



BIOSPHERE
INSTITUTE OF THE BOW VALLEY



COMMUNITY GENERATION: THE MICROGENERATION MODEL



BOW VALLEY
GREEN ENERGY
COOPERATIVE



Accelerating the use of renewable energy in your community.

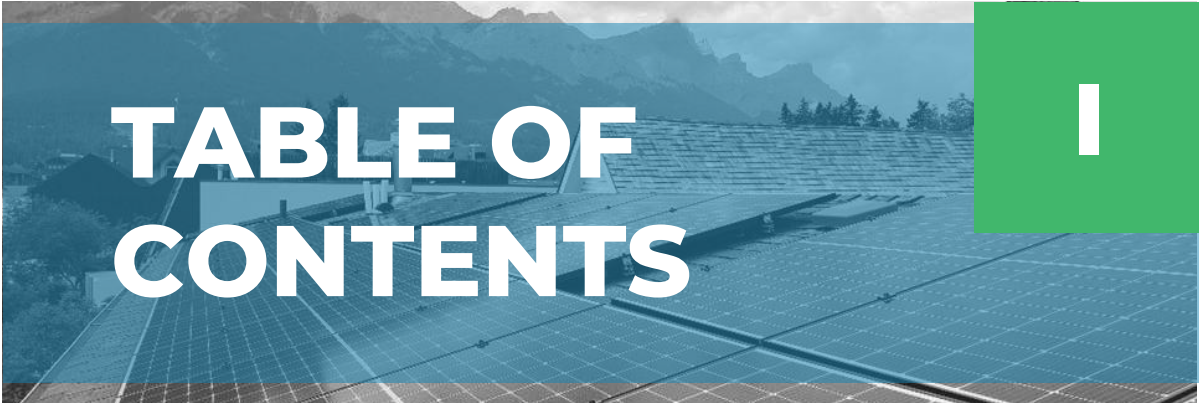



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ACKNOWLEDGEMENTS



Land Acknowledgement

The **Biosphere Institute of the Bow Valley** and the **Bow Valley Green Energy Co-operative** are located in Châ Ūpchîchîyen Kudebi (Canmore), which stands on Treaty 7 territory, the traditional lands of the Ūyâxe Nakoda Nations of Goodstoney, Chiniki, and Bearspaw; three Nations of the Blackfoot Confederacy, the Pikani, Kainai and Siksika; the Tsuu'tina First Nation; and the Rocky View M tis District within the Battle River Territory.

We acknowledge past, present and future generations of Indigenous peoples who have been living and stewarding this land since time immemorial.

Project Acknowledgement

This project was made possible due to support from the Alberta Ecotrust Foundation - Climate Innovation Fund, Bow Valley Green Energy Co-operative, and the Town of Canmore.



ABOUT THIS GUIDE

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Interested in facilitating the renewable **energy transition** in your community? This guide might be for you!

This manual is designed to introduce you to the concept of **Community Generation**. It will highlight the journey of Bow Valley Green Energy Co-operative, an Alberta-based **community generator**, detailing their challenges and successes along the way.

This guide's information is intended to help Alberta collectives interested in exploring Community Generation opportunities within the built environment in urban and rural centres.

WHO IS THIS MANUAL FOR?



This guide is for Albertans who want to develop community-owned **renewable energy** generation projects, specifically **solar photovoltaic (PV) systems**, using a **behind-the-meter** model under the Micro-generation Regulation (Electric Utilities Act).



This manual may be less relevant for those looking at Distribution- or Transmission-connected solar PV projects (see Pembina's Alberta Community Solar Guide instead) and groups outside of Alberta, as different regulations and regional considerations apply; however, some principles and practices may still be helpful, but we recommend connecting with local groups in your Province or jurisdiction to confirm.

NB: This guide does not include information on installing other types of renewable energy developments (such as geothermal / geo-exchange, wind, or biomass), although some principles apply.



ABOUT THIS GUIDE

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WHY FOCUS ON RENEWABLE ENERGY IN ALBERTA?

Action is required across multiple scales to effectively reduce carbon emissions and address [climate change](#), from the individual to the corporate to the national.

Transitioning our energy generation system from fossil fuels to renewable energy sources decreases [Greenhouse Gas \(GHG\) emissions](#) that contribute to climate change. For this reason, renewable energy plays a central role in [climate change mitigation](#).

Solar power, wind, and other renewable energy sources have much lower carbon footprints than fossil fuel-based coal or gas, even after accounting for emissions during manufacture, construction, and fuel supply. Considering the fossil-fuel-based energy used in manufacturing and assuming a life expectancy of 30 years, 87-97% of the energy generated by a solar system does not generate pollution or GHG emissions or contribute to resource depletion. [1](#)

In 2023, renewables contributed approximately 10% of Alberta's grid generating capacity. [2](#) Therefore, the majority of Alberta's energy sources emit GHGs. Each [kilowatt](#) of energy generated from renewable sources, such as solar panels, offsets some of Alberta's electricity needs, reduces the need for carbon-emitting power plants and takes direct action to improve public health by reducing pollution from fossil fuels.

One of the largest solar farms in North America — the 465 MW Travers Solar Project which powers over 150,000 homes, is located in Alberta!



Alberta's wind-swept prairies and vast sunny skies position the province favourably as a leader in Canada in the wind and solar energy industries. Alberta is on the path to becoming Canada's renewable energy capital, with more than three-quarters of wind and solar generation built in Canada in 2023. [3](#)

ABOUT THIS GUIDE

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Why Community Generation?

In 2019, a feasibility study into renewable energy generation facilitated by The [Biosphere Institute of the Bow Valley](#) identified three significant barriers to participation in the energy transition:

- Access to ownership,
- Access to suitable infrastructure and
- Cost.

Overcoming these barriers to participation can be challenging. Community generation is a model that allows citizens, regardless of their housing or economic situation, to engage directly in energy projects through full or partial ownership of an energy generation enterprise.

These types of projects keep the economic benefits within local communities, encourage local job creation, provide local environmental benefits and often support community-focused social initiatives with their profits.

Through our "[Canmore Community Solar](#)" feasibility study, the Biosphere Institute laid the groundwork for the creation of the [Bow Valley Green Energy Co-operative](#), a 'Community Generator' that, with the support of the Biosphere Institute, incorporated in 2020. **Join us as we tell our story ...**

Community generation provides opportunities for local residents to participate in and benefit from renewable energy projects.

This guide focuses on developing inclusive, equitable, and local energy solutions. Social objectives and serving the public good are core tenets of this work.



ABOUT THIS GUIDE

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HOW TO READ THIS GUIDE



Words defined in the Glossary are in **bold**.



Direct references are highlighted as **numbers**, links to these sources can be found in the integrated APPENDIX



Hyperlinks are underlined.



This icon indicates reference to a linked external document.



This icon indicates a reference to a template document, available as a download in the online APPENDIX.

GOALS AND OBJECTIVES

- To guide Albertans looking to implement community-owned renewable energy generation using the behind-the-meter **Micro-generation** model.
- Detail a case study of the unique behind-the-meter community generation model of the Bow Valley Green Energy Co-operative.
- Walk through all the steps of developing and operating a community-owned renewable energy organisation.
- Compile applicable and available resources.
- Provide open-access Templates of relevant documentation.
- The APPENDIX includes a list of organisations you can contact for additional support on your community generation journey.

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COMMUNITY GENERATION IN ALBERTA



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COMMUNITY GENERATION

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WHAT IS COMMUNITY GENERATION?

Community renewable energy generation, or “Community Generation,” projects are financed, owned, and managed by local citizens using an economic model in which local community members invest in shares in an installation.

In a community generation project, local residents become owners instead of **utility companies**. Community generation projects can be any renewable energy source, including hydro, solar, geothermal, biomass, or wind.



Technically, “community generation” refers to a specific type of energy generation project that falls under Alberta's Small Scale Generation Regulation. For this guide, we will use “community generation” to refer to the concept of community-owned, community-managed renewable energy projects, regardless of what Provincial regulations the project falls under.

As this guide will cover, Bow Valley Green Energy Co-operative is the first organization in Alberta to use an innovative behind-the-meter **Micro-generation** model for community generation. Still, the principles and outcomes of community generation are the same.

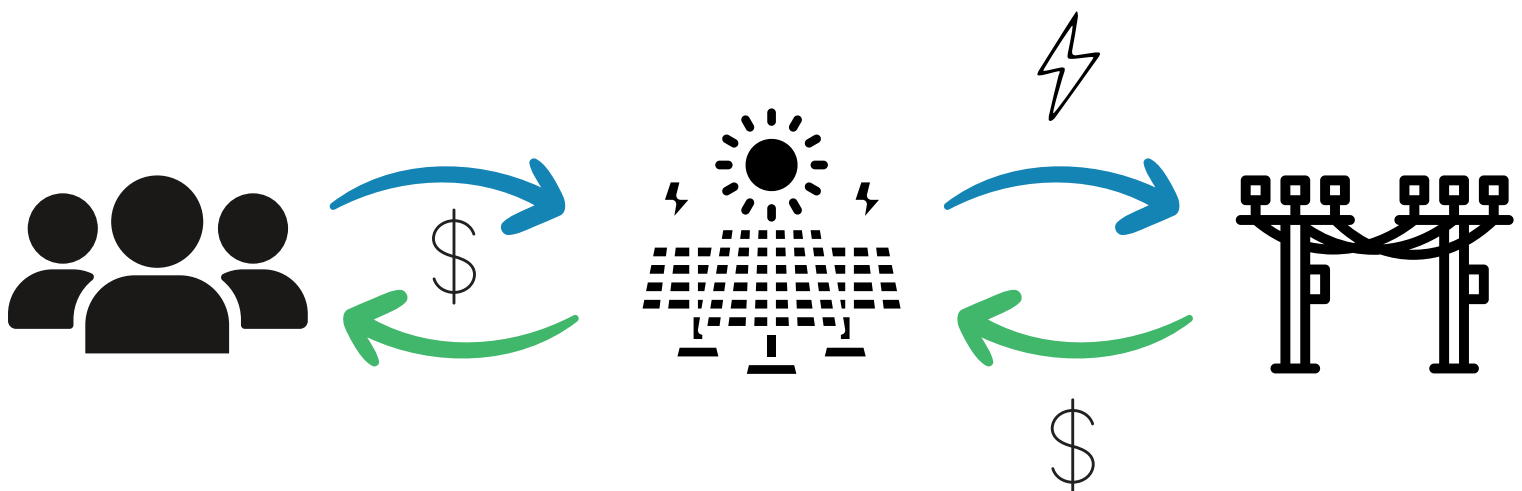


FIG 1 - the concept of community generation

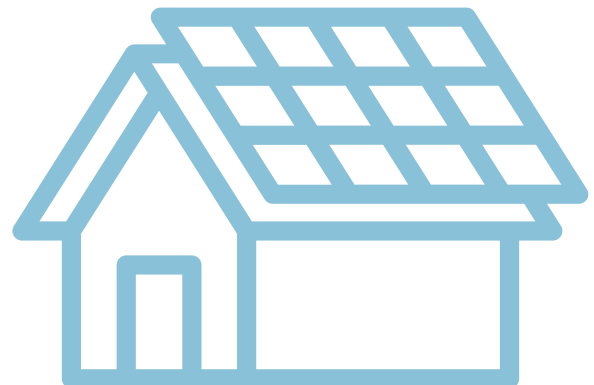
Barriers to the Energy Transition

While solar photovoltaic (PV) systems are gaining popularity across Canada, many barriers remain for residents to install their own solar PV systems.

