



Community Energy

Co-operative Toolkit

Owning energy decisions.
Focusing on community.

Prepared by ACCA for NADC's Energizing the North Seminars
March 2017

The Potential of Community Owned Energy

We see a high uptake of renewable energy when it is community owned. Local ownership of renewable energy projects helps people take an active interest in their local community, and think longer-term about **where and how** energy development occurs.

The co-operative structure provides an excellent framework for communities to own and control renewable energy infrastructure. Instead of only being a consumer, people involved in **community ownership** often think of themselves as producers, investors, and, for many, as stewards of a natural resource.

This guide provides an overview of the co-operative structure, and explains the development process. The case studies included in this toolkit, as well as the overview of utility co-ops, illustrate **what can happen when communities and citizens own the key infrastructure.**

The objective of this guide is to support groups in talking about the issue of renewable energy in their community, and turn that talk into action!

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How to use this Guide

This **Community Energy Co-operative Toolkit** provides essential information to start a renewable energy co-op. The first section provides information on **renewable energy in Alberta** and information on the **regulations surrounding micro-generation**.


The guide then explains the **co-operative business model** and the three-step process to starting one: **Plan, Develop and Launch!**


Each phase is described in this booklet, with the **basic steps** to guide you through the **process of developing a co-operative**. There are lists of resources along the way to help you find more details if you need them.


The **case studies section** provides rich examples of how underlying principles and action steps have been applied by other co-ops and community projects. These illustrations of key aspects in co-op development will **improve your understanding** and **spark ideas** for your own co-operative project.

Use this toolkit as a guide to develop an energy co-op project in your community.

It is divided into three sections, and then subdivided into action-items and steps to propel you along the development path.

 **Plan** — These are the pre-development steps that will allow you and your group to assess whether you should proceed with the development of your co-op idea.

 **Develop** — This is the heart of the co-op enterprise process; these steps will ensure the stability of your co-op enterprise.

 **Launch** — You're open for business! These steps will ensure a smooth launch and sustainable business operations.

There is also a **post-launch section** to build strong habits to ensure your co-op is a success.



What is Renewable Energy?

Renewable energy refers to wind, solar, hydro, geothermal, and biomass.

Alberta currently generates two per cent of its electricity supply from wind. Wind turbine deployment is generally less expensive than solar and may be favoured in the absence of specific policy incentives, despite the high potential of solar in Alberta.

In the past six years, solar energy production and capacity has grown by 84% annually, a growth that the Canadian Solar Industries Association, a solar industry lobby group, estimates could bring \$5 billion in new investment and 70,000 new jobs for Alberta.

Communities are also exploring and developing geothermal and bioenergy initiatives.

Community Energy — Getting Started

Connecting to Alberta's grid is becoming more accessible for individuals and communities given advancement in government renewable energy policy and programming, and the streamlining of processes.

Groups and communities interested in creating opportunities through renewable energy require resources, energy, and perseverance in taking a project from idea to implementation, then through to its decommissioning decades later.

Community Energy Systems and Technologies

Energy Efficiency Alberta (EEA) is a newly created government agency mandated to develop programs and activities that develop micro-generation and small scale energy systems in Alberta.

EEA defines community-owned renewable energy systems as joint ownership across a collection of individuals¹:

"Community energy systems technologies includes both micro-generation and small-scale energy generation. Micro-generation is not intended to produce electricity beyond the owner's needs. Generated capacity is less than one megawatt from alternative or renewable sources of energy. Small-scale community generation refers to generation owned by a local community, co-operative or non-profit organization (including schools, post-secondary institutions and hospitals, etc.). Generation capacity from alternative or renewable sources of energy may be larger than a micro-generation site."²

- Energy Efficiency Alberta (EEA)

Community energy technologies include: solar PV, solar thermal, wind, biomass, geothermal, and micro-hydro systems.

Solar systems are relatively easy to procure and install, making them the most common and accessible means of generating community energy. Other technologies can be more complex.

Communities wanting to explore small run-of-river hydroelectricity projects require adequate siting in proximity to flowing water sources and power lines. While biomass generation facilities exist in Alberta, proximity to ample and consistent feed stocks mean that they generally operate on an industrial level. Some community initiatives exist, and others are in the development stages.

Lethbridge Biogas is a 2-megawatt bioenergy plant that serves as Alberta's current demonstration project, testing the feasibility of small utility-scale biogas. It is an excellent local example for understanding such opportunities for future community energy deployment.

¹ Energy Efficiency Alberta (2017). Getting It Right: A More Efficient Alberta; Final Report of the Alberta Energy Efficiency Advisory Panel. (pp.49); Accessed at: <https://www.alberta.ca/documents/climate/EEAP-Report-Getting-It-Right-Complete.pdf>

² Energy Efficiency Alberta (2016). Energy Efficiency and Community Energy in Alberta: Discussion Document. (pp. 6); Accessed at: <https://www.alberta.ca/documents/EEAP-DiscussionDocument.pdf>

District energy is a form of community energy that allows a network of homes, businesses, and commercial/industrial facilities to make most efficient use of local heat and power generation.

Drake Landing³ in Okotoks, Alberta, is a master-planned residential community that employs solar thermal arrays mounted on the neighbourhood's homes and garages to capture solar energy and store it underground in a central location for use in heating the community. Drake Landing sets the bar high regarding what can be done on a community level to harness and share in the renewable energy available to them. This is an advanced type of project requiring much forethought, lead time, expertise and coordination in order to make it a reality.

Communities wanting manageable projects and shorter timelines would, at present, be best positioned for success by exploring solar PV installations ranging from solar gardens or parks (10s of solar panels) to small solar farms in rural communities (100s or 1000s of panels).

Rules — Connecting Community Energy Systems to Alberta's Electricity Grid

Alberta created its initial micro-generation (micro-gen) regulation in 2008, to streamline the process of approving and connecting renewable energy systems under 1-megawatt in size to Alberta's grid. Previously, small generators (residential, commercial, institutional, and light industrial) had to complete lengthy applications and undertake assessments similar to those required of industrial power suppliers.

This regulation was updated in 2016, increasing the limit to 5-megawatts and allowing a micro-generation system to service multiple adjacent meters that share a common distribution system feeder.

³. Learn more at Drake Landing solar community: <http://www.districtenergy.org/assets/CDEA/Case-Studies/Drake-Landing-Solar-Community9-25-07.pdf>

Rules — Connecting Community Energy Systems to Alberta’s Electricity Grid (Continued)

The micro-gen regulation also details how generators are compensated for their excess electricity. In Alberta, micro-generators that export some of their energy to the grid are net-billed for the difference in what they generate and consume.

The utility, or wire service provider, is responsible for ensuring micro-gen systems connected to their grid have the proper meter; this is determined by the location, size and purpose of a given installation. These factors also dictate whether or not the excess electricity produced is credited back to the generator at a retail rate (such as a home or a business), or based on Alberta’s wholesale power pool rate (such as small utility-scale solar farm under 5-megawatts).

Lastly, because the Alberta Utilities Commission (AUC) oversees the implementation of Alberta’s micro-gen regulation, the AUC has published key resources to assist prospective micro-generators in navigating the process, including completion of the application paperwork.



More information on Alberta’s grid and electricity market system is available from the Alberta Electric Systems Operator (AESO).

⁴ The Micro-Generator Application Guideline can be accessed at: http://www.auc.ab.ca/involving-albertans/micro-generation/Documents/MicroGeneratorApplication_Version1-3_20130705%20.pdf

Four Steps to Becoming a Micro-Generator in Alberta

According to the Alberta Utilities Commission (AUC) website, there are four key steps to becoming a Micro-generator in Alberta:

1.

Become familiar with the contents of the Micro-Generator Application Guideline which will help you in understanding the process and technical requirements of interconnecting your micro-generation unit to the distribution system.

2.

When you are ready to proceed with your micro-generation project, complete all the required fields of the generation project (less than 1 MW) notice form. Please note that missing or incomplete information may cause delays in processing your application.

3.

Send in your completed application form with all the wire service providers required documentation to your wire service provider for approval. (Example: if your micro-generation project located in the city of Edmonton you will need to send your application to EPCOR Distribution & Transmission Inc.)

4.

Notify your electric retailer. You must advise your retailer of the micro-generation connection date and arrange for compensation for any excess electricity generated.

To learn more visit: <http://www.auc.ab.ca/involving-albertans/micro-generation>

Programs to Assist Community Energy Projects

Provincial and municipal solar related programs have been in existence in a variety of forms since the micro-generation regulations were legislated. Financing options that require consideration and complement government programs are included. Communities looking to leverage incentive programs can visit:

■ Alberta Solar Rebate <https://www.encyalberta.ca/solar/>

For homeowner, businesses, and non-profit solar rebate of \$0.75/watt on solar PV
This is a \$36 million program commitment over 2 years.

■ Alberta Indigenous Solar Program <http://indigenous.alberta.ca/AISP.cfm>

The Alberta Indigenous Solar Program (AISP) is a pilot program providing grants to Alberta Indigenous communities or organization for installation solar PV systems on facilities owned by the community or organization.

■ Banff Solar PV Incentive Program <https://www.banff.ca/solar>

Eligible property owners install a solar PV system and then receive production-based top-up payments. This program is aimed at reducing the simple pay-back for installed solar systems to seven years.

■ Alberta Municipal Solar Program <http://www.mccac.ca/programs/AMSP>

The Alberta Municipal Solar Program (AMSP) provides financial rebates to Alberta municipalities who install solar PV on municipal land or facilities and complete the required public engagement for the project. Facilities located on municipal lands (e.g. community associations/leagues) qualify for this funding, subject to municipal sign-off and other requirements.

■ Growing Forward On-Farm Solar PV Program <http://www.growingforward.alberta.ca/>

For rural community solar. Green Acres Colony, for example, developed a 2 megawatt solar farm with the help of a \$250,000 grant from the Growing Forward 2 program.



■ What is a Co-operative?

What if there was a way of structuring an enterprise so that it is owned by the people who use and benefit from the services it offers?

There is — co-operatives!

A co-operative, or co-op 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.”*⁵

Co-ops are found in virtually every industry and sector of the economy in our province and around the world.

■ Traits of a Co-operative

Co-operatives are businesses owned and run by and for their members. Whether the members are the customers, employees or residents, they have an equal say in what the business does and how it shares the profits.

They're guided by a board of directors that is elected by their local members.

They're created in response to community need, not solely from the perspective of one individual or shareholders raking in a profit.

Like any business when it is profitable, co-ops share the profits with its shareholders; in the case of co-operatives, those shareholders happen to be the everyday members who live, work and shop locally.