Common obstacles to installing solar on one's home are: 4

- Many households rent or reside in multi-tenant buildings, so they don't have homeowner authority.
- Some buildings may not support the installation of renewable energy infrastructure due to site shading, [solar azimuth](#) (orientation), or appropriate roof structures.
- Lack of finances: even with government incentives, homeowners need to source the total upfront cost to install a system and
- Education and industry knowledge regarding financial and environmental benefits are not always communicated effectively to the consumer.

Community generation offers a solution to those barriers by allowing residents to contribute directly to renewable energy generation locally, even if they are unable to install renewable energy on their own homes.



Additional Benefits of Community Generation



- Expanding local renewable energy options.
- Creating local investment revenue.
- Providing co-benefits for the environment:
 - *reducing carbon emissions and*
 - *decreasing pollution.*
- Providing co-benefits for the economy:
 - *increased local investment revenue and*
 - *supporting local jobs.*
- Providing co-benefits for the society:
 - *by encouraging more equitable access to renewable energy generation.*
- Generate profits that support local community initiatives such as:
 - *education on energy efficiency,*
 - *supporting social purpose organisations and*
 - *environmental protection.*
- Support mental health benefits as participation in climate action can decrease apathy.

“Hope is a verb with its shirtsleeves rolled up”

David Orr

COMMUNITY GENERATION

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CONNECTING ENERGY GENERATION TO THE GRID

Off-grid solar PV systems do exist, but there are benefits to connecting a system to the grid. Connecting to the grid allows for a secure supply of electricity at all times of the year without needing a battery, as it allows for the intake of electricity from the grid when the system isn't producing enough for the building's needs. The use of a **bi-directional meter** also, under current Alberta utility-led programs, allows systems to sell excess electricity to the grid and, in doing so, generate additional revenue to offset the cost of an installation.

In Alberta, three regulations enable electricity generators to connect to the grid: **5**

Behind-the-Meter (Micro-generation)

Under the Micro-generation Regulation, solar systems produce electricity that is consumed by the host site, and any excess electricity is exported to the electricity grid through a bi-directional meter in exchange for a credit. This process is sometimes called "**load offsetting**". The Micro-generation Regulation governs household solar systems in Alberta.



FIG 2 - Micro-generation in Alberta - Municipal Climate Change Action Centre **5**

COMMUNITY GENERATION

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Distribution-Connected (Small-Scale)

Distribution-connected systems sell all electricity generated directly to the grid for profit. **Small-scale Generation** systems connect to the grid through one interconnection and export point. Despite the name, solar installations that fall under the Small-Scale Generation regulations are usually over 1MW in size and cost upwards of \$1 Million.

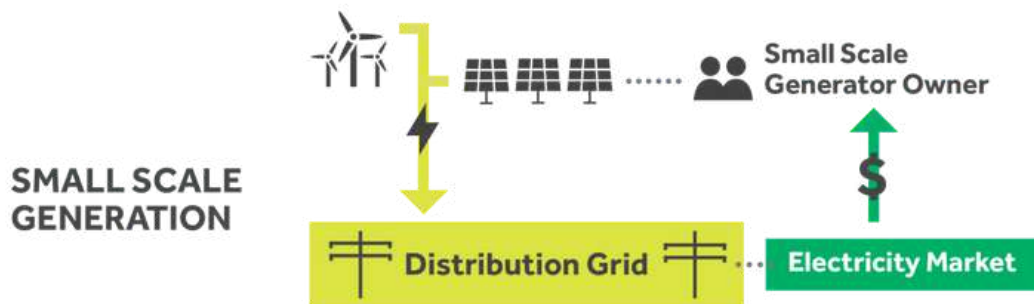


FIG 3 - Comparison of small-scale generation and community generation in Alberta - Municipal Climate Change Action Centre 5



Community generation projects typically fall under the Small Scale Generation Regulation. Bow Valley Green Energy Co-operative is the first organization to use the Micro-generation Regulation for community generation.



Transmission-Connected

Transmission-connected solar projects are large-scale, centralised, and connected to the high-voltage long-distance transmission system. Large utility-scale solar farms fall under this regulation and are not considered community generation projects.



COMMUNITY GENERATION, A FEASIBILITY STUDY

A FEASIBILITY STUDY

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CANMORE COMMUNITY SOLAR

In 2019, the Biosphere Institute of the Bow Valley asked itself a question: how might we achieve our vision of solar panels on every rooftop in the [Bow Valley](#)?

This question inspired a project to assess the feasibility of a community-owned solar project in Canmore, Alberta.

The Biosphere Institute was motivated to evaluate solar feasibility on existing buildings as it would maximise the opportunities for renewable energy generation in an area where available land is limited and expensive. Canmore is also a unique location surrounded by Provincial and Federal park boundaries and wildlife corridors.

Using financial support from Energy Efficiency Alberta through their Community Generation Capacity Building grant stream, the Biosphere Institute worked with a local solar contractor, [KCP Energy](#), and the [Alberta Community and Co-operatives Association](#) to complete a community generation feasibility study for residential, commercial and industrial rooftops in Canmore.

Assessing Technical Feasibility



Using the University of Calgary's [Rooftop Solar in Canmore Neighbourhood by Neighbourhood Analysis](#), the Biosphere Institute identified the top 10 neighbourhoods in Canmore for solar potential. We began canvassing residents in these neighbourhoods to gauge their level of interest in either renting out their rooftop space for the installation of a community generation project or participating in community financing. The community expressed overwhelming levels of support for the concept.

A FEASIBILITY STUDY

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Meanwhile, KCP Energy assessed the feasibility of maximising the solar potential of residential and commercial properties through site and solar assessments. Concurrently, [ISL Engineering](#) undertook targeted structural assessments on the commercial properties.

Three scenarios were considered:

- Hosting solar panels on rented rooftops across a residential neighbourhood;
- Hosting solar panels on rented Commercial/Industrial building(s) and
- Opportunities beyond the development footprint of Canmore.

Scenario 1: Residential Rooftop Rental – Results

Two solar assessments for each property were reviewed by our project team and sent out to individual homeowners. One identified the Micro-generation solar opportunity at a given property, and the other identified the small-scale generation opportunity.

The advantage of connecting directly to the grid under the Small-Scale Regulation is that there is no cap on the [generation capacity](#) or the number of panels so that roof space can be maximised for solar production. In this scenario, 1MW of generation capacity could be distributed across fewer residential properties than needed under the Micro-generation regulations.

However, under the current regulatory framework, this scenario was technically feasible but not financially feasible. Each small-scale installation on an individual property would require its own [interconnection point](#) and wires studies, adding significant additional cost to any project.

A FEASIBILITY STUDY

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Connecting a dispersed yet linked network of solar panels through one interconnection point was also deemed cost-prohibitive due to the additional infrastructure and construction requirements to link the systems.

Under the Micro-generation Regulation, the financial feasibility of installing individual small residential systems was also deemed unsuitable due to short-term property ownership horizons (Average of five years) and smaller systems being more expensive per kilowatt vs larger systems.

Scenario 2: Commercial Rooftop Rental - Results

The Biosphere Institute identified the 25 largest buildings in Canmore, representing 10% of the overall built area of the town. Many were evaluating solar system installation independently and did not require the Biosphere Institute's help, so the project team evaluated nine commercial properties.

The financial feasibility of commercial buildings under the Small-Scale Generation Regulation was also deemed to be cost-prohibitive due to the high costs of interconnection fees. Despite the larger building size, the installations would still be significantly smaller than 1MW, and economies of scale could not be established.

With the aggregation of solar systems across multiple industrial or commercial properties, a community generation project under the Small-Scale Generation Regulations could be feasible, provided the project was a minimum of 1MW in size. The difficulties here lie with collaborating with a group of building owners rather than an individual and the fact that the buildings would need to be located relatively close together to minimise additional infrastructure requirements.

A FEASIBILITY STUDY

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Under the Micro-generation Regulation, the financial and technical feasibility was deemed suitable. The Biosphere Institute identified this scenario as the most promising for facilitating a community generation project within the Town of Canmore municipal limits.

Scenario 3: Additional Opportunities - Results

The project team identified viable opportunities for both Micro- and Small-Scale Generation projects outside the Town of Canmore boundaries.

The potential to interconnect a Small-Scale generation project is higher, and the costs are much less. Outside of Town boundaries was identified as the best scenario regarding cost-effectiveness for Small-Scale Generation.

Technical Feasibility - Lessons Summary

	Small-Scale Generation	Micro-generation
Residential Sites	N	N
Commercial Sites	?	Y
External Sites	Y	Y

There are advantages and disadvantages to developing a community generation project under each regulation. It's essential to consider the size limit of the system, how energy and revenue potentially flow, and the costs associated with different scales of projects.



A FEASIBILITY STUDY

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Pros and cons of installing Community Generation projects 'behind-the-meter' under the Micro-generation regulations:

- The energy produced can be used directly by the property.
- A power purchase contract is facilitated between two parties, not involving the wires provider.
- There is no need to undertake costly [interconnection studies](#).
- Excess electricity is sold to the grid, generating additional revenue for the host.
- Projects offset the need for fossil fuel-based electricity generation.

- Size limit of 5 MW.
- Electricity production must be equal to or less than the site's annual consumption.
- Each installation must have an end-user for the electricity generated.
- Working with a property owner with their individual wants and needs.
- It is usually associated with on-the-roof projects.



Pros and cons of installing Community Generation as distribution-connected projects under the Small-scale regulations:

- All electricity produced is sold to the grid.
- No end-user needs to be identified.
- All revenue generated flows to the facility owner.
- Provides new renewable energy generating capacity to the grid.

- Interconnection and pre-construction survey fees are high and unavoidable.
- The minimum size to make a project economically viable is 1MW (approx \$1M in cost).
- It is unlikely to suit construction within the built environment.

A FEASIBILITY STUDY

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Assessing Community-Based Financing

After the results of the technical feasibility study were assessed, and the community showed a high level of interest in the concept of community generation, the Biosphere Institute then worked with the Alberta Community & Co-operatives Association in April 2019 to create a steering committee to guide the formation of an Opportunity Development Co-operative.

This steering committee eventually formed the founding Board of Directors of the newly incorporated Bow Valley Green Energy Co-operative (BVGEC).

INTRODUCING THE BOW VALLEY GREEN ENERGY CO-OPERATIVE

Bow Valley Green Energy Co-operative (BVGEC) is a grassroots, socially responsible organization that aims to facilitate the creation of community-owned renewable energy generation projects in the Bow Valley. BVGEC is community-led and volunteer-driven.

Between the organisation's incorporation in 2020 and December 2023, BVGEC has;

- installed 455 Kilowatts (Kw) of renewable energy,
- generated 371 Megawatt Hours (MWh) of renewable electricity,
- raised \$190K in community investments and
- offset 308 tonnes of Carbon Dioxide equivalent from Alberta's electricity grid!



For up-to-date information on the Bow Valley Green Energy Co-operatives' recent successes, visit www.bvgreenenergy.org.





THE BOW VALLEY GREEN ENERGY CO-OPERATIVE, A HISTORY

THE INCORPORATION OF BVGEC

In 2020, the Biosphere Institute, funded by the Federal [Investment Readiness Program](#), in partnership with the newly formed BVGEC and outside consultants in law, social finance, business, solar energy, and marketing, proposed to incorporate and launch BVGEC and prepare it to accept investments in an initial community-run solar installation in the Bow Valley using the following process:

Business planning: With the support of the Biosphere Institute and BVGEC Board of Directors, a consultant completed an investigation into available loan and funding opportunities, designed and implemented an accounting and financial reporting system, and drafted financial processes for the young organisation.

In addition, the Biosphere Institute contracted two consultants to develop a business plan and create a Micro-generation financial modelling tool for use by BVGEC in calculating a power purchase price range for each potential site, allowing for project assessments.

Development of legal frameworks: Facilitated by the Biosphere Institute, BVGEC contracted a law firm to finalise corporate documents, including submitting bylaws to Service Alberta and finalising the offering documents and resolutions required to prepare the Co-op to issue investment shares.

The firm drafted the [Offering Memorandum](#) Exemption, Form 45-106. This form is a detailed roadmap of the proposed investment opportunity for Co-ops selling investment shares. The legal consultant also drafted the [Share Purchase Agreement](#) for provision to prospective investors, along with risk acknowledgement forms.

As per the Alberta Security Commission exemption, BVGEC initially offered investment shares only to accredited investors, friends, and family of the Board, and members that have held membership for one year until such time as the Share Offering could be broadened using a detailed Offering Memorandum.

BVGEC - A HISTORY

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BVGEC'S PILOT PROJECT

Bow Valley Green Energy Co-operative worked with a Canmore church, Ralph Connor Memorial United Church, to facilitate a “proof-of-concept” pilot project. The Church site was deemed suitable for BVGEC’s first project as it offered both good solar potential and a manageable scale of 11.25kW. In addition, grant funding from Faithful Footprints lowered the initial capital required to install the project.

Member loans fully funded this first project, sourced from founding board members, which the lenders later converted to investment shares once BVGEC completed an initial Share Offering.

In September 2021, BVGEC flipped the switch on its inaugural community-funded renewable energy generation system. This installation was Alberta's first community-owned solar system and the first community-owned energy generation installation in the Bow Valley!

RALPH CONNER UNITED MEMORIAL CHURCH



BVGEC - A HISTORY

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RCMUC Project Monitoring

BVGEC monitors the solar array. Production data is transmitted electronically from an Electronic Communication Unit adjacent to the Church's utility room via the Internet to a web-based monitoring tool dashboard, which is typical of most solar installations.

The Church provides grid-tied electricity bills to BVGEC to track electricity import and export data, which are compared to historical electricity demand.



You can view real-time RCMUC production data here: [Ralph Connor Memorial United Church](#).

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RCMUC Project Benefits

During 2023, BVGEC calculated the electricity rates that the Church would have paid without solar power and compared this to the available data.

Due to a reduction in electrical import cost, export cost credits, and reduced transmission and distribution charges, the Church saved an estimated \$470, all while generating 11.28MWh of renewable electricity and eliminating 6.5 tonnes of CO2 emissions.

BVGEC's Board of Directors' strategy to install a relatively small initial solar PV system was deliberate. Solar is one of the simplest and cheapest renewable energy technologies to develop, and there were board members with experience with solar. The Board also wanted to see a project get off the ground within a year to prove the viability of their business model.



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BVGEC - A HISTORY

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HOW BVGEC'S BUSINESS MODEL WORKS

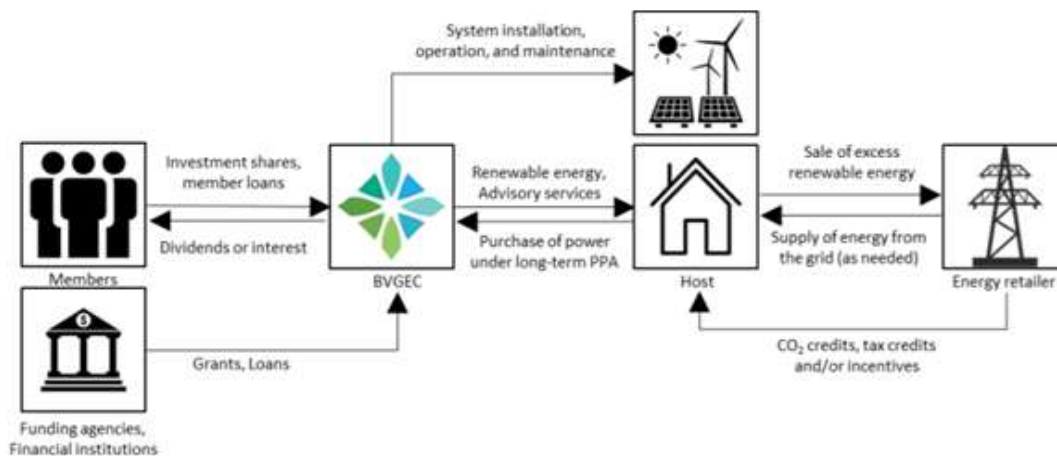
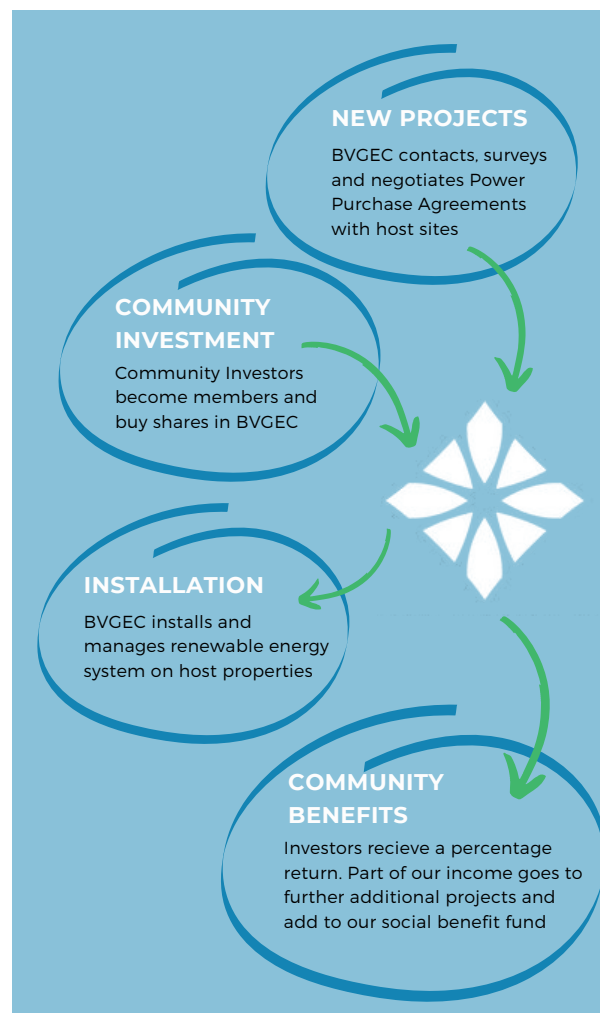


FIG 4 - BVGEC's 'behind-the-meter Micro-generation business model

BVGEC uses shares purchased by Members to finance and install renewable energy systems for on-site electricity generation on **Host Sites** within the context of Alberta's Micro-generation Regulation.



A host site signs an agreement to purchase 100% of the renewable energy generated by the system for a fixed price over a fixed time period. This twist on community generation creates an economically viable avenue for using community-sourced funds to install renewable energy infrastructure and has so far proved successful with four operating projects (2021-2023).



BVGEC - A HISTORY

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BVGEC'S PROJECT PORTFOLIO (2021-2023)

RALPH CONNER CHURCH - CANMORE



- Went live: Sept 16, 2021.
- System size: 11kW.
- Installation contractor: [Kuby Renewable Energy Ltd.](#)
- Community and Grant Funded.
- Average annual electrical production: 11,250kWh.
- Expected GHG Reduction of 7.4 teCO₂/year.

I-PLACE - CANMORE

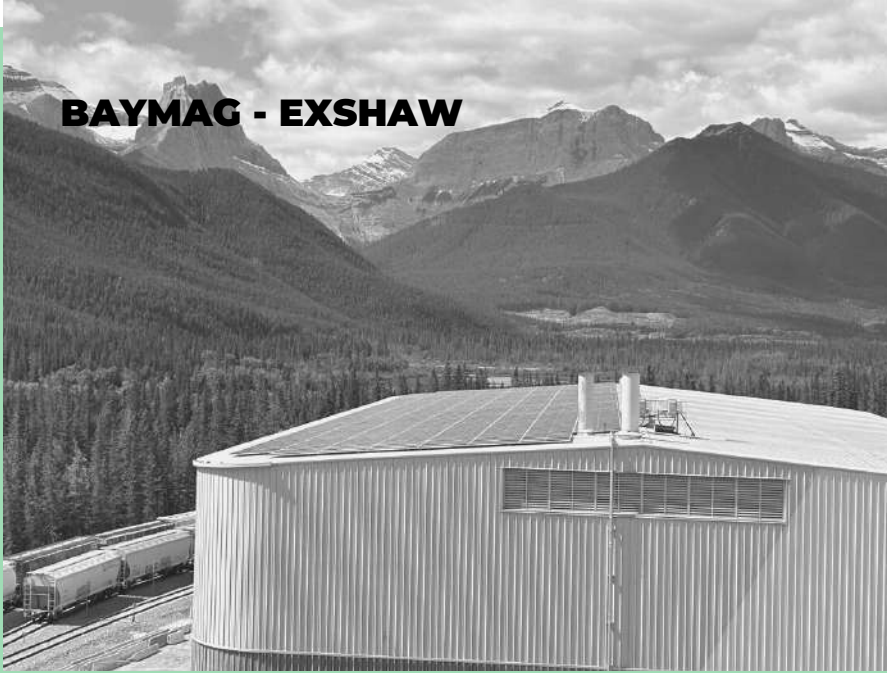


- Went live: Nov 7, 2022.
- System size: 127kW.
- Installation contractor: [Kuby Renewable Energy Ltd.](#)
- Community and Grant Funded.
- Average annual electrical production: 146,000kWh.
- Expected GHG Reduction of 88 teCO₂/year.