⁵ <http://ica.coop/en/what-co-operative>

⁶ <http://acca.coop/wp-content/uploads/2014/06/AB-Co-op-Primer-2016.pdf>

Alberta's Co-op Sector

More than one million Albertans choose to be a member of a co-operative; some live in co-op housing, others bank with a credit union, some may buy their groceries, gas, their farm supplies or camping gear at a co-op; and others may get their electricity or water through a co-op. They can be found in both rural and urban communities.

According to the Alberta Community and Co-operative Association's (ACCA) Alberta Co-op Primer⁶, Alberta is home to:

294 Utility Co-ops

64 Housing Co-ops

39 Retail Co-ops

27 Credit Unions

24 Extra-Provincial
Co-operatives

9 Opportunity Development
Co-operatives

119,000 people receive natural gas through an Alberta gas co-op. This is the largest rural natural gas network on the planet.

40,000 Albertans get electricity from a rural electrification association, with members saving \$19 million on electricity prices each year.

8,750 curb stops in Alberta are serviced by water co-ops.

620,000 Albertans do their banking with a credit union.



■ The Co-op Advantage

“As member-owned, member-run and member-serving businesses, co-operatives empower people to collectively realize their economic aspirations, while strengthening their social and human capital and developing their communities. Co-operatives contribute to sustainable economic growth and stable, quality employment, employing 250 million.... Within the G20 countries, co-operative employment makes up almost 12% of the total employed population.⁷”

- The International Co-operative Alliance

(ICA)

■ Stable, quality employment

Millions of people worldwide earn their living as members or employees of a co-operative.

■ Economic growth

Co-operative enterprises worldwide generate 2.2 trillion USD in turnover while providing the services and infrastructure society needs to thrive.

■ Sustainable businesses

Co-operatives operate from people's needs and a concern for community.

■ Food security

Via a co-operative, farmers can own their land and ask better prices for their produce.

■ Giving people a voice

Voting business decisions together fosters democracy and empowers people.

⁷ When the United Nations declared 2012 the Year of Co-operatives, to mark this historic announcement, the ICA adopted the slogan, “Co-op Enterprises Build a Better World.”

The Co-operative Principles

The main difference between co-ops and other business structures is that all co-ops worldwide adhere to a set of principles that guide the co-op enterprise. These seven principles, shown below, were adopted by the International Co-operative Alliance in 1995.

- 1. Voluntary and Open Membership** — Co-operatives 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.
- 2. Democratic Member Control** — Co-operatives are democratic organizations controlled by their members, who actively participate in setting policies and making decisions. Men and women serving as elected representatives are accountable to the membership.
- 3. Member Economic Participation** — Members contribute equitably to, and have democratic control over the capital of their co-operative. At least part of that capital is usually the common property of the co-operative. 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 their co-operative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the co-operative; and supporting other activities approved by the membership.
- 4. Autonomy and Independence** — Co-operatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their co-operative's autonomy.
- 5. Education, Training and Information** — Co-operatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their co-operative. They inform the general public, and particularly young people and opinion leaders, about the nature and benefits of co-operation.
- 6. Co-operation among Co-operatives** — Co-operatives serve their members most effectively, and strengthen the co-operative movement, by working together through local, national, regional and international structures.
- 7. Concern for Community** — Co-operatives work for the sustainable development of their communities through policies approved by their members.

Differentiating Between Co-ops and Other Businesses

Co-ops also differ from other forms of business in terms of their purpose, share structure, allocation of profit, voting and board structure, and ownership model. These differences are outlined in the following chart prepared by the Ontario Co-op Association⁸.

Legal Characteristics of Co-operative, Private and Not-for-Profit Corporations⁹		
Co-operative Corporation	Private Business Corporation	Not-for-Profit Corporation
PRINCIPLES		
Limited liability	Limited liability	Limited liability
Primary purpose is to provide goods and/or services to members	Primary purpose is to maximize shareholders' wealth	Primary purpose is to further community, social, cultural or environmental objectives.
Control by members	Control by shareholders	Control by members
Surplus is distributed, primarily to members as patronage dividends, after reasonable return gain on invested capital, no capital gains	Unlimited return on shareholders' capital through dividends and capital gains	Business is carried out without the purpose of gain for members. Surplus is retained to further the organization's purposes
Co-operatives income is taxable (unless not-for-profit); patronage dividends are deductible from co-op's taxable income	Income is taxable; dividends are paid from after-tax income.	Normally exempt from income tax
SECURITIES REGULATION		
Sale of shares (and other securities) regulated under the Co-operative Corporations Act; offering statement is required unless exemption is available	Sale of shares (and other securities) regulated under the Securities Act. Prospectus required unless exemption available	Sale of bonds, debentures and other securities generally exempt from regulation
VOTING		
Each member has one vote, regardless of the amount	Shareholders' voting rights are based on the number of voting	Members are generally entitled to one vote, but may have

Legal Characteristics of Co-operative, Private and Not-for-Profit Corporations⁹		
Co-operative Corporation	Private Business Corporation	Not-for-Profit Corporation
SHARES		
May, or may not have share capital; every member must hold one membership share to have voting rights. Preference shares may be held by non-members	No restrictions on the purchase or sale of shares	No share capital
Shares are sold by the co-op and can be transferred only with Board approval	Shares may be traded if a market exists, subject to any shareholders' agreement to the contrary	
DISTRIBUTION OF SURPLUSES		
Surplus, if distributed is normally paid to members as patronage dividends, based on their use of the co-op (often as shares, rather than in cash)	Surplus (or profit) is principally distributed as dividends and paid to shareholders based on the number of shares held	No surplus may be distributed to members
DISSOLUTION		
Distribute all assets (after payments of debts and liabilities), and other par value of shares to their holders, either equally among all members, among members based on patronage dividends accrued over the preceding five years, or, if not-for-profit, to another co-op or charitable organization	Common shareholders have the right to receive all assets remaining after payments of all debts, liabilities and other shareholders' entitlements	Upon dissolution, all remaining assets must be distributed to a charitable organization or other organization whose objectives are beneficial to the community. Some "member-benefit" not-for-profits may be permitted to distribute net assets among members

⁸ http://www.ontario.coop/cms/documents/1/Co-op_Biz_Comparisons_and_legal_combined_April2012.pdf

⁹ Developed by Brian Iler, Iler Campbell LLP for the Ontario Co-operative Association

Types of Co-operatives

Co-operatives are all about meeting member needs. Membership also defines the type of co-operative.

When developing community-owned renewable energy co-operatives in Alberta, the Opportunity Development Co-operative structure (listed on the next page, and discussed further in the next section), is likely the best fit. However, there are ample examples of other forms of renewable energy co-operatives.

The case studies at the back of this toolkit illustrate how different types of co-ops are making an impact in North American and European communities. The role of utility co-operatives at the beginning of the case studies section, also shows how the co-op structure developed and changed the energy market in Alberta.

Consumer co-ops

Consumer co-ops are the most prevalent type of co-op. The members are the customers for your product or service. Examples include retail stores, insurance co-ops, financial institutions such as credit unions, and housing co-ops.

Alberta is home to two innovative renewable energy consumer co-operatives:

Alberta Co-operative Energy (ACE; www.acenergy.ca)

Foothills Energy Co-op (www.foothillsenergycoop.ca)

Both Alberta Co-operative Energy and Foothills Energy Co-op are active in member education on energy literacy and other topics.

In these co-operatives, the members leverage their purchasing power to buy locally produced renewable energy, and to democratically control where the surplus (profit)

Worker co-ops

In this instance, those who work for the co-op are the member-owners of the co-op. Not all employees have to be members and many worker co-ops require a trial period (e.g., 3 months to 2 years) before new employees can be eligible for membership.

This type of co-operative empowers workers to actively engage in the key decisions of the co-op.

There are several solar installation firms that are structured as worker co-operatives. The worker co-op structure has been successful in providing a pathway for people to start businesses in the sector.

Vancouver Renewable Energy Co-operative (VREC; www.vrec.ca) is one Canadian example. Their “projects have generated over 500,000 kWh of clean power and prevented over 38,000 kg of greenhouses gases.”

Producer co-ops

Producers create co-ops to collectively market their goods or services. They also share the costs of marketing, group purchasing and/or retail space. Producer co-ops are often co-ops formed by businesses¹⁰ seeking to own a part of the supply chain.

Home Hardware, Federated Co-operatives Ltd., Ocean Spray Cranberries, and UFA Co-operative Ltd., are all common examples.

Amicus Solar (www.amicussolar.com) is a producer co-op made up solar installer businesses. Amicus organizes wholesale purchasing allowing small businesses to access lower prices; they also promote the sector, find financing options, and support sector education and common branding.

¹⁰. This could include sole-proprietors and contractors and artists.

Types of Co-operatives

Opportunity Development Co-operative (ODC)

An Opportunity Development Co-op, is a co-operative made up of local investors. ODCs pool capital through the sale of Registered Retirement Savings Plan (RRSP) and Tax Free Savings Account (TFSA) eligible shares. The shares are used to finance local business development, and to create both a social and financial return on investment.

In an Opportunity Development Co-op, the members finance local business development by providing debt or equity, to a local project. There are several renewable energy projects that use this, or similar structures, located across Canada. ODCs are discussed further in the next section in this toolkit.

To learn more about ODCs visit www.acca.coop/unleashing

Multi-Stakeholder Co-operative

In unique scenarios where the co-operative meets two different goals of two different groups, there is also the potential to create a Multi-stakeholder co-op.

This hybrid co-op combines two or more of the co-op types outlined above. This is an excellent option if you want to encourage equal ownership for two different types of members, e.g., consumers and workers¹¹.

While it might seem straightforward to choose a consumer co-op when selling goods or services, it is worth taking the time to consider some alternatives. For example, if one of the goals of your retail co-op is to support youth employment, perhaps a worker co-op might be a better option. If you want to showcase the local production of solar panels, perhaps a producer co-op would best foster that. This will also be the case when developing a renewable energy project.

¹¹ Keep in mind, however, that this hybrid model can also create challenging complexities: how do you ensure equal representation on the board? How do you resolve issues such as workers wanting an increase in pay, while consumers want to reduce costs? How can workers, who will be relatively smaller in number, have an equal voice to the larger number of consumer members?

■ Is a Co-op the Right Business Structure?

The main purpose of a co-op is to meet the needs of its members. Often, these needs are created by gaps in the market that government or conventional business is unable to fill. These often represent great opportunities for co-ops as they are based on the idea of community support — similar to non-profit organizations.