BVGEC - A HISTORY

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BAYMAG - EXSHAW



- Went live: May 17, 2023.
- System size: 291.5kW.
- Installation contractor: KCP Energy.
- Community and Grant Funded.
- Expected average annual electrical production: 300,000kWh.
- Expected GHG Reduction of 240 teCO₂/year.

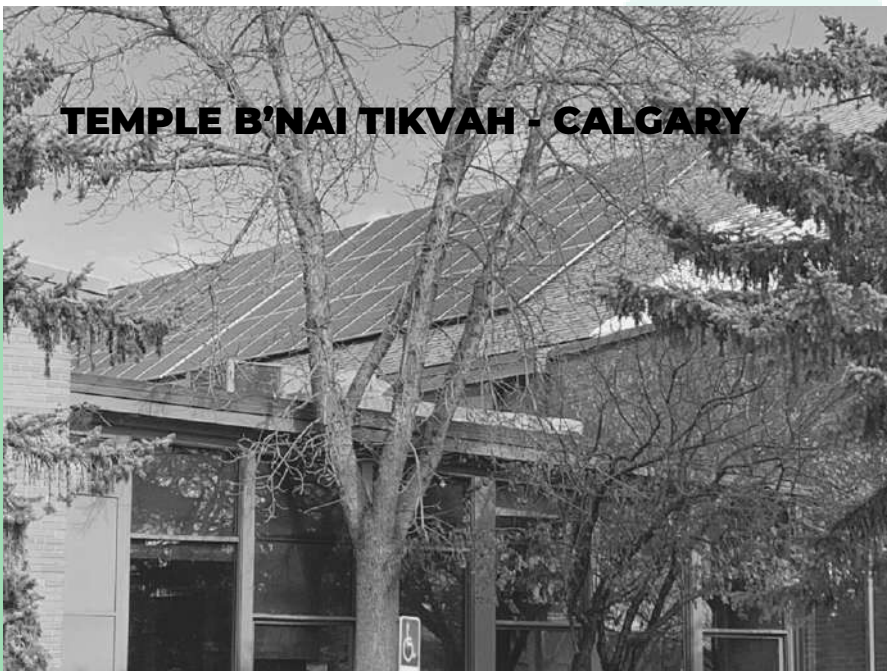


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To see BVGEC's current suite of projects and upcoming installations, visit [BVGEC Portfolio](#).



TEMPLE B'NAI TIKVAH - CALGARY



- Went live: Nov 8, 2023
- System size: 26kW.
- Installation contractor: SkyFire Energy.
- Community and Grant Funded.
- Expected average annual electrical production: 30,000kWh.
- Expected GHG Reduction of 20 teCO₂/year.

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CREATE YOUR ORGANIZATION

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FINDING THE RIGHT INGREDIENTS

Welcome to the recipe section, where the ingredients are expertise, dedication, and a dash of resilience. Just like crafting a delectable dish requires the right combination of flavours, achieving success demands a thoughtful blend of skills, mindset, personalities, time and strategic planning. **You can do it!**

In this recipe for success, we'll explore the key elements supporting your creation of a community-owned energy generation project in your neighbourhood. So, sharpen your knives, preheat your ambitions, and embark on an adventure towards achieving the perfect recipe for success!

ASSESSING NEEDS AND COMMUNITY INTEREST

It might seem obvious, but understanding whether there is a potential installation opportunity and genuine local interest in community generation is vital to getting started. If your community or municipality has done a solar or renewable energy feasibility study, there might be insights to review there. A quick online survey, community conversation session, or door-knocking campaign might help you understand the level of interest from community members. After all, you'll need a team to accomplish this work.

To assess the business need, scan other players in your area's renewable energy space to understand the gaps and opportunities your organization might work to fill.

The Biosphere Institute knew there was a need in the Bow Valley to install renewables on existing rooftops; mountains enclose the valley, and our town is constrained in space. Next, we imagined an initiative to fulfil this need (community generator). We assessed the community's interest by doing door-to-door outreach with residents, leaflet drop-offs to businesses, and local advertising. This outreach identified strong community support.



FORM YOUR TEAM

You'll need at least 6-9 people with various skill sets who are committed to a shared vision. Articulating a common and compelling vision is the first step to ensure your team will stick together through challenging situations. Your vision is the "WHY" – why are you here together?



BVGEC came together with a shared vision to get solar power on every rooftop; they worked towards that goal from day one.



Time, Commitment, and Values

As you get established, your initiative will likely be entirely volunteer-run for at least the first few years. Committed and engaged volunteers are the main ingredient for success.

Tips for recruiting and maintaining volunteers from the BVGEC board:

- Recruit retirees – they have time, a career's worth of knowledge and skills, and might be looking to give back to the community after years in the workforce.
- Engage early career professionals and graduates looking to gain knowledge to support a career change.
- Celebrate all wins, no matter how big or small.
- Honour the time commitment of your volunteers – consider submitting for local volunteer recognition programs or awards.
- Continue to reaffirm the teams' vision and cohesion.



Skills and Expertise

Some skills can be learned along the way, but some skills you'll need immediately. Knowing what skills are necessary for the work is essential so you can find the right people for your team.

Here's our advice for need-to-have versus nice-to-have skills.

	Ingredients	Need / Nice?	Options for support
Phase 1 Exploration	Financial acumen	NEED	<ul style="list-style-type: none"> • Business Link
Phase 1 Exploration	Technical expertise (renewable energy)	NEED	<ul style="list-style-type: none"> • Energy sector employees
Phase 1 Exploration	Leadership skills	NEED	<ul style="list-style-type: none"> • Business Link • Co-operatives First
Phase 1 Exploration	Business-savvy	NICE	<ul style="list-style-type: none"> • Business Link • Co-operatives First • Chamber of Commerce • Business professionals
Phase 2 Incorporation	Legal expertise	NEED	<ul style="list-style-type: none"> • Service Alberta
Phase 2 Incorporation	Volunteer management experience	NICE	<ul style="list-style-type: none"> • Local Non-profits and charities
Phase 2 Incorporation	Governance knowledge	NICE	<ul style="list-style-type: none"> • Familiarize yourself with Robert's Rules of Order • Business Link • Co-operatives First • Chamber of Commerce • Alberta Community & Co-operative Association

Continued...

Here's our advice for need-to-have versus nice-to-have skills. Continued ...

	Ingredients	Need / Nice?	Options for support
Phase 3 Investment Readiness	Website development/IT support	NICE	<ul style="list-style-type: none"> • <u>Business Link</u> • <u>ACCESS Shared Services</u>
Phase 3 Investment Readiness	Project management skills	NICE	<ul style="list-style-type: none"> • Business professionals • Chamber of Commerce • Non-profits and charities
Phase 3 Investment Readiness	Communications/marketing expertise	NEED	<ul style="list-style-type: none"> • <u>ACCESS Shared Services</u>
Phase 3 Investment Readiness	Accounting/Bookkeeping	NICE	<ul style="list-style-type: none"> • <u>Business Link</u> • <u>Co-operatives First</u> • Chamber of Commerce • Business professionals
Phase 4 Operations	Fund development skills	NICE	<ul style="list-style-type: none"> • Non-profits and charities • Government of Alberta provides free <u>training</u>

Finding the Right People

It's okay to be selective: you want to make sure your group functions well together, possesses the right skillsets and is committed to the success of your initiative.

- *Post an advertisement for a volunteer position on goodwork.ca.*
- *Host an information session.*
- *Reaching out through the newsletter of local organisations that support your idea.*
- *You can approach the individuals you think would make the right fit.*



STRATEGIC PLANNING


Now that you have gathered the right ingredients (i.e., your team), it's time to get cooking and hold your first strategic planning session.

Your first strategic planning session is a time to map out your vision, clarify future goals, and align your objectives. Consider getting an external, objective facilitator to lead your session. You'll likely need to organise several of these sessions and reflect on what's going well and what's not.

There are many good resources on leading an effective strategic planning session, and we recommend finding the one that works best for you, your objectives and your team.

BVGEC found the following resources useful when running its strategic planning sessions:

CURRENT STATE	FUTURE STATE	VALUES & RISKS	PRIORITIES & GOALS	ACTION PLANNING
				
Where are we now?	Where are we going?	What will get in our way?	What do we need to do?	How will we implement our plan?
Celebrate	3-year visioning exercise	Values & behaviors	Setting 3 Strategic Priorities	Action & Comms Planning
SWOT Scan	3-year mission exercise	Risk Analysis	SMART goals	Critical Capacities

 FIG 5 - Sample strategic planning agenda - SME Strategy Management Consulting 6

CHOOSING THE RIGHT ORGANIZATIONAL MODEL

Each type of organisational model has benefits and challenges. So, how can you choose the best business model for you? In your team, start by asking:

- What is the purpose of our organisation?
- What do we, as board members, hope to get out of this enterprise?
- How do we want decisions to be made?
- What are our collective values?
- What size will our organization grow to become?

The following information provides a summary to consider when choosing your organisational model. It's crucial to determine what model will work best for your objectives.



BVGEC pursued the idea of a **Co-operative** when they learned that many community energy organisations in Canada had success as Opportunity Development Co-operatives. ODCs allow BVGEC to accept community investment, whereas not-for-profits cannot. BVGEC is also a **social enterprise** and chooses to reinvest its profits into realising its mission.



A Note On Social Enterprises

There is no single definition of a **social enterprise**, but they are generally organisations with primarily social objectives and an overall mission to serve the public good. A social enterprise will operate for-profit enterprises to generate earned income and reinvest it into realising their social mission. Any of the following organisational models can be deemed a social enterprise...

Not-for-profit 7

Two types of not-for-profit organisations exist: Registered Charities and Non-Profit Organizations (NPOs). They both operate under a non-profit model, but some key differences exist. Here are a few characteristics, but for more comprehensive information on not-for-profit entities, visit the [Canadian Revenue Agency](#).

	Registered Charity	Non-Profit Organization
Purpose	Must be established and operate exclusively for charitable purposes	Broader, can operate for any purpose other than profit
Tax Receipts	Can issue tax receipts	Cannot issue tax receipts
Tax Exempt Status	Exempt from paying income tax	Generally exempt, may have to pay tax on property income or capital gains
Benefits to Members	Cannot use the income to personally benefits its members	
Foundation Funding	Can receive Foundation Funding	Cannot receive Foundation Funding

Table adapted from the [Canadian Revenue Agency](#).

Commercial Enterprise: Corporation

Business corporations are commercial enterprises (distinct from sole proprietorships or partnerships). A corporation is a legally established (incorporated) business that acts separately from its owners, with the same rights as a real person. Corporations can own assets, incur debt, and enter into contracts. A corporation also has “continuous existence,” meaning it can continue to exist even if the owner dies.

Owners are shareholders, which can be people or a legal entity. Shares are considered property; each share equals one vote, so the more shares a shareholder holds, the more votes they can exercise.

Co-operatives

A **co-operative** is: “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.” *Alberta Community & Co-operative Association*

Co-operatives are businesses, but unlike corporations, they are accountable to all members, not a select few shareholders. Credit unions, housing co-ops, and rural electrification associations are all examples of co-ops in Alberta.

Co-ops worldwide adhere to seven principles adopted by the International Co-operative Alliance in 1995.

Seven Cooperative Principles

- VOLUNTARY AND OPEN MEMBERSHIP**
Cooperatives are voluntary organizations open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.
- DEMOCRATIC MEMBER CONTROL**
Cooperatives are democratic organizations controlled by their members, who actively participate in setting policies and making decisions. The elected representatives are accountable to the membership. In primary cooperatives, members have equal voting rights (one member, one vote) and cooperatives at other levels are organized in a democratic manner.
- MEMBERS' ECONOMIC PARTICIPATION**
Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing the cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefitting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.
- AUTONOMY AND INDEPENDENCE**
Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.
- EDUCATION, TRAINING AND INFORMATION**
Cooperatives provide education and training for their members, elected representatives, managers, and employees so that they can contribute effectively to the development of their cooperatives. They inform the general public, particularly young people and opinion leaders, about the nature and benefits of cooperation.
- COOPERATION AMONG COOPERATIVES**
Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.
- CONCERN FOR COMMUNITY**
While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.

NRECA
A National Rural Cooperative

FIG 6 - The Seven Co-operative Principles

There are many types of co-operatives in Alberta: 8

- **Consumer Co-ops:** aim to achieve better prices for goods or services, e.g., Calgary Co-op grocery store.
- **Utility Co-ops:** deliver public utilities such as electricity, water, or telecommunications, e.g., FedGas Co-ops.
- **Credit Unions:** financial co-operatives that provide financial services such as mortgages, loans, and business advice. E.g., Servus Credit Union.
- **Worker Co-ops:** owned and governed by employees.
- **Producer Co-ops:** achieve economies of scale to provide processing or marketing services to smaller businesses, typically in agriculture.
- **Investment Co-ops/Opportunity Development Co-ops:** focus on local economic investment around an identified community need; sell shares to local community members.

Renewable energy co-operatives often choose the Investment Co-op model, also known as an Opportunity Development Co-op (ODC). ODCs are for-profit entities that invest in local economic growth and local businesses.

In Canada, there are over 20 thriving green energy co-operatives coast to coast. Examples include the Ottawa Renewable Energy Co-op (Ontario), with almost 1000 Co-op members and over 7MW of renewable energy capacity, and the Community Energy Development Co-op (Kitchener-Waterloo), with 750 members and 10MW of installed renewable energy capacity. For a list of renewable energy co-ops and their websites, see [APPENDIX](#).

For more details on co-operatives and information on starting a renewable energy co-op, see the [Community Energy Co-operative Toolkit](#) from the Alberta Community & Co-operative Association.



Summary of Organisational Models

	Not-for-profit Corporation	Co-operative Corporation	Business Corporation
Purpose	To fulfill a collective, public or social benefit	To meet members' needs, as defined by members	To maximise shareholder wealth
Accountable to Whom?	Donors, funders, and public community	All members	Majority shareholders
Governance	Board of Directors	Board of Directors One member – one vote	Board of Directors Votes based on the volume of share ownership
Leadership	Board represents organisations mission	Board represents members – 80% of Directors are elected members	Board represents shareholders
Membership	Members are not required to make a financial contribution	Members must make a financial contribution	N/A
Liability of Owners	Board members may be held vicariously liable for the acts of volunteers or employees, and are jointly liable for decisions of the board, even if they did not directly participate in them.	Co-ops are incorporated businesses, and owned by a collective of Members, who have limited liability. In rare cases, a co-op's board may be legally liable for decisions that result in damages.	Limited liability - the assets and debts of the business remain separate from the personal assets and debts of the company's owners.
Wealth Distribution	No profits may be distributed	Profits are either re-invested in the company or distributed to members in the form of patronage dividends as shares or cash	Profits are distributed as dividends and paid to shareholders based on the number of shares held
Tax Implications	Income tax-exempt	Co-operatives are generally responsible for the same taxes as other corporations.	Income is taxable; can take on debt and pay its own taxes



Table adapted from the *Community Energy Co-operative Toolkit*.

FIND YOUR NAME

You'll be saying it, writing it, and promoting it – so choosing your name is essential. Good business names can make a huge difference in your organisation's success.

Here are some guidelines to consider:

- Make it short and memorable.
- Say it aloud: It needs to be pronounceable and sound good.
- Make it unique and distinctive.
- It should be easy to spell.
- It should be descriptive: use a name that has meaning and conveys a benefit (i.e. you know right away what it is).
- Don't use hyphens or initials.
- Don't pick a name that could be limiting as your business grows.
- Conduct a trademark search.
- Check domain availability for .com, .ca, and .org.
- Test it out on Google AdWords.
- Use plain language – puns might seem clever, but they can be confusing to those for whom English is not their first language.
- Check other provinces and territories
- Check for translation to ensure you're not naming something else by mistake in another language.
- Try it out with family and friends to get their feedback.



SECURE START-UP FUNDING

Securing development funding is critical to achieving momentum and getting the first project underway. Determine what you need funding for during the initial stages of forming your organisation. This will likely include communications and marketing materials such as subscription fees and advertisements, fees for professional services, and incorporation fees.

Financing can come from grants, loans, and start-up support until operations bring sustainable funding.

Potential Funding Sources:

- Community Foundations
- Corporate Sponsorships
- Economic Development Associations
- In-kind donations
- Loans from founding members or community members
- Local, Regional, Provincial and Federal Governments
- Individual donors
- Crowdfunding

Grants

Grants are often only awarded to Non-Profit organisations, so partnering with a charitable organization with a similar mission is helpful. Much of BVGEC's success can be attributed to the staff time and financial support provided by the Biosphere Institute of the Bow Valley, especially during the early stages of development.

This “backbone” support from Biosphere Institute enabled BVGEC to partner on successful grant applications, lead strategic planning sessions, and benefit from expertise and capacity in administration, communications, and facilitation.

Successful grants that the Biosphere Institute (BIBV) and/or BVGEC have taken advantage of:

- Energy Efficiency Alberta (*now defunct*) (BIBV 2019)
- Investment Readiness Program (BIBV 2020 & BVGEC 2023)
- Alberta Ecotrust - Climate Innovation Fund (BIBV with BVGEC 2021)
- Banff Canmore Community Foundation (BIBV 2020 & BIBV with BVGEC 2021)
- Rotary Club (BIBV with BVGEC 2021)
- The Co-operators Co-op Development Program (BVGEC 2021)



What's Next...

With verified community interest, an initial team, an organisational model, and sufficient development funding, your next phase is building capacity and tackling the nitty-gritty of organisational development.

At this point, it's helpful to host a community meeting to build awareness, outline the work done so far and what you hope to accomplish next, and put out a call for support. Your invite should include your existing supporters, but also consider including local foundations, economic development organisations, governments, Indigenous communities, or any other individual or group you think can help or would benefit from knowing about the initiative.



FROM CONCEPT TO REALITY



REALIZATION

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INCORPORATION

It's time to incorporate!

At this point, you'll need some professional support - hire an external co-op developer and lawyer. You can ask the Alberta Co-operatives and Community Associations for recommendations. This person will ensure you submit the correct legal documents under the Co-operatives Act.



To Incorporate your organization as a Co-operative, you'll need:

- A Name and **NUANS** Report
- Articles of Incorporation
- Names and signatures of incorporators
- Forms (Statutory Declaration, Information for Incorporation, Notice of Address, Notice of Directors or Change of Directors)
- Incorporation fee – approximately \$100 at the time of publication



BYLAWS

Bylaws are the rules and regulations that govern your Co-operative. Bylaws also outline the organisation's procedures to carry out its business, including conflict resolution, governance and Membership. Bylaws must be submitted to Service Alberta ⁹ within 180 days of receiving the Certificate of Incorporation in Alberta. You'll need to hold a Directors meeting to discuss the bylaws.

Typically, bylaws cover the following topics:

- Membership and members
- Directors and officers
- Meetings
- Investor shares
- Patronage
- Voting and voting rights
- Other



REALIZATION

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BVGEC relied upon outside counsel to provide templates of Articles of Incorporation and Bylaws. Then, based on the internal review of initial board members, BVGEC modified them to meet the Co-operative's needs. Before filing, BVGEC had outside counsel review and receive advice on the proposed documents.



Copies of BVGEC's Articles and Bylaws can be found in the Attachments.



DEVELOP A BUSINESS PLAN

You may want to recruit a business planning professional to help create this key document. If you do, ensure they have the knowledge base to support the initiative that you are undertaking, i.e., familiarity with the renewable energy or energy markets and ideally experience in the co-op sector.

Writing a Co-operative business plan requires careful consideration of a Co-operative enterprise's unique structure and goals and specific risks, which could include market fluctuations, regulatory changes, or internal conflicts.

Remember to tailor your Co-operative business plan to your specific industry, market, and the needs of your members. Regularly revisit and update the plan to reflect changes in the business environment and the Co-operative's development.



A Business Plan Template can be found in the Attachments.



Here are some tips to help you create an effective Co-operative business plan:

- **Understand Co-operative Principles:**
 - *Ensure that your business plan reflects Co-operative principles, such as voluntary and open membership, democratic member control, and concern for the community. Align your goals with these principles.*
- **Define Co-operative Structure:**
 - *Clearly outline the Co-operative's structure, including membership criteria, voting procedures, and profit-sharing mechanisms. Highlight how the Co-operative will be governed democratically by its members.*
- **Mission and Vision Statements:**
 - *Clearly articulate the Co-operative's mission and vision. This should encompass the business's goals, values, and purpose, emphasizing its commitment to serving members and the community.*
- **Market Analysis:**
 - *Conduct a thorough market analysis to understand the industry, competition, and potential customers. Identify the Co-operative's unique selling points and how it will address market needs.*
- **Member Benefits:**
 - *Clearly define the benefits of membership, including any financial returns, discounts, or other advantages. Explain how membership contributes to the Co-operative's success and sustainability.*
- **Financial Projections:**
 - *Develop detailed financial projections, including startup costs, operating expenses, and revenue forecasts. This shows how the Co-operative will generate income and distribute profits among its members.*
- **Risk Management:**
 - *Identify potential risks and challenges the Co-operative may face and outline strategies for mitigating these risks.*



Continued...