As a co-op is an enterprise model, it is better suited to a business environment than a society, which is more focused on rallying its members around a cause. With the community backing the business, co-ops can take on risks that conventional business shareholders — whose interest is largely in realizing a return for their investment — are not.

This checklist will help in assessing whether the co-op model could provide an advantage:

- Does the business idea address a gap in the market that government/conventional business is unwilling to fill?
- Are there people or businesses in the community who would join as members?
- Will the idea create a financial and social benefit?
- Is the originator of the idea and the planning group willing to share key decision-making responsibility with the co-op's membership?

Being able to answer these questions in the affirmative ensures the project idea could be a good fit as a co-operative.

There is always benefit in learning more about the co-operative structure, and the broader co-operative movement. The next section takes it to the next step — creating a co-op.

Overview of the Development Guide

The next three sections of the toolkit explain the development process for a co-operative enterprise. Elements of this overall approach, may also be of use for special projects or forming other types of organizations.

The guide focuses on the Opportunity Development Co-operative (ODC) structure because it is a good fit for deploying capital towards a local renewable energy project while ensuring local control and community focus.



Keep in mind the development process may not always be linear.

The project may bounce back between the different steps, stages and phases. This is a natural part of the process.

The guide will help chart the course to move forward and provide tools and resources to move forward and track progress.

Stage One — Plan Your Co-operative

Getting started can be tricky. As you begin, you may feel the “chicken and the egg” dilemma, but explore your questions, include others, and see what you find!

Some readers may have a team of champions that are already assembled, others will have already clearly defined a need to act upon. More often than not, it will be a combination of both.

Let the fun begin! In the planning stage, you will:

- Identify economic need in your community
- Form a group
- Assess your group’s capacity
- Develop guidelines for decision making
- Assess your business idea
- Choose the co-op’s name
- Develop a work plan and timeline

Stage One — Plan Your Co-operative

■ Identify the Needs and Opportunities for Community Renewable Energy

Most co-op ideas will enjoy a good deal of vetting and revision before settling on a final direction, and drafting and deploying a mission statement.

One of the main considerations to keep in mind when exploring the various aspects of the initial idea is what kind of economic/environmental/social benefit it will bring to the community. While in smaller towns and villages, the whole community may benefit, in larger communities the target community will most likely not be defined geographically, but around an issue or interest.

When it comes to community owned renewable energy the needs to be addressed are often driven by two factors:

- Local projects that need access to start-up or expansion capital, and
- Community members who want to own and/or invest in local renewable energy projects.

Larger goals will underlie these two factors, and will make a profound and long-lasting impact on a community, these could include:

- Economic diversification/development
- Energy transition and independence

Stage One — Plan Your Co-operative

For a community seeking more energy options, to be more independent, to have green businesses, etc., the risk is less of an issue. Lower return on investment, and a longer investment term may not be the only deciding factors.

Identifying the need involves understanding the intended outcomes, both in the short term (1 MW of wind power) and long term (less reliance on fossil fuels). It also requires the group/co-op's board to land on a specific project to invest in.

Identifying the community's need will relate directly to who the members are, and the impact that could be made in the local economy.



Opportunity Development Co-ops (ODCs) provide capital to meet a financial need and create a social return on investment (ROI). Investors in a community with high unemployment might forgo a higher return on investment if their investment created more jobs.

This also creates an interesting situation in that, the business needs to perform to create jobs, and more jobs means a local multiplier effect. The investors may see meagre returns, but the local tax base grows, other businesses are positively impacted and there is more vibrancy in the community. In terms of renewable energy, there are considerable impacts outside of financial returns.

Stage One — Plan Your Co-operative

■ Form a Group

One of the main differences between forming a co-op and forming a conventional business is that co-ops are shaped by groups, not individuals.

Without a group, it is not a co-op. An individual may come up with an idea for a co-op, but the next step is to generate interest in the community and **pull together a group of five to seven people** who are willing to commit to the formation of the co-op, at least to the launch stage.

Where do you find group members?

Often groups form that consist of friends or colleagues, but sometimes groups come together through word-of-mouth. One common method in smaller communities is to rely on volunteers who come forward after an informational meeting. Another option is to work with one or two friends/colleagues and brainstorm a list of desired group members.

When approaching these prospects, have a “pitch” in hand that includes a synopsis of the co-op advantage as well as a short (2-3 sentence) capsule summary of the need for the co-op idea in your community.



Consider targeting key people in the community who have the skills you will need to develop the co-op. Allowing planning group members to “self-select” can be brilliant, but it can also end up with a group of “chronic volunteers.”

Developing a co-op is a business venture that needs nurturing—be careful your volunteers are not already overburdened with their other volunteer activities, and ensure that volunteers who are eager possess the qualities that your working group is trying to attract.

Stage One — Plan Your Co-operative

■ Assess Group Capacity

An important consideration when forming a group is the capacity and diverse skills that each member will bring to the table. The working group operates much like an interim board:

- Making governance decisions and mapping out the vision for the new co-op
- Performing many of the management and staff functions — developing a budget, for example — until the co-op is launched

For example, you may want to include one or two people with an accounting or legal background, or someone with business expertise. It is also important to ensure the co-op has a collaborative working environment:

- Who will lead, or will you rotate the lead?

As the initiator of the co-op enterprise idea, you will have to be prepared to share the decision making from this point forward and potentially turn over the project lead to someone else the group elects.

What kind of commitment will the group require from each of its members?

Since the working group will likely be the first members of the co-op, the group will want to make sure that these provisional members are prepared to commit not only their time, but to provide the first member equity contributions to the new enterprise.

It is essential that the group includes individuals with expertise in renewable energy, who understand the development process for renewable projects.

Stage One — Plan Your Co-operative

■ Plan the Group's First Meeting

Agenda for your first planning meeting:

■ **Introductions** — Each member says a little bit about themselves and why they are excited about the prospect of forming the energy co-op.

■ **Elect roles** — You will need a facilitator and note taker for the meeting. These roles may be rotated or permanent.

■ **Communication and decision-making guidelines** — Brainstorm ideas and have someone list them on a flip chart. Develop and adopt a provisional set of guidelines that the group agrees to test out.

■ **The Business Idea** — Someone provide a brief review of the key aspects of the business idea with the group, highlighting why they think the community will benefit.

■ **Updates** — Update the group on any recent developments since they were first approached to serve on the team.

■ **Round Robin** — Each person around the table gives their initial impressions about the co-op idea. Why do they think it is necessary, who will benefit, etc. as well as some of their concerns about getting it off the ground. Let the group know that all comments are valued. Ensure the group agrees that everyone will have a chance to speak without interruption or feedback.

■ **Next steps** — Agree on the items for discussion at the next meeting. These could include reviewing the economic benefit of the idea, determining if a co-op is the right business structure, and/or developing a plan for assessing the enterprise idea.

■ **Closing** — Some groups like to close with a round robin review of how the meeting



Leadership is an essential part of raising capital and investing locally. The leadership within the board of the ODC will determine its success.

First, the board of directors are the only ones who can sell shares. People must trust them personally, and trust their vision for the impact the investment will create. In many instances a local investment will benefit some groups more than others.

For example, renovating a historic building will mean contracts for a local builder, and a new location for a business. A strong leader can communicate how to align goals, show mutual success and communicate a concept of shared risk and reward.

Raising large amounts of money, requires large networks. Community leaders tend to know a lot of potential members.

Stage One — Plan Your Co-operative

■ Develop Guidelines for Decision Making

At the first meeting of the group, one of the main items on the agenda should be the question of how you will work together.

■ **Inclusion** — Include all members of the planning group to ensure everyone's decisions and voice is heard. Not only will this result in more and potentially better ideas and solutions, but it also models inclusive decision-making for members of the co-op. Many groups use Robert's Rules of Order, although may modify them to suit their needs.¹²

■ **Consensus** — Other co-ops, especially at this early group formation stage, choose to operate by consensus. The advantage of this form of decision-making is that rather than aligning on opposite sides of an issue and attempting to persuade others that your view is the correct one, in consensus building, *“Every decision is looked at from the perspective of what's in the best interest of the community as a whole.... And because there are no losers, everyone has buy-in into the decision and supports the implementation. We move forward together with no disgruntled minority left behind.”*¹³

■ **Stalemates** — In the case of a stalemate on an issue, groups may opt to employ a system of noting disagreements and designating a sub-committee to take these points away and work on ways in which to address them, and then bring them forward to the next meeting.

■ **Develop a confidentiality and conflict of interest policy** — Avoid information leaking out before a public announcement of the co-op's plans and help ensure that any potential vested interest in the co-op is declared up front.

The purpose of the co-op is to fulfill the needs of members, it is likely that some or all around the table will gain financially from the co-op's development and may want to sway decisions to enhance that benefit. Clear communications can help prevent any real or perceived advantage.

¹² Woodsworth Housing Co-op's Rules of Order: <http://www.woodsworthcoop.ca/index.php/by-laws/rules-of-order/>

¹³ Heartwood Cohousing has an excellent guide to consensus decision-making on their website: <http://www.heartwoodcohousing.com/consensus.html>

Stage One — Plan Your Co-operative

■ Assess the Business Idea

Sometimes groups become energized around an idea and assume that everyone else will too. Here's an opportunity to test those assumptions with a "back-of-the-napkin" approach. At this early stage, it is not critical to do an exhaustive analysis, however asking the following key questions will give your group the confidence to continue to the *develop phase* of the process. This assessment could also provide an abrupt reality check that needs to be addressed:

■ How do you know there's a demand for your product or service?

Conduct some market research. An Internet and/or library search can help, as can a community meeting or a quick survey. Is the population large enough in your catchment area to spark a high enough demand for your co-op's offering?

■ Do they like you with their wallets?

How much are your potential members/customers willing to pay for your product or service? How much are they willing to pay for membership in the co-op? An online survey using a program such as Survey Monkey can capture this information and analyze the results for you.

■ Will the demand (#1), and the projected revenue (#2), be enough to cover the cost of launching and operating the enterprise?

Use the Quick Budget Calculator on the next page to estimate costs. Keep in mind that most businesses lose money in the first year of operation; this projected outcome shouldn't be enough, on its own, to deter you from continuing with your enterprise idea.

■ How will you cover the shortfall (if any)?

Most new enterprises need some form of start-up capital. What options can you brainstorm for your enterprise? Bank or credit union loan? Member loans? Shares in the co-op? Kickstarter campaign? Investment co-op? How realistic are these?

Stage One — Plan Your Co-operative

■ Assess the Business Idea (Continued)

This process will differ slightly if the group chooses an Opportunity Development Co-op or ODC. They will be assessing the business idea from the prospective of a lender, an investor, a partner, or as an owner of an asset. For more information on ODCs refer to page 20.