Here are some tips to help you create an effective Co-operative business plan:

- **Marketing and Promotion:**
 - *Outline a marketing and promotional strategy to attract members and customers. Emphasise how the Co-operative will differentiate itself in the market and build a strong brand.*
- **Training and Education:**
 - *If necessary, detail any training or education programs for members to ensure they understand the Co-operative principles, their roles, and how to contribute effectively to the business.*
- **Sustainability and Social Responsibility:**
 - *Highlight the Co-operative's commitment to sustainability and social responsibility. This could include environmentally friendly practices, fair labour policies, or community engagement initiatives.*
- **Legal and Regulatory Compliance:**
 - *Ensure that your Co-operative business plan addresses all legal and regulatory requirements for Co-operatives in your jurisdiction. This may include filing the necessary documents, obtaining licenses, and complying with Co-operative laws.*
- **Contingency Plans:**
 - *Develop contingency plans for potential challenges or changes in the business environment. This could involve alternative marketing strategies, financial adjustments, or crisis management plans.*



BOARD OF DIRECTORS

The Board of Directors sets strategic direction, ensures good governance, and makes decisions regarding the organisation's activities. Board Members are accountable to their members and, importantly, hold fiduciary responsibility.

When organising your Board of Directors and writing your bylaws, some questions you may want to consider:

- What is the minimum and maximum number of Board Members?
- What is the ideal term length for a Board Member?
- How many terms may a Board Member sit for?
- Should Board Members also be required to be members of the Co-operative?
- How will you ensure equity, diversity, and inclusion on your Board?

INSURANCE REQUIREMENTS

Your organisation's insurance requirements will be different depending on your activities; we suggest you seek advice from an insurance broker to figure out the best coverage.

As a minimum, BVGEC recommends sourcing Directors' and Officers Insurance. These policies offer liability coverage for company managers to protect them from claims arising from decisions and actions taken as part of their duties. They typically cover legal fees, settlements, and financial losses when the insured is held liable.



GOVERNANCE AND ADMINISTRATION

Governance and administration might not be the subject your organisation's founding members are passionate about, but good governance is vital to ensure success. Make this a priority from the beginning to save your organization from future issues.

ROLES AND RESPONSIBILITIES

Formally establishing roles and responsibilities helps clarify volunteer tasks and identifies areas of weakness within your skill set. Your organization will also need to appoint a Chair, Secretary and Treasurer.

- Create a roles and responsibilities document for Board members.
- Create a confidentiality document.
- Establish a regularly scheduled meeting on a consistent day of the week and time of day.

COMMITTEES

Committees are the smaller groups that advance specific tasks. Think of it like an action group that takes your overall vision and strategy and breaks it into actionable tasks.

- **Assign a Committee Chair.**
 - *The Committee Chair should be a Board Member who is responsible for facilitating meetings, keeping Committee members informed, reporting on the Committee's actions to the Board, and bringing decisions to the Board where appropriate.*
- **Gather Committee members.**
 - *Committees can include members who aren't Board Members, so you may want to think about people you know who have the skillsets you need or put a call-out for volunteers.*
- **Create Terms of Reference for Committees.**
 - *This outlines the scope of the work, desired skillsets, and suggested outcomes. A template Terms of Reference is available in the attachments.*

This table outlines committees you might consider forming in order to advance your organisation.

Stage of Development	Committee Name	Areas of responsibility
Early	Finance and Administration Committee	Finances, accounting, insurance, banking, invoicing, business plans and budgets, project economics validation, dividend/interest payments
Early	Membership and Stakeholder Engagement Committee	Member registration, engagement, volunteer management, onboarding, recognition and retention
Early	Communications and Promotions Committee	Website, social media, local events, organizing presence at regional events, internal and external communication releases
Early	Governance Committee	Bylaws, government reporting, contracts and legal agreements (MOU's, NDA's, RFI, RFQ), share subscription agreement
Early	Technology and Business Development Committee	New technology appraisal, exploration of and communication with potential business opportunities
Early	Project Development Committee	Assess potential hosts, guide/advise/review project development process
Later	Fund Development	Identify fund opportunities, apply for eligible funding streams, liaise with partners, grant and sponsorship support
Later	Co-op Development and Strategic Planning	Policy and systems change in energy environment, stakeholder engagement, policy advocacy, strategic guidance



Table adapted from the *Community Energy Co-operative Toolkit*.

RECORD KEEPING

You'll need a common place where all Board Members can access files. A clear, consistent recordkeeping system will set good habits from the beginning. Records must be accessible to all in the event that a board member leaves the Co-op; you don't want them taking all their hard work with them!

Consider using a digital filing system such as [Google Drive](#). Designate a member to create a filing system and file naming convention, and consider running an information session if some members of your team are not familiar with how to use the system you choose.

BANKING, BOOKKEEPING AND TAXES

As for any new business, you will need an operational bank account to flow your revenue and expenses through. The choice of a banking institution is entirely at the discretion of your organisation's board of directors.



BVGEC chose to bank with a fellow Co-operative and connected with their local Credit Union to set up our account.

BVGEC recommends that you open an account which requires two signing officers/ signatories to move money out of.



If your organization is lucky enough to have a bookkeeper or accountant within your volunteer ranks, utilise their skills and recruit them to help you set up your financial tracking system. Identify a system that works for your organisation's needs; there are several online accounts software systems that are available for a small fee. Taking the time to set up your financial processes properly early on will save future headaches. If your organization doesn't have qualified volunteer support for this, we highly recommend hiring an external contractor to complete this work.

When it comes to Taxes, it is your organisation's responsibility to:

- engage an external accounting office,
- provide relevant information to your chosen accounting firm,
- review your submissions and their output for accuracy and
- ensure filing within the Canada Revenue Agency's timelines.

Documents that you might provide to your account to support their work include;

- a general ledger,
- a final draft of Financial Statements,
- supporting documents, including bank statements, invoices, receipts, expense claims and credit card statements.

Your chosen accounting firm will complete the relevant tax forms and file both Federal and Provincial business tax documents for you.

Depending on the services offered by your organisation, you may be liable to file for and pay GST – Goods and Services Tax. Your accountant can advise you on this.

Your accountant will also file for available tax credits. In the case of BVGEC, they qualify for the [Clean Technology Investment Tax Credit](#).

QUALIFICATIONS FOR MEMBERS

Co-op Membership is legally governed and defined in your organisation's bylaws.

To onboard Members to your Co-operative, you must create a Member application form, have this approved by your legal team, and be ready to accept payments.

All Applications for Membership in the Co-op are subject to the approval of the Board.

Membership application process:

- Potential Member completes and submits application form to the Co-operative; this may be online or on paper.
- The Board of Directors reviews the application and approves or declines the request.
- Upon approval, the new Member pays the Co-operative for their Membership share.
- The Co-op confirms receipt of the payment and issues a Membership share certificate.

For BVGEC to achieve its vision of *making renewable energy accessible and affordable in the Bow Valley*, it wanted to offer opportunities that foster financial and social contributions. Several involvement pathways were designed to build a more community-focused, robust, and inclusive organization.

For this reason, BVGEC's "Friends" provide capacity-building resources such as advocacy, stewardship, education, relationship building, or other in-kind support. "Members" intend to contribute financially and begin by purchasing a \$100 member share to join. "Investors" participate by purchasing investment shares and receiving a return on investment through dividends. Both organizations and individuals can participate in any of these three tiers.



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PREPARE FOR LAUNCH

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COMMUNICATIONS AND MARKETING

Effective communications and marketing are vital to build supporters, engage investors, and showcase success to your community. Think about it: If a potential supporter or curious community foundation can't find your project updates or your website is two years out-of-date, they'll be sceptical that your team is doing anything and will likely turn away.

Communications vs Marketing.

Think of communications as storytelling and marketing as advertising. Both are essential to building awareness and engaging your community members, but they have different goals and tactics.



Develop Your Branding

Don't take it from us – marketing professionals know that good, consistent, and unique branding builds trust, makes you stand out among competitors, effectively communicates your story, and shows professionalism and credibility. If you want wide customer recognition and loyalty, branding is essential.

When developing your brand, follow these steps:

1 - Understand Your Audience

- *Who will be interested in the service your organization is offering?*
- *Do you want a broad reach or target a specific population subset?*
- *What demographics will you need to target with your marketing efforts – age, income, geographic area?*

Answering these questions will help you focus on your communications and marketing tactics. You should enlist the help of a communications professional to do some research or exploratory work to determine your audience.

One helpful tool is to consider the barriers and opportunities for each key audience and then determine the best tactic to reach them. Don't make assumptions about who you should target. Aim for objectivity by facilitating an anonymous survey or referring to demographic data or research. Have one-on-one conversations with members of your key audiences and ask open-ended questions about their motivations and behaviours. You may be surprised by what you find out.

Example:

Key audience	Barriers/opportunities	Tactic
Working parents with young children ~age 30-45	Barriers: <ul style="list-style-type: none">• Don't have a lot of spare time• ... Opportunities: <ul style="list-style-type: none">• Care about their children's future, concerned about climate change• ...	<ul style="list-style-type: none">• Targeted Facebook campaign• Host community drop-in BBQ with kids' activities•

2 - Create Value Proposition

Your value proposition can be considered your "elevator pitch" – something you'd say to someone who knows nothing about your organisation. It concisely summarises what service you provide to whom and why.

Here's a template you can use to create your value proposition:

Our (product/service) helps (target audience) who (need) by (action) so that (people, planet or prosperity outcome is achieved OR brand personality is experienced).



3 - Determine Brand Elements

To develop a consistent brand, you'll need to decide on elements such as:

- Colours
- Typography
- Brand tone
- Verbal identity

Again, consulting a marketing professional to determine brand elements may be helpful. However, there are also good online templates.

A You can see *BVGEC's brand template* in the [attachments](#) for reference.

Having a consistent brand and brand templates also makes it easier for you to develop materials for communications like your website, social media and newsletters since you are sticking with a standard template. Thankfully, you no longer need a degree in design to create a professional brand or manage a website.

The following tools can help you get started on a low budget:

Design tools:

- [Canva](#) is a widely popular design tool. The Pro account is worthwhile to access thousands of free designs and photos, but it cannot be used without a fee.

Website builders

- [Squarespace](#), [WordPress](#), [Wix](#), and [Weebly](#) are examples of site builders with built-in templates that you can use without any web design experience.
- You'll need to budget for a domain name and annual website hosting fee on these platforms.