In terms of assessing the business, an ODC may apply **investment criteria** to ensure they are directing capital towards businesses that will create both a financial and social return on investment.

The table below can help focus the criteria for the group. Keep in mind that some local investments will address more than one community objective and/or investor goals etc.

Community Objectives	Risk Assessment	Investor Goals
Renewable Energy	Start-up Businesses	Social and Financial Return
Job Creation	Capital Projects	Term of Investment
Youth Employment	Existing Businesses	Visibility of Project
Business Retention	Growth	Partners
Succession Planning	New Technology	



Decision Point

Is the group confident that the results of this assessment are promising enough to continue with the development of the co-op?

Stage One — Plan Your Co-operative

Quick Budget Calculator

Expenses	
Project Development Costs	
Site Assessment (environmental, historical)	\$
Engineering and Project Management	\$
Micro-Generation Applications	\$
Co-operative Development	
Legal and Accounting	\$
Co-op Developer	\$
Member Outreach and Recruitment	\$
Capital Costs, Construction of Infrastructure	\$
Maintenance	\$
Insurance	\$
Human Resources (including benefits)	\$
Rent for Office or Store Front	\$
Utilities (phone, internet, heat, web-hosting, etc.)	\$
Marketing	\$
	SUBTOTAL
Revenue	
Member Equity (loans, shares, etc.)	\$
Power Purchase Agreements	\$
Lease Agreements to Third Party	\$
Other	\$
	SUBTOTAL

A renewable energy developer will likely create a much more in-depth project budget. This table will help create a rough estimate of project costs.

Stage One — Plan Your Co-operative

■ Choose the Co-op's Name

Choosing a name sometimes takes time and is best left until later in the process, when the purpose(s) of the co-op's mission are clearer. Many groups adopt a working name until the co-op is ready to launch. A recognizable name is useful when promoting the co-op to prospective members, supporters and potential funders.

Old habits die hard, and sometimes a working name sticks and it is hard to shed after the launch. Keep in mind the Cooperatives Act of Alberta requires the word "co-operative" or "co-op" in your legal name.

Some co-ops choose to operate under a different name than the one that appears on their incorporation documents. For example, the "Solar Energy Panel Workers Co-operative" may choose to operate as "The Solar Co-op." This is allowable under the Act.



When choosing a website domain, consider going **.coop** instead of .com or .ca.

Known as the "co-op marque," a .coop domain, is a symbol of global co-operative identity that all co-ops can align with and brands co-ops as a distinctive form of business.

The domain was developed by the International Co-operative Alliance, details at: <http://identity.coop/>

Stage One — Plan Your Co-operative

■ Develop a Work Plan and Timeline

Now that you have made the decision to continue with the development of the co-op and you have chosen a name, however provisional, the next crucial step is to draft a work plan and timeline for *Phase II — Develop your Co-op*.

This phase of the process can take much longer than expected — be prepared! A good rule of thumb is to estimate how long each step will take, then double or triple it. Many co-ops require a year from this point to launch. However, a study of the success factors of co-operatives conducted by the B.C. Co-operative Association found that successful co-ops identified business planning and clarity of purpose as one of the keys to their development and survival.

Use the following template, or develop your own, and use this at every meeting to chart your group's progress. Ensure you have all twelve months, then check the box that represents the deadline for each step in the left-hand column, or shade in a bar across the row, ending with the box/month with the proposed deadline. Add sub-steps or develop a separate work plan for complex activities such as developing a business plan and your member recruitment drive.

Co-op Work Plan and Timeline	Jan.	Feb.	Mar.	Apr.	May	etc.
Acquire Professional Assistance		X				
Evaluate Interest of Potential Members						
Evaluate Market for the Product/Service						
Explore Financing and Funding Options						
Conduct a Feasibility Study						
Develop a Business Plan						
Draft the Incorporation Documents						
Conduct a Member Recruitment Drive						

Stage Two — Develop Your Co-operative

In the development stage, you will:

- Acquire some professional assistance
- Evaluate interest and commitment of potential members
- Explore financing and funding options
- Conduct a feasibility study
- Develop a business plan
- Draft the co-op's incorporation documents

Stage Two — Develop Your Co-operative

■ Acquire Professional Assistance

Throughout the *co-op planning and development process*, the services of professionals will be an invaluable addition to enhancing the capacity of your group. Staff at the Alberta Community and Co-operative Association (ACCA) www.acca.coop can assist with:

- Facilitating meetings and strategic planning sessions
- Assessing your business idea
- Determining your co-op structure
- Understanding incorporation requirements
- Presenting to your group or community on the advantage of co-operatives
- Accessing resources
- Choosing a professional co-op developer



Stage Two — Develop Your Co-operative

Before deciding to hire a professional, read through the guide and review the preliminary budget estimates. The group may also have some of these skills and can carry out this work on their own. There are scores of resources throughout this toolkit to help your group along the way.

Hiring a professional co-op developer can save both time and money by offering expertise to carry the more challenging aspects of the development process.

CoopZone, a resource site for co-op development, has a directory of developers in Alberta: <http://www.coopzone.coop/developers/members/region/Alberta/>. They can either support the process or carry out the work needed in the development phase.



When hiring a professional, ensure they have worked with co-op clients before and understand the crucial difference between individual entrepreneurs and collective member-ownership. Always request references from past clients, particularly co-ops.

Stage Two — Develop Your Co-operative

■ Evaluate Interest and Commitment from Potential Members

Each member of the planning team is an ambassador for the co-op project. So, talk it up on the street, in the grocery store, at the gym, at the office. In casual conversations with group members, **use short statements highlighting the exciting idea and the benefits.**

Ask people if they are interested and keep an email list of those who have given permission to be contacted. Send out regular, brief and cheery updates on your progress and key milestones.

Assess Community Interest

If not already completed during the *planning phase*, consider carrying out a survey of interested community members. Keep it short! Aim for three to five questions and make liberal use of multiple choice and rating scales rather than answers than requiring respondents to provide lengthy answers.¹⁴ Sample questions and topics can include:

■ [Short description of co-op idea.] On a scale of 1-5, with one being the least likely and five being the most likely, how likely are you to use the co-op's services?

■ How much would you be willing to pay for membership in the co-op? [Offer a multiple choice answer, with a range of three prices.] For a renewable energy project, this could be the cost of owning a share in a wind-farm.

■ Where would you like the project to be located?

■ Are you interested in coming to a community meeting to learn more? [Yes/No]

¹⁴ A helpful online survey tool can be found at www.surveymonkey.com.



Have a Community Meeting

Another great way to galvanize interest and commitment is to hold a community meeting.

Advertise well; a Facebook page or a website is a great tool to keep people informed of events and progress. It also provides a platform to advertise events.

Use the event as an opportunity to present your business case for the co-op — including the challenge being addressed— but keep this portion of the meeting relatively short. The purpose of the event is to engage potential members. These members will become the owners of the co-op. Their input is invaluable, they will offer up the hard questions that will ensure the project is strong.

Be open and receptive to suggestions and critiques; capture audience ideas and concerns on a flip chart and let them know how you plan to incorporate these into the planning process.

Keep the group connected and have a strategy to stay in touch. Have them join an email list. Have a provisional membership application handy that they can fill out. Ask for volunteers to help support the work of the planning committee. Generate a culture of engagement right from the start to build a strong foundation for the co-op.

Stage Two — Develop Your Co-operative

■ Explore Funding and Financing Options

Co-op start-ups require capital to get off the ground. Along with the expenses related to the work of the co-operatives, the group also needs to consider the development costs. As a member-focused enterprise, co-ops must consider the costs of member recruitment and engagement, and related marketing. It is useful to have at least three to six months of cash-on-hand to cover operating expenses, but this is just an estimate.

The best way of determining how much the co-op will need is to generate a cash flow analysis during the business plan process.

The four main approaches to acquiring capital for start-ups are:

■ **Business Loans** (Banks and Credit Unions) — New start-ups may find it challenging to secure a bank or credit union loan for their business if it is unknown to the potential lender and does not have a track record of successful operations. The odds for financing diminish if a lender does not fully understand the project and is unable to review the potential financial results through a sound economic and financial analysis.

Lenders classify these concerns into the “5-C’s” of Credit :

Capacity — What is the group’s ability to repay the loan?

Capital — What assets are being financed with the loan? How much is requested?

Character — Who are the principals of the project? What is their background?

Collateral — What is being used to secure the loan? How is it valued?

Conditions — What additional factors can affect the loan?

Stage Two — Develop Your Co-operative

Member equity and loans — All co-ops in Alberta require that members purchase a member share to become a member of the co-op. As a for-profit enterprise, it can offer (Class B, non-voting) investment shares.¹⁵ This gives members an opportunity to support the development and sustainability of the co-op further. Members can also provide loans to the co-op. The co-op would need to develop policy around borrowing from members (terms and maximum interest rates) and then approach members with the option to lend to the co-op. Many groups use this equity to help jump-start the co-op's operations. Like conventional businesses, owners are expected to invest in the success of the enterprise.

Community fundraising — Particularly if the co-op can demonstrate benefit to the community, fundraising events might help raise needed venture capital. Consider mounting an online campaign, or a pre-sale of services. Volunteers involved in the development of the co-op could organize the fundraising event, leaving the planning committee free to focus on the long-term planning horizon.

Opportunity Development Co-ops (ODCs) — An ODC is formed by local leaders and then registered with the provincial government as a for-profit co-operative. It then identifies, or is approached by, local entrepreneurs with a business opportunity in need of investment. Members of the ODC review the business plan and often provide advice about it. They then agree on the best way to assist the business with debt financing (a loan) or equity financing (land, equipment, or co-owners). For more information, check out page 20 in this toolkit and www.acca.coop/unleashing.

¹⁵ When offering an investment shares, consult a lawyer

Stage Two — Develop Your Co-operative

■ Conduct a Feasibility Study

By now, the group should have gathered a good deal of information about the market potential, member support, financing options, and cost estimates for the co-op idea. Now it is time to test whether all this information adds up to a viable business enterprise by conducting a feasibility study. The information in this section is taken largely from the excellent USDA guide “Vital Steps: A Cooperative feasibility study guide.”¹⁶

Feasibility studies can vary according to the type of renewable energy the co-op is considering (solar, wind, bioenergy or geothermal). It may also be helpful to enlist an expert to conduct a feasibility study for the renewable energy project.

What’s a Feasibility Study?

A feasibility study is an analytical tool used during the business development process, to show how a business would operate under a set of assumptions.

■ These assumptions often include such factors as the technology used (the facilities, equipment, production process, etc.), financing, (capital needs, volume, cost of goods, wages, etc.), marketing (prices, competition, etc.), and so on. Each renewable energy sector requires different technologies to actualize.

■ The study is usually the first time in the project development process that many key pieces and information about the project are assembled into one overall analysis. The study must show how well the pieces fit and perform together. The result will be an overall assessment of whether the proposed business concept is technically and economically feasible.

¹⁶ The guide can be found online: https://www.rd.usda.gov/files/publications/SR58_CooperativeFeasibilityStudyGuide.pdf.

Stage Two — Develop Your Co-operative



■ The feasibility study will also include financial projections to show revenue, the repayment of loans and dividends (if the co-op has offered equity shares, etc.). The study should also include contingencies to assess potential returns under less than optimal conditions.

Feasibility studies for a co-operative are similar to those for other businesses, with one exception. Potential members use the feasibility study to evaluate how a co-operative business idea would benefit them personally rather than to determine the return on investment they would receive on invested stock. A study conducted for a renewable energy co-operative, for example, must address the project's potential impact on members' household economy, in addition to analyzing economic performance at the co-operative level.

Co-operative businesses are developed first and foremost to serve members' needs and enhance their economic well-being. However, to do so, they must operate efficiently and compete effectively in the marketplace.

Stage Two — Develop Your Co-operative

■ Key Actions for a Feasibility Study

■ Decide who will conduct the study.

The feasibility study evaluates the project's potential for success. Outside consultants are useful because of their experience and expertise with the development process. External experts also work in an objective manner to ensure that all potential members' ideas, thoughts, and concerns are considered, and that assumptions and information are accurate and realistic.

The perceived objectivity of the evaluation is an important factor in the credibility placed on the study by potential members, lenders, and other interested parties. Also, the creation of the study requires a strong background both in the financial and technical aspects of the project. For these reasons, outside consultants conduct most studies, although the project leadership normally has input as well. Unless the group already has a renewable energy developer in their group, it would be important to hire one, or engage one within the founding group.

■ Develop a set of project assumptions.

Key project assumptions should be determined at the beginning of a feasibility study. Usually an assumption is thought of as something that is taken for granted, but in the current context, assumptions provide the basis for the project and therefore need to be carefully thought out and developed. Since the group cannot analyze every variation of a project, it must provide boundaries within which the study will be carried out. The consultant, if one is being used, can assist in the development of assumptions by providing objective knowledge and expertise.

Some of the assumptions will have more than one option to study. That's where sensitivity analysis will come into play. It might be useful to test out a range of scenarios, size of the project, etc. Which is most realistic? Most promising? Other questions that help determine proper assumptions might arise as well, depending on the type of

Stage Two — Develop Your Co-operative

project. It is up to the steering committee and those conducting the study to explore all avenues when determining the assumptions needed for a full analysis in a study.

Determine the components for a comprehensive study.

On the next page are sample components that will help guide the selection for your analysis and final study report.

The feasibility of a renewable energy project will require technical experts and engineers. With this guide, you will know the broad strokes of the feasibility study, but it is highly recommended that your group enlist outside experts for this work.

Criteria of a Good Feasibility Study Consultant:



- Has previous experience conducting feasibility studies.
- Has experience with the renewable industry to be studied, or access to experience and associated professionals.
- Works independently and objectively (of suppliers, marketers, etc.).
- Understands co-operatives fully (their operations, governance, financial workings, etc.).
- Is willing to listen to the groups' ideas.
- Works closely with designated contact members of the steering committee or group.
- Is willing to revise study given feedback.
- Accomplishes the study within an agreed upon timeline.
- Works within the group's designated budget.
- Is a strong writer with skills in data analysis , spreadsheet design and presentation.
- Provides clear, useful information in the completed study.

Stage Two — Develop Your Co-operative

■ Developing Assumptions in a Feasibility Study — Questions to Ask

■ How/why do the potential members propose that a co-operative needed?

Define the renewable energy project to be handled or provided (there can be more than one and each should be clearly defined).

Explain the proposed co-operative's comparative advantage (define what the market is demanding and what producers do well).

Describe the proposed co-operative's benefit to members (enhanced marketing, higher marketing prices, lower prices for products purchased, more efficient and lower cost services, etc.).

■ What is the potential membership base and volume of product for the project? (This data is normally gathered via a survey of potential members.)

Define the level of potential support by producers who would have the opportunity to participate.

Describe the approximate number and size of the producers who are likely willing to participate.

Define the level of use of the co-operative by the members.

Explain the potential for future expansion of membership and volume.

Stage Two — Develop Your Co-operative

How well will the co-operative fit into the market?

Define the projected prices for both inputs and outputs.

Define the projected volume of sales.

Explain the size of the market and how the co-operative fits in (e.g., market share).

Determine the potential for strategic alliances.

What are the financial and organizational needs for the project?

Estimate overall capital needs and describe potential sources of this capital.

Define the level of financing needed and potential lenders.

Describe the legal requirements, documents, agreements, permits, and inspections.

Describe the infrastructure, facilities and equipment needed and whether they will be purchased, built, or leased, and estimate how much they will cost.

Estimate the management requirements and skills, and the cost of obtaining the appropriate management.

Stage Two — Develop Your Co-operative

■ Components of a Feasibility Study — Sample Outline

■ Executive Summary

Summary of the important findings and recommendations

■ Introduction

Description of the project

General setting and need for project

Work already completed, pertinent dates, and those involved in the project

■ Industry Background

Basic background information on the industry

Economic conditions of the industry

Implications and feasibility of entering industry

■ Marketing

Market potential for goods or services to be handled

Markets to be served (current and future) and their attributes

Ease or limitations of entering the market

Marketing plan (strategies to be followed, summary of key actions)

Overall assessment of the marketing situation and plan

■ Operational and Technical Characteristics

Supply of labour and its quality (including management)

Supply of key inputs needed for operations

Technical characteristics and specifications of required plant and equipment

Assessment of potential operational capacity and efficiency

Location considerations (if one has not been already selected) and assessment

Stage Two — Develop Your Co-operative

Financial Statements and Projections (pro forma statements)

Projected revenues, operating costs, and net income

Capital requirements, potential and actual sources of equity, accumulation

Schedule, investment schedule (plant, equipment, human resources, etc.)

Pro forma cash flow statement

Income, balance sheet, and sources and uses of funds statements

Equity accumulation plan and financial ratio analysis

Financial plan summary (description of how it will all fit together)

Summary and Recommendations

Concise summarization of the major findings

Recommendations and concluding comments

Development schedule (remaining key steps and accompanying dates for action)

Appendix

Appendices (additional spreadsheets)

Important supplemental information

Notes, credentials, and references



Decision Point

Is the group able to approve the outcomes of the feasibility study and proceed with the development of a business plan?

Stage Two — Develop Your Co-operative

■ Guidelines for Group Decisions

- Unanimous agreement is not required to move forward; a consensus approach is better
- Never decide to proceed based solely on negative reactions
- Base decision-making on economic and social realities faced by the co-operative
- Make each decision only once

■ Group Decisions After Accepting the Study

Once the study is deemed acceptable, the steering committee and group need to decide whether to proceed with the project. Positive results from a feasibility study do not necessarily imply that the group should proceed with the project. Several factors could cause the group to stop or to revise the project:

- The situation/environment has significantly changed since work on the study was completed
- The group has chosen another project it considered more beneficial
- The risks are deemed greater than the group is willing to accept
- Capital, size, or capacity requirements are more than the group can accommodate
- New information shows key study assumptions to be unrealistic

Stage Two — Develop Your Co-operative

Negative study results do not necessarily signify that a group should stop developing the project. The group may cautiously proceed even if study results are negative. Any decision to continue should carefully weigh the risks involved and openly declare those to all involved before making a decision to proceed.

Here are some reasons for the group to consider continuing with a business plan and project implementation, when the study did not provide favourable results:

- The situation/environment has improved since the study was completed
- Critical assumptions of the study are found to be unduly harsh or negative, or have significantly changed
- More potential members and/or product volume have been identified
- The group feels that more producers or volume will participate once the project is closer to implementation
- The group has found a partner to share the cost, risk, capacity, etc.
- Technical limitations of machinery or design have been resolved

The group should not proceed to develop a business plan with negative issues still pending. It is important that the steering committee and group address any recommendations and limitations the feasibility study outlines before it takes the time and approves the expense that a business plan will take.

Stage Two — Develop Your Co-operative

■ Develop a Business Plan

Whereas the feasibility study tests out a series of assumptions and identifies potential problems with those assumptions, the business plan is a roadmap for the future direction of the co-op. The feasibility study helps determine whether to proceed with implementing the business while the business plan spells out how it will be implemented. Each has common components. Assuming the feasibility study results are positive, much of its information will be incorporated into the business plan.

Russ Christianson (a professional co-op developer) in his excellent guide to preparing a co-op business plan¹⁷ advocates for a collective effort: *“A plan, which is generated by a single person and then forced upon those responsible for making it happen, is bound to fail.”*

Similar to the preparation of the feasibility study, the group can prepare it themselves or hire a co-op developer or consultant to craft the plan in close collaboration with the committee. Either way, the key is to *own* the document, to *live* and *breathe* its contents rather than putting it on a shelf to gather dust.

The business planning process provides an opportunity for the group to review the foundational questions around the co-op enterprise:

“What need will be fulfilled, precisely for whom, and why? Successful co-operatives define and respond to their members’ and customers’ needs, and change their business strategy as these needs change.”



¹⁷ <https://uucommunitycoops.files.wordpress.com/2013/07/co-op-business-plan-template-pdf.pdf>

Stage Two — Develop Your Co-operative

Pillars of a Business Plan

Christianson outlines four pillars that need to be addressed as the bedrock of the plan and the co-op. Consult his guide for further discussion and elaboration of the pillars and the other key elements of the plan.

Vision — The vision or dream that members and other stakeholders share for the future of the co-op

Mission — How the co-op will reach its shared vision

Purpose — The underlying purpose fulfilled by the co-op

Values — The co-operative principles and values held by all co-operatives throughout the world

The business plan for a co-operative will follow the same approach as any other type of enterprise. It needs to show how more revenue will be generated than costs incurred. If the group is forming an Opportunity Development Co-op (ODC), the board will likely be evaluating a business plan and determining whether to invest.

Understanding a business plan and the strategy to generate revenue, and be viable, is essential for determining whether the investment will be successful.