Social Media

- *LinkedIn, Facebook, Instagram, Twitter (now known as 'X') and TikTok are some of the most popular social media platforms.*
- *Think about registering for a consistent username across all platforms.*
- *Start with the social media platforms your audience is most likely to use.*
- *Set a goal to post at least once a week, as regular posting shows your followers you're active. Facebook and Instagram offer a free scheduling service on business.facebook.com to save you time.*
- *Other scheduling services for a fee include [Buffer](#), [Hootsuite](#), [Later](#), and more.*



Craft a Communications Plan

Your initial communications plan is simple. It outlines what you will say, to whom, through what channel, and when. If this is a shared document, it should also outline who is responsible for completing the task.

Here's a sample Communications Plan template:

Message/ Objectives	By when (Frequency)	Channel	Target Audience	Who is responsible
e.g., Inform about membership opportunities	Monthly – first Monday of each month	• Newsletter – MailChimp	• Subscribers – target young professionals	• Andrea
...				



INCEPTION

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Tips for Communications, marketing and advertising

- Create a newsletter or mailing list. Be clear about how often you'll send communications.
- Encourage all members to attend your AGM.
- Understand what social media platforms your target audience uses
- Aim for earned media – earned media is media that you don't have to pay for. Build relationships with the local radio hosts, journalists or editors of the local papers, or social media influencers.
- Rely on a network of partners to share posts online to increase your social media reach.



RECRUIT MEMBERS

With a solid brand and an understanding of your audience and how to reach them, it's time to do a member drive! This is about building a community of supporters who will help drive awareness of the organization and participate in the organisation's activities.

BVGEC started with a 45-day Member Drive campaign with three goals: to recruit 25 members, increase social media followers, and identify investment interests from the community. At \$100/membership, this also translated into generating revenue of \$2500 in membership fees.

This campaign acted as a test of current messaging across individuals and organisations. BVGEC was successful in using other organisations' communications channels to spread the word, as well as boosted social media posts.






GET INVESTMENT READY



The final step in defining your status as an Opportunity Development Co-operative is to make your organization 'Investment Ready'.

 To accept investment in Alberta under the Securities Act, firms and individuals must be registered with the Alberta Securities Commission **10** to give advice about securities or to trade, buy or sell securities to Albertans.

As Member organisations that solicit investment only from their Members, Co-operatives are exempt from this rule. **11** This may become a deciding factor in the organisational model you choose.

At this point, a securities lawyer is required to guide your organisation, which may incur a significant expense.

Disclaimer – The information provided in this manual is for general informational purposes only and should not be construed as legal advice. Users of this manual should not act upon the information provided without seeking professional legal counsel.

 *Templates of BVGEC share Subscriptions can be found in the Attachments.*

BVGEC launched their first investment share offering in 2021 using the Offering Memorandum Exemption, Form 45-106. This form is a detailed road map of the proposed investment opportunity applicable to the investment shares being sold and is included in the Share Purchase Agreement.

BVGEC's Share Purchase Agreement and risk acknowledgement forms were provided to prospective investors. It included alternative securities exemptions, including those available to high net-worth eligible investors, BVGEC Members of one year or more and Friends and Family of the Board.





INSTALL YOUR FIRST ENERGY PROJECT

HOST SITE SELECTION

No matter how good the renewable energy potential is, a project cannot be realized unless there is a willing host site.

Outreach may be required to engage host sites, or interested hosts may contact you. It's helpful to deliver a 15-minute standardised presentation that outlines how your organization functions, the advantages and considerations for the host site, and the process for the next steps should they choose to proceed. Leave lots of time for questions, as this is where the real discussion happens.

In discussions with potential hosts, it's important to communicate the value proposition. Social and environmental good are essential values the host site and Co-operative must share. Through its host program, a Co-operative can enable property owners to demonstrate environmental leadership by allowing local green energy to be generated on their premises. This directly contributes to greening the local electricity grid while also dramatically boosting the environmental performance of on-site operations and aiming to reduce electricity costs.

To address the barriers associated with installing renewable energy systems, BVGEC works with organisations that meet the following defined criteria for ideal host sites, as they have the highest potential for success:

- *Cannot afford the upfront costs of renewable energy*
- *Focus on community needs and/or are non-profit organisations*
- *Offer the potential to expand host site recruitment, BVGEC membership, and investor engagement for future projects.*



GENERATION

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In summary, the value proposition that BVGEC provides to its hosts:

- Avoid capital outlay for renewable energy
- Long-term, predictable energy supply pricing
- Participation in socially responsible energy development
- Opportunity to be an environmental leader in their community
- Educational/promotional opportunities
- Potential opportunity to be the “first” – i.e., first synagogue in Canada to install renewables



MOVING YOUR CHOSEN PROJECT FORWARD

Create and confirm a Collaboration Agreement with the host site. The principle of this Agreement is for both parties – the Co-operative and the host site - to express their intent to proceed with project development and not pursue alternative opportunities while moving through the five phases outlined below. This Agreement is usually not legally binding or formal. It may be terminated at any time if the parties have not been able to agree to the terms and conditions of any binding agreements or contracts.

Appointment of a Joint Steering Team

Decide which members of your organisation, the host site, and any other partners will be the point of contact for day-to-day work. Setting up a recurring meeting time (e.g. biweekly) is helpful to provide regular updates on progress and discuss the next steps.

Phase 1: Feasibility Assessment

First, BVGEC undertakes a preliminary economic evaluation of the potential installation opportunity based on freely available data on solar irradiance at the host site location. This preliminary analysis gives BVGEC a rough idea of the estimated cost and solar generation capacity.

Information required from the host site for the Feasibility Assessment may include:

- 12 months' energy consumption invoices
 - *To determine annual onsite consumption and, therefore, the maximum size of the system that could be installed*
- Basic architectural drawings (if available)
 - *To calculate roof area available for panel installation*
- Aerial photos
 - *To identify potential areas of shading*
- Roofing materials and age
 - *To confirm the roof is made of a suitable material for installation and that the roof is ideally less than 5 years old*
- Building ownership details and outlook
- Land ownership and outlook

At this stage, projects can be turned down if the technical or economic feasibility is not favourable, or move to Phase 2 (Project Definition Agreement).

Phase 2: Project Definition Agreement

If the preliminary economic modelling for the host site is favourable, you can progress to the next step, a Project Definition Agreement. The Co-operative drafts this agreement with collaboration and involvement from the host site.



The scope of the Project Definition Agreement includes, but is not limited to:

- Request for Quotations from Solar PV vendors
- Formal structural assessment (provided by solar company)
- Financing options
- Draft Energy Sales Agreement (Power Purchase Agreement)
- Draft Operation and Maintenance Agreement
- Draft Construction Contract
- Risk Assessment

The next step is to undergo a [Technical Bid Evaluation](#) and [Vendor Capital Assessment](#) to assess solar PV providers' applications using agreed-upon criteria.

Choosing an installer:

- Tip #1: Refer to Solar Alberta's "[How to Choose a Solar Provider](#)" resource
- Tip #2: Allow the host site to participate in the selection process. This is a long-term decision for their building, so it's vital that both parties are comfortable and confident in the contractor's work.
- Tip #3: When choosing a solar installer, consider their ability to provide service in a short-term demand scenario, especially if your organization is in a rural area with limited coverage. Consider choosing a local firm that can provide maintenance and annual checks to the system.

By this point, you will have a good understanding of the viability of a project and have verbal confirmation from the Host as to whether they are committed to proceeding according to the draft documents created during this phase.

Phase 3: Capital Raise

Now is the time to confirm your availability of capital. Ideally, you would begin negotiations with a Host site with significant capital in the bank. However, this can be difficult for fledgling organisations, and you may need to execute a targeted investment raise to source the capital required to construct the project.

Phase 4: Execution of Contracts and Agreement to Proceed with Installation

Once you have confirmed access to capital, you are ready to move ahead and execute those draft agreements.

This Phase ratifies a formal agreement by both parties within a legally binding commitment to proceed with project development. Finalised contracts include the Power Purchase Agreement between the Co-operative and the host site and the service contract between the Co-operative, the host site, and the solar supplier.

Energy Sales Agreement (ESA), also known as A Power Purchase Agreement (PPA) in the case of BVGEC, is a long-term contract between two parties, the buyer (host) and the seller (renewable energy project developer) of the electricity. The PPA outlines all aspects of the contract, including revenue distribution and electricity price, terms and schedules, obligations for installation, maintenance and decommissioning, and dispute resolution procedures.



A PPA template can be found in the Attachments.

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Energy Sales Agreements should consider the following:

- A base floor rate of energy.
- Track the value of appropriate jurisdictional carbon taxes and, if the host wishes to retain these, a value for this.
- Tracking the provincial average energy rate and a tracking clause allowing price increases by a formula.



To create a PPA, BVGEC looked at a number of “boilerplate” examples from other renewable energy Co-operatives in Canada. Each PPA may be different based on the needs of the host site.

Phase 5: Project Execution

After the ink has dried on all relevant documentation, the steering team will work together to facilitate the project installation.

This primarily consists of coordinating with the chosen solar installation contractor, who will schedule and complete the work as per pre-agreed timelines. This is often the most exciting stage of a project and we recommend celebrating your teams’ success in installing your first OR latest community generation system, you may even consider hosting an official switch on event!

Marketing tip

Don't forget to document key events to share your successes on your communications platforms and inform local media!

Phase 6: Operation and Maintenance

Your project is up and running, generating green electricity. Congratulations!

Finally, you need to consider:

- How would you be able to best track your site's energy production? You will need this information to monitor for any disruption in energy generation, which may require maintenance and host invoicing.
- The frequency with which you invoice your Host site.
- How you will generate, send and receive payment for those invoices
- Setting up an annual service for the infrastructure; this is usually offered by the installer but incurs an additional cost.
- How will you pay for faults or system failures that are your organisation's responsibility?





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A NOTE FROM THE AUTHOR

If you have been inspired by the work of BVGEC outlined here, great! We'd like to invite you to use this manual and begin the work to develop your own local community initiative. A word of caution from a team who has lived it - THIS IS HARD WORK, and before you begin, you and your team need to be prepared to put in the hours. It took BVGEC 2.5 years from inception in 2019 to the installation of their first project in 2021, and during that time, their volunteers committed hundreds of hours of volunteer labour. To date, and as a team, that number is in the thousands.

But please don't let that dissuade you. BVGEC is considered a trailblazer, and it is never easy to be the one finding the trail. With the right guidance, the right people, templates, direction, and support of this manual and those listed within it, your journey will likely be much easier.

Sincerely, your friends,





APPENDIX A



GLOSSARY

I

Behind-the-meter (also known as “behind-the-fence” or “site generation”) is used to describe electricity generation for on-site use rather than for sale to energy retailers.

A **Bi-directional Meter** is an electricity meter that can flow electrons in two directions; electricity can be imported and exported from the grid.

The **Biosphere Institute of the Bow Valley** is a Canmore-based charitable organization working to empower community leadership to address environmental challenges, including Human-Wildlife Coexistence and climate change, through three core programs: WildSmart Community Program, Shift: Climate Transitions, and Future Leaders.