Stage Two — Develop Your Co-operative

This table offers two approaches to a business plan. This page reviews a conventional business plan, and follows a similar approach as the feasibility study. To the right, is a summary of the Business Model Canvas¹⁸. A local economic development officer should be able to assist in using either approach, as well as in providing additional resources.

Business Plan

EXECUTIVE SUMMARY

Overview of the function of the business, the problems it solves, strategy to achieve goals and a review of the financial projections.

PRODUCTS AND SERVICES

Frames the opportunity/challenge and explains why the business exists and is best equipped to deliver a product or service in the market.

MARKET SEGMENTATION

Size of the market and the target audience/membership for the business. It should indicate how the business will capture part of the market share. Market trends, key customers, and market needs will also be articulated in this section.

STRATEGY AND IMPLEMENTATION

Explains what the business will do and how it will be viable. This could include strategies for marketing, sales, location and facilities, technology, etc.

MANAGEMENT/ORGANIZATIONAL STRUCTURE

How is the business structured and who will be making decisions and carrying out the activities of the enterprise? This could be personalized to provide the history of the team and their professional resumes and experience. Gaps could also be listed in this section.

FINANCIALS

Provides a clear picture of the costs of running the business to generate revenue. It should include forecast for revenue and costs and how that is translated into profits, growth, etc.

APPENDIX AND SUPPORTING DOCUMENTS

18. Additional Business Model Canvas notes provided from Enterprising Oxford <http://www.eship.ox.ac.uk/business-model-canvas-explained>

Stage Two — Develop Your Co-operative

In both the plan and canvas approach, additional sections can be included to explain the social return on investment. For a renewable energy project this could include reduction in green house gas, the creation of green energy jobs, etc.

Business Model Canvas

VALUE PROPOSITION

What value does the enterprise create for the customer, member, community? How is it unique, and what problem does it solve?

KEY ACTIVITIES

What does the enterprise do to create the value proposition? How does the enterprise achieve its goals of creating value?

KEY PARTNERS

Who are the people, groups, or organizations outside of the enterprise who will help it succeed enterprise succeed?

KEY RESOURCES

What are the inputs, people and equipment, needed to produce the good or service?
What are the key pieces the enterprise needs to excel?

CUSTOMER SEGMENTS

Who are the different types of customers the enterprise is trying to create value for?

CUSTOMER RELATIONSHIPS

How does the enterprise interact with their customer? How does the customer feel about the enterprise?

CHANNELS

How is the value proposition promoted and delivered to the customer?

COST STRUCTURE

What are the business' major cost drivers? How are they linked to revenue?

REVENUE STREAMS

How does the business earn revenue from the value propositions?

Stage Two — Develop Your Co-operative

■ Incorporation Process

Incorporating a co-operative means creating a legal entity. As such, it is important to enlist the services of a lawyer. The incorporation process is outlined on the Service Alberta website.¹⁹ Co-operatives are incorporated under either the federal or provincial co-operative act. Unless the co-op intends on doing business in the rest of Canada, registering provincially will suffice.

The registration process is based around two documents: the articles of incorporation and the bylaws. If you have registered a business, a not-for-profit society, or a charity you may be familiar with both documents.

The bylaws document the mission and vision of the co-operative, and the various policies that direct the co-op. Bylaws are also what the members agree to, and what the board is required to uphold. Bylaws can be amended if needed, which may occur as the co-op grows and the needs of the membership change.

The bylaws are the key part of the co-operative, especially if the co-op will be raising share capital. As such, it is important to enlist a lawyer who specializes in co-operatives and securities to create these documents.

All of the documents your co-op will need can be found at:
<http://www.servicealberta.ca/1200.cfm>.

Keep in mind that the documents cannot be filed electronically. They must be submitted in person or through the mail. The Cooperatives Act does not require bylaws or a feasibility study to be submitted with the incorporation documents.

¹⁹ <http://www.servicealberta.ca/cooperatives.cfm>

Stage Two — Develop Your Co-operative

To incorporate an Alberta-based co-operative, and before the bylaws are submitted, the steering committee needs to provide the following:

- A set of the Articles of Incorporation

http://www.servicealberta.ca/pdf/coop/Articles_of_Incorp_Regs.pdf

- A completed Summary of Articles of Incorporation and Statutory Declaration in addition to the Articles of Incorporation above

- A completed NUANS report (Newly Upgraded Automated Name Search)

- A completed copy of Notice of Address/Change of Address form

- A completed copy of Notice of Directors/Change of Directors/Change of Director's Address form

- An incorporation fee of \$100

After the documents have been processed, the Director of Cooperatives will issue a Certificate of Incorporation giving the co-operative permission to begin business. The Director will also send the Certificate and a filed copy of the incorporation documents to the applicant. This means your co-operative can open its own bank account and enter into contracts.

Once the co-operative is incorporated it must hold an annual general meeting to approve the board (or elect new members) and the bylaws and submit the documents to the Director of Co-operatives within six months. The six-month period will pass quickly, and several new co-ops have been caught off-guard.

Stage Two — Develop Your Co-operative

■ Bylaws for Your Co-operative

The basic bylaw requirements for Alberta co-ops are found through Service Alberta.

Bylaw Requirements: http://www.servicealberta.ca/pdf/coop/Bylaw_Requirements.pdf.

References to each requirement are to the Alberta Cooperatives Act:

<http://www.qp.alberta.ca/documents/Acts/C28P1.pdf>

Regulations associated with the Act:

http://www.qp.alberta.ca/documents/Regs/2002_055.pdf.

Most new co-op groups find it a relief to consult with the Alberta Community and Co-operative Association, a professional co-op developer, or a lawyer experienced with co-op incorporations. Also, every co-op is different so will have different provisions in its bylaws. It is therefore not wise to just copy the bylaws from an already incorporated co-op. Some of the key elements that need to be considered:

- The size of your board of directors
- Membership criteria
- Whether investment shares will be issued
- The par value of member shares

Review the Service Alberta website and contact their staff if you have questions regarding the co-op act and the incorporation process.

The 'Consumer Tips: Cooperative Act' guide is an excellent resource:

http://www.servicealberta.ca/pdf/tipsheets/Cooperatives_Act.pdf

Stage Two — Develop Your Co-operative

Co-op Development Resources

Community Power Network <http://communitypowernetwork.com/node/9220>

This site provides a list of renewable energy co-operatives by type (consumer, worker, etc.). Although the examples are largely drawn from the U.S., these co-operatives are inspirational for those starting a renewable energy co-op in Canada. The site also lists further resources by type of co-op.

Canadian Worker Co-op Federation (CWCF)

Self-Directed RRSP & TFSA Program <http://canadianworker.coop/funding/rrsp-program/>

Resources for raising capital through the sale of RRSP and TFSA eligible shares. This site is also indispensable to those who are forming a worker co-op. It contains a guide to starting a worker co-op, along with details of CWCF's Tenacity Works loan fund for worker co-ops.

Co-operatives and Mutuals Canada (CMC) <http://tools.coop/>

CMC's sub-site, tools.coop, provides a list of great resources for specific types of co-ops, such as biofuels and local food, as well as general guides and information on co-operatives in aboriginal communities.

Vital Steps: A Co-operative Feasibility Guide

https://www.rd.usda.gov/files/publications/SR58_CoopFeasibilityStudyGuide.pdf

This guide not only outlines the components of a feasibility study, but explains each step in developing a study. A bonus is its focus on co-operatives.

Ontario Co-op Association

http://www.ontario.coop/all_about_cooperatives/coop_links_resources

The Ontario Co-op Association's website contains an exhaustive list of links and resources in support of co-op development.

Stage Two — Develop Your Co-operative

■ Six Critical Skills for Co-op Development Success

■ **Collaboration** — The ability and willingness to work with others toward a collaborative solution to issues and challenges is the number one skill to ensure a smooth co-op development process. Collaboration is largely a skill of focusing on what is best for the co-op and leaving individual needs and preferences at the door.

■ **Understanding the numbers** — Not everyone has an accounting background; however, taking the time to learn how to read a financial statement and to understand the basics of budget preparation and cash flow analysis will be invaluable in making critical decisions along the co-op development path.

■ **Planning** — Much of the work of the start-up team and board of directors is focused on planning for future success by keeping the overall purpose and mission of the co-op at the forefront. Developing a work plan for the start-up phases is critical in order to keep on task.



Stage Two — Develop Your Co-operative

■ **Conflict resolution** — Differences of opinion will undoubtedly surface during the start-up phases as well as post-launch. Learning how to resolve differences without rancor is a necessary skill in any group initiative. Heartwood Cohousing provides a useful set of guidelines and steps to conflict resolution on their website:

<https://www.heartwoodcohousing.com/conflict-resolution.html>

■ **Clarity defining roles in the co-op** — Creating boundaries, particularly between the work of management and the Board of Directors, will help avoid conflicts and will provide fresh perspectives on issues and plans for the co-op. A general rule of thumb is that management addresses the day-to-day operations of the co-op, while the board provides a high-level oversight on its governance and strategic direction.

■ **Human Resource** — Knowing when to hire help, especially legal and accounting expertise, will avoid costly mistakes and volunteer burnout.

Stage Three — Launch The Co-op!

Once the business plan is in place, it is time to get started doing the business of the co-operative.

The *launch phase* has two main goals: to generate revenue and to build membership.

During the *develop phase*, the steering group outlined plans, held meetings with potential members, and created the legal co-op entity. During the *launch phase*, the co-op will begin operations. It can legally take in revenue (from sales and member shares), can begin accepting members, and now needs to turn its attention to factors affecting governance, management and operational success. Put simply, the co-op will be carrying out the work set out in the *plan* and *develop phases*.

While it might seem that the launch happens all on one day there are many steps along the way that can help make that one day — and all the days to come — a success.

To launch your co-op, you will:

- Conduct a member recruitment drive
- Lease or purchase office or retail space
- Acquire equipment for business operations
- Hire management, staff and contract support
- Hold a grand opening!
- Implement your marketing and business plan
- Engage your members
- Hold your first general meeting and elect a board of directors

Stage Three — Launch The Co-op!

■ Conduct a Member Recruitment Drive

The purpose of a co-op is to meet the needs of its members. As such, recruiting members is of the utmost importance. Member engagement occurs in the planning and development phases, however member recruitment begins in earnest, once the co-op is incorporated. The co-op can collect fees for member shares legally and can begin generating excitement about the impending launch.

To recruit members, it is important to understand why they would want to join the co-op. Many will join because they support the mission and purpose of the co-op; especially if it is a game-changing enterprise such as renewable energy. Some will join to be an owner/investor of a business they use on a regular basis. Others may join because they will be using the co-op; purchasing the good or service the co-op creates (or working in the co-op if it is a worker co-op). Last, some will join because they feel it “keeps the market honest.”²¹

For a renewable energy co-operative, this would also include an increase in energy options and reduction in greenhouse gas production. For an ODC, prospective members could be motivated to join based on returns on investment and the ability to invest directly in a renewable energy project. If members are other businesses, they may want to join to:

- Generate new business or benefit from shared marketing
- Benefit from economies of scale or reducing expenses
- Raise their profile
- Support the fact that the missions of both businesses align

²¹. Purpose, identity, and the member value proposition in co-operatives and mutual Enterprises; Mazzarol 2015



Stage Three — Launch The Co-op!

■ Develop a Recruitment Plan and Strategy

Recruitment Objectives	<p>Identify the number of members to be recruited. For example, if the co-op needs to raise \$500,000 to invest in a wind-farm. How many members will it need?</p> <p>Assess what types of members the co-op is looking for. An early stage member drive could be to recruit champions who will share the co-op’s message with their networks.</p> <p>Understand the skills the co-operative needs. Are there people with specific skills in the community that could join the board or a committee?</p>
Target Audience	<p>Understand who the prospective membership base is. This requires getting more specific. Are the members rural or urban, young or old? Knowing who the co-op should recruit members could be will help focus efforts and messaging.</p> <p>Leverage existing groups. If the co-op is building a wind-farm there are several groups that could be connected to the project; land-owners, farmers, environmental groups, REAs, etc. Reaching out to those groups instead of individuals directly is an effective way to spread the word, as well as get an endorsement by a reputable partner.</p>

Stage Three — Launch The Co-op!

Key Messages	<p>Effectively communicate the value proposition of becoming a member.</p> <p>Messaging needs to be accurate and relevant to manage the expectations of prospective members.</p> <p>Different groups of members will respond to different messages. Some members will want to only see a financial return on investment, others will be motivated by the mission. Most will be somewhere in the middle.</p>
Channels	<p>Understand where prospective members are located and strategize how to reach them. Are they located within the same community or is it province wide? They might even be connected by the issue (i.e. renewable energy). How will the co-op find its members?</p> <p>Different types of members respond to the way the message is presented. Members of a local Rotary Club may prefer an in-depth presentation delivered at their 7AM breakfast meeting, from someone who looks and sounds like a CEO. Students may respond to a 30 second video.</p>

Stage Three — Launch The Co-op!

■ Recruitment Methods

Use this checklist to help strategize what the most cost-effective methods will be best suited for your co-operative's member recruitment drive.

■ **Set up a team** — The recruitment task can be enormous and too much for one or two people. This is also an excellent opportunity to engage new volunteers to recruit. Prepare necessary materials such as brochures/flyers and member application forms beforehand.

■ **Develop a list of key member targets** — The co-op will also need additional skills and talents and may want to target specific individuals for recruitment. You could also target someone who has influence over others and will be able to popularize your organization. Make a list of key individuals in your community that you would like to have as members and contact them personally.

■ **Determine strategies** — What channels will your co-op use to reach its target audience? Will you go door-to-door, set up information tables at events, encourage online sign-up? Also, you can use personal contacts to expand your reach.

■ **Implement your marketing plan**— Social media advertising allows you to target by gender, interest and geographical location, and can be more cost-effective depending on your messaging. Getting stories into the local paper or on the radio can be free, and allow you to convey more developed key messages about your co-op, the role of members, forthcoming meetings, etc. You can also send letters to individuals or use leaflets to encourage people to join up.

Stage Three — Launch The Co-op!

■ Next Steps

The next steps in the *Launch process* take you from concept to reality. This is a time when the planning group — who are the founding members and board directors named in the incorporation documents — will transition to the elected board of directors.

But the committee members still have a key role in the following decisions:

- Lease or purchase office or retail space
- Acquire business equipment
- Hire management, staff and contract support

A useful guide (although references are to the UK context) can be found here — <https://www.uk.coop/the-hive/growing-your-co-operative/hr-and-people>;

Alberta employment standards are described here —

<https://www.albertacanada.com/business/invest/employment-standards-and-labour-code.aspx>

- Hold a grand opening²²
- Celebrate!

Once management, staff and/or contract support has been hired, the planning group will necessarily step back from its hands-on role to allow the operations of the co-op to unfold.

The focus of the planning group at this juncture is to a) continue to make governance decisions until the board is elected at the annual meeting, and b) ensure a smooth transition from planning to operations.

²² Here's a helpful 39-step launch checklist for the big day: <http://100startup.com/resources/launch-checklist.pdf>

Stage Three — Launch The Co-op!

■ Post Launch Activities for a Successful Co-op Enterprise

Co-op planning and governance doesn't end at the launch date. Now is the time to pull out your business plan and develop strategic and operating plans for your first year of operation.

Shortly after incorporation, the co-op must hold a meeting of the directors identified on the Notice of Directors filed with the provincial government (included with your incorporation documents) — see section 56 of the Cooperatives Act. At the meeting, the directors may:

- Select the form of security certificates and co-operative records
- Admit members, issue and authorize member shares and arrange for member loans
- Appoint officers
- Appoint an interim auditor (until the first members' meeting is held - see below)
- Make financial arrangements for the co-op
- Transact any other business necessary to organize the co-op

Within 180 days after your incorporation certificate was issued, you need to hold a general meeting of your members. At this meeting, you need to conduct the following business:

- Elect a board of directors — this may include the same people named in the Notice of Directors or anyone else qualified to stand for the board
- Adopt bylaws for the co-op
- Appoint an auditor who will hold office until the end of the first annual meeting (no later than 18 months after incorporation)

Stage Three — Launch The Co-op!

Although member meetings are ostensibly held in order to conduct the business of the co-op, most co-ops take the opportunity to celebrate the co-op's successes, meet, greet and network with members, and applaud the achievements of staff and members of the co-op.

Attend an AGM of one of your local co-ops or credit unions to get a sense of the co-op culture they embrace. Co-ops are invariably social and friendly!



Don't forget to continue with member engagement, planning activities (usually annually) and to educate your members and staff.

The Alberta Community and Co-operative Association holds many great learning opportunities and events throughout the year!

Case Study — Alberta’s Rural Electrification Associations

In 1945, at a time when electric street-cars could be found in Edmonton and Calgary, less than 4% of Alberta’s farms had electricity. Over the next 25 years, utility co-operatives would bring electricity to rural Alberta.

Rural Electrification Associations, or REAs, are non-profit, co-operative businesses that own the power distribution infrastructure that carries power to its members.²³ Like other co-operative businesses, REAs are owned by its members. REAs perform specific services for their members, including power system operations, repairs, and power pole replacements, among other things.

There are two types of REAs in Alberta: operating and non-operating. Operating REAs manage their own lines, while non-operating REAs contract this duty out to a third party, usually a power company. Today, there are 31 REAs in Alberta, with approximately seven in operating status.²⁴

One of the greatest benefits that REAs provide in Alberta is the discount that members pay for their electricity compared to private power utilities. A 2013 study of various REAs found members’ **price savings ranged from 10% to 52% compared to the private power companies** operating in the same area. By doing business with an REA, **members saved a combined \$19 million²⁵ annually.**

REAs have also provided significant numbers in terms of direct **employment** and employee **salaries**. Across the seven operating REAs, 157 people were employed and paid a total \$11.3 million annually. REAs also provide benefits to their communities because of the direct purchases that REAs make in their communities. Co-operative businesses are well known for purchasing more of their business inputs locally compared to investor-owned businesses. To this end, the seven operating REAs paid \$13.47 million to more than 500 local suppliers. Overall, REAs provide an estimated \$49.22 million per year in Alberta when accounting for electricity savings, employment effects, system investments, and local purchasing effects.²⁶

REAs are a significant part of Alberta’s recent history and continue to make an impact in the local economy.

²³ The corresponding co-operative business that own the pipes that carries natural gas to farms in rural Alberta are called Gas co-ops

²⁴ AFREA: Information

²⁵ “Alberta REA Strategic Review- Rural Economic Impacts” Prepared for Alberta’s REAs, Toma and Bouma Management Consultants, January 2013

²⁶ *ibid*

REA Developments Timeline:

1944: The Alberta Power Commission is created, intended to oversee rural electrification.

1945: Less than 4% of all farms in Alberta have electricity.

1946: Government amends the Co-operative Marketing Associations Act, enabling REAs to borrow half the money required for line construction from the government over a ten-year period

1947: Government negotiations to get private power companies to spearhead rural expansion of the power infrastructure are not successful.

March 1947: The Springbank REA Ltd is the first REA to be incorporated in Alberta; by year's end six more would be formed.

August 1948: A referendum on public ownership of private power companies is defeated, ensuring that government would not have direct involvement in expanding the rural electricity network.

1948: By year end, 28 new REAs are formed.

July 1950: The Alberta Union of REAs (AUREA) is formed; the precursor to today's Alberta Federation of REAs (AFREA).

1951: Only 17% of Alberta farms have electricity.

August 1952: The government introduces the \$10 million Rural Electrification Revolving Fund, which provides ten-year, low-interest loans with only 15% down.

1952-1953: More than 10,000 farms are connected with electricity.

1956: The government extends the term of government-backed loans to 25 years and the reduces down-payment requirement to \$100.

1961: 87% of Alberta's farms have electricity.

Case Study — Athabasca Chipewyan First Nation's Solar Lodge in Fort Chipewyan, Alberta, Canada

Project Type: Solar

Infrastructure: 8 Solar Panels

Generation Capacity: 1.8 kW

Estimated Project Cost: \$20,000 CAD

GHG Reduced: 3,694 Kgs of CO₂/year, assuming energy use of 8 hours/day over 365 days

http://albertaecotruster.com/portfolio_page/fort-chipewyan-renewable-energy-project/

Fort Chipewyan, or Fort Chip as it is often called, is a small town of about 1,200 residents and is predominantly made up of Mikisew Cree First Nation, Athabasca Chipewyan First Nation, and Metis. Located 200 km north of Fort McMurray and in the region of the Athabasca oil sands development, Fort Chip is highly secluded only offering access through a winter road and by plane in the spring and summer. The residents of Fort Chip have been critical of the oil sands development in their region but have always had to rely on diesel fuel to supply their power needs. Diesel is extremely expensive because of the distance required to bring the fuel to site and the transportation hazards inherent in delivering to a location with limited infrastructure. Some cost estimates have placed the cost to heat a home in Fort Chip at \$3,500 per year. However, a recent partnership between the Athabasca Chipewyan First Nation (ACFN) and local stakeholders have been working together to bring solar energy to the community and reduce the community's dependence on fossil fuels. The first project, of hopefully many more future projects, completed was an installation of eight solar panels on the Fort Chipewyan First Nation Elder and Youth Lodge. Fort Chipewyan's Sustainable Energy Future Initiative (SEFI), started the process toward renewable energy development.