The **Bow Valley** is the valley located in the headwaters of the Bow River in the Canadian Rockies of Alberta, geographically from the Bow Glacier to the Stoney Nakoda Reserve. Communities in the Bow Valley include Lake Louise, Banff, Canmore, Dead Man’s Flats, Exshaw, Harvie Heights, Lac des Arcs, and Morley.

The **Bow Valley Green Energy Co-operative** (BVGEC) is a grassroots, socially responsible organization that aims to facilitate the creation of community-owned renewable energy generation projects in the Bow Valley. We are community-led and volunteer-driven.

Carbon Dioxide Equivalent (CO₂e) is the number of metric tons of CO₂ emissions with the same global warming potential as one metric ton of another greenhouse gas.

Clean Technology Investment Tax Credit is a 30% refundable Clean Tech ITC first announced in the 2022 Fall Economic Statement. The credit is available for “clean technology property” that is acquired and becomes available for use on or after March 28, 2023. The Clean Tech ITC can be claimed by a “qualifying taxpayer”.

Climate Change is the significant variation of average weather conditions becoming, for example, warmer, wetter, or drier—over several decades or longer. It is the longer-term trend that differentiates climate change from ...

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... natural weather variability. Due to human-caused Greenhouse Gas emissions from burning fossil fuels, the world is warming faster than ever in recorded history. Warmer temperatures over time are changing weather patterns and disrupting nature's usual balance.



Community Generation is formally defined under Alberta's Small Scale Generation Regulation as a small-scale generating unit that is the subject of a community benefits agreement or a community benefits statement and has been qualified by the Commission under Section 3 of the Regulation. This manual defines **Community Generation** as renewable energy projects that benefit communities.

A **Community Generator** is an organization that owns and operates renewable energy infrastructure financed by community investment and uses its profits to benefit the communities in which the infrastructure resides.

Community Investments are a subcategory of socially responsible investing. They aim to earn investor returns while contributing to noble causes.

A **Co-operative (Co-op)** is a business owned and run by its members who use and benefit from its goods or services. [12](#)

Energy Transition refers to the global energy sector's shift from fossil-based energy production and consumption systems — including oil, natural gas and coal — to renewable energy sources.

Generation Capacity is the amount of electricity a generator can produce at a given time.

Greenhouse Gas (GHG) emissions are naturally occurring atmospheric gases that are also produced when hydrocarbons, such as natural gas and oil, are burned. Greenhouse gases include carbon dioxide (CO₂), methane, nitrous oxide, and ozone, all of which contribute to climate change as their levels increase.

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Host Sites are properties whose owners partner with a renewable energy Cooperative and ultimately receive renewable electricity from an operating system.

The **Interconnection Point** is the location where a grid user – an energy producer supplying power to the grid or an energy consumer drawing power from the grid – is physically connected to the grid infrastructure.

Interconnection Studies (Wires Studies) are a series of processes undertaken by your local wires provider to determine the interconnection requirements at a specific site and provide costs for interconnection.

Kilowatt (Kw) is a unit of measurement for the rate of power an electrical device or load uses. The higher the kW of a device, the more electrical power is needed to operate it. A kilowatt is 1000 watts (W).

Load Offsetting is how much of your electricity use you can offset with solar. It is calculated as the amount of electricity your solar system produced in a year divided by the total amount of electricity your home used that year, expressed as a percentage. Ideally, you want your solar production to be equal to or greater than your electricity usage to eliminate your electricity bill.

 **Micro-generation** defines electricity production using renewable energy sources sized to meet customer's electricity needs. The Micro-generation Regulation is under the Electric Utilities Act.



Mitigation refers to efforts to reduce or prevent greenhouse gas emissions. Mitigation can mean using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behaviour.

NUANS Report is a computerized search system that compares prospective business or corporate names to a database of existing, reserved, and proposed corporate names and trademarks in Canada. Once a preliminary search is completed, if the name appears to be available for incorporation or registration, a full Nuans® search can be initiated.

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An **Offering Memorandum** is a document typically used in a private placement offering of securities that provides investors with specific information about the issuer of the securities, its business and the securities being offered.

Opportunity Development Co-operatives are for-profit Co-ops made up of local community members who identify or are approached by local entrepreneurs with a business opportunity in need of investment. [12](#)

Renewable Energy is energy derived from natural processes that are replenished at a rate equal to or faster than the rate at which they are consumed. Renewable energy includes solar, wind, geothermal, hydropower and ocean resources, solid biomass, biogas and liquid biofuels. [13](#)

A **Share Purchase Agreement** is an important document that outlines the terms and conditions of the sale, including the purchase price, payment terms, and any warranties or representations made by the seller. The SPA is designed to protect the interests of both parties and ensure that the sale is conducted fairly and transparently.

Small-scale Generation refers to a regulatory framework established in Alberta to facilitate distribution-connected alternative and renewable generation sized to supply electricity to the grid.

Social Enterprises are organizations with primarily social objectives and an overall mission to serve the public good. A social enterprise will operate one or more profit enterprises to generate earned income and reinvest it into realizing its social mission.

Solar Azimuth is the horizontal orientation of your panels in relation to the equator. For best results, your solar panels should face toward the equator. If you live in the Northern Hemisphere, face them south. If your panels are fixed, setting them at a tilt angle equal to your latitude is best.

Solar Photovoltaic Systems are unique electrical systems that produce energy from a renewable and inexhaustible source: the sun.

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Technical Bid Evaluations assess the technical capability, including quality, experience, compliance with specifications, operating cost, and performance penalties, to meet the project requirements and execution capability.

A **Utility** is a company that supplies something such as electricity, gas, or water to the public.

Vendor Capital Assessments are an evaluation and approval process that businesses can use to determine if prospective vendors and suppliers can meet their organizational standards and obligations once under contract. The end goal is to secure a low-risk, best-in-class vendor and supplier portfolio.

Wires Studies (Interconnection Studies) are a series of processes undertaken by your local wires provider to determine the interconnection requirements at a specific site and provide costs for interconnection, including high-level upgrade options. [14](#)



WHERE TO FIND SUPPORTIVE ORGANIZATIONS TO REFERENCE

The following is a partial list of organizations doing similar work across Canada. The great thing about these community-minded organizations is that they are willing to share and help. Reach out to your network and other community generation organizations in Canada doing this work.

	Type of organization	Located	Website
Alberta Community & Co-operative Association (ACCA)	Voice of co-operative and credit union sector across Alberta	Edmonton, AB	https://www.acca.coop/
Bow Valley Green Energy Co-operative (BVGEC)	Co-operative	Canmore, AB	https://www.bvgreenenergy.org/
Co-operatives First	Not-for-profit providing co-op start-up resources	Saskatoon, SK	https://cooperativesfirst.com/
Decentralised Energy Canada (DEC)	Industry association	Canada	https://www.deassociation.ca/
Peace Energy Co-operative (PEC)	Cooperative	Dawson Creek, BC	https://peaceenergy.ca/
Solar Alberta	Non-profit society	Edmonton, AB	https://solaralberta.ca/
Solar Power Investment Co-operative of Edmonton (SPICE)	Co-operative	Edmonton, AB	https://joinspice.ca/
Southern Alberta Renewable Energy Co-op (SABRE)	Co-operative	Southern AB	https://www.sabrecoperative.com/

Further Resources

- [Municipal Climate Change Action Centre's solar PV calculator](#)
- [Canadian Energy Regulator - Provincial and Territorial Energy Profiles – Alberta](#)
- [QUEST - Enabling Low Carbon Energy Projects for Investment](#)



SUPPORTS

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CANADIAN RENEWABLE ENERGY CO-OPS (OUTSIDE OF ALBERTA)

	Type of organization	Located	Website
Ottawa Renewable Energy Cooperative (OREC)	Cooperative	Ottawa, ON	https://www.orec.ca/
Solar Share	Cooperative	ON	https://solarbonds.ca/
SolShare Energy	Solar Investment program	BC	https://www.solshare.ca/
Vancouver Renewable Energy (VREC Solar)	Business	Vancouver, BC	https://www.vrec.ca/

REFERENCES

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- 1 [Solar, wind and nuclear have ‘amazingly low’ carbon footprints, study finds](#) - Carbon Brief - 8 December, 2017
- 2 [Provincial and Territorial Energy Profiles – Alberta](#) - Canadian Energy Regulator
- 3 [Alberta's Renewable Energy Advantage](#) - Pembina Institute Blog - 31 July, 2023
- 4 [Canmore Community Solar](#) - Biosphere Institute of the Bow Valley
- 5 [Connecting to Alberta’s grid with community generation](#) - Municipal Climate Change Action Centre Blog - April 3, 2020
- 6 [Sample strategic planning agenda 2023 strategic planning process](#) - SME Strategy Management Consulting Blo - March 29, 2023
- 7 [What is the difference between a registered charity and a non-profit organization?](#) - Government of Canada
- 8 [Types of Co-operatives](#) - Alberta Community & Co-operative Association
- 9 [Incorporate an Alberta Co-operative](#) - Alberta Government
- 10 [Registrant Toolkit](#) - Alberta Securities Commission
- 11 [RULE 45-511, Local Prospectus Exemptions and Related Requirements](#) - Alberta Securities Commission
- 12 [What is a Co-operative](#) - Alberta Community & Co-operative Association
- 13 [What is Renewable Energy?](#) - Government of Canada (NRCAN)
- 14 [Interconnection Guide](#) - Fortis Alberta



BVGEC - A HISTORY

IX



A BRIEF HISTORY...

APRIL 2019

The Biosphere Institute of the Bow Valley recruited volunteers interested in supporting a community generation initiative

JULY 2019

These volunteers created a dedicated volunteer steering committee

NOVEMBER 2019

Officially named Bow Valley Green Energy Cooperative

FEBRUARY 2020

Execution of Community Generation Feasibility Study facilitated by the Biosphere Institute of the Bow Valley

Introduction of BVGEC to the community at an open house

Successful application made to the Investment Readiness Program and Banff canmore Community Foundation to facilitate business and financial planning, and formalize investment share offerings

MAY 2020

BVGEC is officially incorporated as a cooperative

OCTOBER 2020

Membership and friends framework adopted

The board of Directors become BVGEC's first official members!

NOVEMBER 2020

Volunteer Friends of BVGEC opportunity opened

Pioneer joint BVGEC and host committee formed

DECEMBER 2020

Bylaws submitted to Service Alberta

JANUARY 2021

Bylaws approved by Service Alberta

MARCH 2021

Community-wide Membership opens via online portal

Member Drive launched

AUGUST 2021

Initial Investment raise issued via Subscription Agreement to Friends, Family and Accredited Investors

SEPTEMBER 2021

An inaugural community-funded renewable energy generation system was installed at RCMUC!





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