SEFI, a joint initiative between Fort Chipewyan and the Keepers of the Athabasca, an Indigenous-led environmental group with a mandate to protect the environment in the Athabasca region, explores the possibilities of clean energy development for the community.



Keepers thought that Fort Chipewyan would be a good candidate for a solar installation because of its reliance on expensive diesel and its remote location. After receiving a grant from the Pembina Institute and the Centre for Indigenous Environmental Resources to initiate the project and receiving project support from EcoTrust Alberta and Glasswaters, two foundations that support environmental protection and community collaboration, the Keepers of the Athabasca conducted an energy audit to determine community energy needs and determined the options for the solar installment. After pushing the project to the point of installation, community members were trained and participated in the installation of the solar panels, allowing the community to initiate future solar developments independently.

The completed installation of the ACFN Elder and Youth Lodge will provide 1.8KW and will store 72 hours of emergency power in 18 batteries, with any unused power being fed back into the grid to receive a credit. So far, the new solar installation is generating interest among other residents, providing good prospects for the use of solar in the community in the future. This is the first big step forward for a community that has been looking for an opportunity to get off expensive and harmful fossil fuels.

Case Study — Zooshare Biogas Co-operative in Toronto, Ontario, Canada

Project Type: Biogas

Infrastructure: Anaerobic Digester

Generation Capacity: 500 kW

Estimated Project Cost: \$3,000,000 CAD

GHG Reduced: 2.8 million Kgs of CO2 equivalent per year

<https://zooshare.ca>

The ZooShare Biogas Co-operative is a Toronto-based co-operative business that captures methane emitted from the breakdown of bio-waste to generate electricity. Located on property owned by the Toronto Zoo, ZooShare will be the first zoo-based biogas plant in North America and will have a generation capacity of 500KW, or enough electricity to power more than 200 homes each year. ZooShare has partnered with the Toronto Zoo to collect the animal manure, or “zoopoo”, produced at the Zoo to use in the biogas plant. As part of its agreement with the Toronto Zoo, ZooShare will pay 10% of its annual earnings to the Zoo. ZooShare has also partnered with a grocery retailer that will supply inedible food that will be used to produce electricity in the plant. All together, ZooShare will process about 3,000 tonnes of zoo manure and 15,000 tonnes of organic grocery waste every year.

ZooShare received its start-up funding with a grant from the Ontario Power Authority for \$115,000. In addition, the Ontario FIT program is ensuring the benefit to ZooShare by guaranteeing 17 cents per KWh for electricity fed into the grid. The project is slated to cost more than \$5 million dollars. ZooShare is raising the capital requirement entirely in the community through the sale of \$5,000 community bonds, an exclusive tool used by non-profits to offer accessible investment opportunities to the public. So far, ZooShare raised over \$3 million from 600 members.



The ZooShare Biogas Co-operative will provide multiple benefits to the community by diverting waste from landfills and reducing the amount of methane that is released into the atmosphere. ZooShare will also help return nutrient-rich soils back to the ground by selling the solids that are left over after electricity has been produced to farmers as fertilizer. Thus, ZooShare is creating a sustainable loop of food production where food waste is turned into fertilizer, which is then used to produce more food for us. The ZooShare Biogas Co-operative is expected to start construction in spring of 2017 and reach commercial operation in the fall of the same year.

Case Study — Gunn’s Hill Wind Farm, Oxford Community Energy Co-operative in Oxford County, Ontario, Canada

Project Type: Wind

Infrastructure: 10 Wind Turbines

Generation Capacity: 18 MW

Estimated Project Cost: \$9,000,000 CAD

GHG Reduced: 37 million Kgs of CO₂/year, assuming energy use of 8 hours/day over 365 days

<http://www.oxford-cec.ca/>

Oxford County is a rural farming district located in southwestern Ontario. Oxford County, an amalgamation of eight different municipalities, is home to almost 110,000 people who will soon be served by a large wind energy project being developed in the area. The Gunn’s Hill Wind Farm is located in the Township of Norwich, one of the municipalities in Oxford County. The Gunn’s Hill Wind Farm is a commercial scale wind farm, boasting ten wind turbines and a generation capacity of 18 MW. Gunn’s Hill will produce enough power to serve the needs of 6,700 homes in Oxford County. It is also the largest co-operatively owned wind farm, being partially owned by the Oxford Community Energy Co-operative (OCEC).

The Gunn’s Hill Wind Farm is jointly owned between OCEC, Six Nations of Grand River Development Corporation, and Prowind Canada. OCEC was specifically developed in 2013 to include the public in ownership of the project. Through OCEC, the public may own up to 49% of the Gunn’s Hill Wind Farm. OCEC has built up its member base to 186 members, with about 33% of its members residing in Oxford County alone, and has raised about \$9 million in capital for the project from its member base.



The Gunn's Hill Wind Farm will provide a range of benefits to Ontario. It will be contributing to Oxford County's commitment to reach 100% renewable energy sustainability by 2050, made possible through Ontario's Feed-in-Tariff (FIT) program. Apart from the environmental and sustainability benefits that Gunn's Hill will contribute to Oxford County's goal, the project will provide benefits to the community by offering landowners an additional guaranteed source of income, providing student bursaries, Indigenous employment opportunities, and the development of at least 200 jobs. OCEC, for its part, will seek to provide even more benefits of clean energy in the future for its members through the development of new renewable energy projects in Ontario. In fact, with recent approval through Ontario's FIT program for 1.2 MW of solar installations, OCEC has already begun taking the next steps of helping Oxford County become energy self-sufficient.

Case Study — Springbok Sustainable Wood Heat Co-operative in Alford, Surrey, England

Project Type: Biomass

Infrastructure: 2 Biomass Boilers; 2 x 5,000 Litre Accumulator Tanks

Generation Capacity: 298 kW

Estimated Project Cost: £ 450,000

GHG Reduced: 2.6 million Kgs of CO₂ over 20 years

<http://www.springbokwoodheat.co.uk/>

Just after World War II, the Springbok Estate, then called Sachel Court, was chosen by The Merchant Seamen's War Memorial Society as its primary location. The founder of the society recognised the need for a place where retired British naval sailors could find assistance after the War. The Society was a place for retired merchant sailors to find comradeship, support, and a home to live in after retirement. The society even helped train its residents in different fields, such as agriculture. Today, the Society's name has changed to Care Ashore. However, its location is still at the Springbok Estate in Alford, Surrey, in southeastern England. The building is quite old and had an out-dated heating system that needed to be replaced. To accomplish this goal, The Springbok Sustainable Wood Heat Co-operative was created to provide a new biomass district heating system on the Estate that uses sustainably sourced woodchips and pellets. The new district heating system provides reliable heat and hot water to Springbok Estate's elderly residents while also supporting the sustainable management of the local environment.

Springbok Estate is located in a remote area of England, which is also one of the most heavily wooded regions in the country. Being as secluded as it is, the Springbok Estate was never connected to the local gas grid and relied on several oil-fuelled boilers. Because the boilers were outdated, they required significant maintenance which was quite expensive. With the heating



load required for its residents, Care Ashore decided that the current system was too unreliable. After considering a new, but expensive, biomass district heating system, Care Ashore decided to use the social enterprise model to help raise the money required for it. Thus, Care Ashore established the Springbok Sustainable Wood Heat Co-operative and began raising money for the new biomass district heating system. Between 2014 and 2015, the Springbok Co-operative raised £425,000 through two community share offerings.

The Springbok Co-operative installed the biomass district heating system in July of 2015. It sources its wood from sustainably managed local forests and it plans on supplying its own wood-chips and pellets in the future. The Co-op makes money by selling heat to the Springbok Estate residents and by taking advantage of the Renewable Heat Incentive (RHI), which is a payment made by the UK Government for renewable heat generation. Once the Co-operative has paid back its investors, in line with co-operative principles, it will pass its savings on to its customers.

Case Study — Wildpoldsried, a Town of Alternative Energy, in Wildpoldsried, Bavaria, Germany

Project Type: Wind

Infrastructure: Approximately 5 Wind Turbines

Generation Capacity: 12 MWh

Estimated Project Cost: £ 6,000,000

GHG Reduced: 12 million Kgs of CO₂/year

http://www.wildpoldsried.de/index.shtml?homepage_en

Nestled away in a quaint rural farming village in southeastern Germany, the village of Wildpoldsried has become famous for something other than its dairy milk. Although it has only 2,600 residents, its innovative spirit in the realm of renewable energy is the rival of the globe. Taking advantage of progressive government policy toward renewables, Wildpoldsried has accomplished complete energy self-sufficiency, generating more than six times the amount of clean energy the village consumes. Many of the renewable energy projects started in the village have been citizen-driven or community initiatives.

The story begins in 1997 when the village elected a new mayor, Arno Zengerle. Mayor Zengerle and the Village Council, in consultation with the townspeople, decided to develop new industries in the town based on local initiatives. Green energy was one initiative that citizens found to be important for the future of the town. In 1999, to help accomplish their goals, the Village created a blueprint to guide its development called Wildpoldsried Innovative Leadership-2020 (or, WIR-2020 based on the German acronym). WIR-2020 focused on three areas:

- Development of renewable energy and energy conservation;
- Construction of ecological buildings using ecological building materials; and
- Protecting water, water resources, and the ecological disposal of wastewater.

With its bold vision, combined with the incentives provided in Germany's Renewable Energy Source Act of 2000, which created the feed-in-tariff that guaranteed generous purchase rates for renewable energy generation fed into the grid, a surge of renewable energy development took off in Wildpoldsried at the turn of the millennia.



Wind energy leads the way in Wildpoldsried, with 15,000 MWh generation capacity. Wind energy projects began with an initiative of one of the village's active citizens, Wendelin Einsiedler. Einsiedler, along with other community members, decided to create a new society to help facilitate renewables development in the village. The new society began assisting the development of wind energy in Wildpoldsried.

First, the society developed EW Wind Energy to develop its first wind energy project. In 1999, the company raised €2.6 million to construct two windmills producing a combined output of 2 MWh. The money raised by the company was solely based on community investments. In 2001, the society created a second company to develop a new wind energy project, raising €3.4 million from 94 local investors to build two additional windmills with a combined energy capacity of 4.5 MWh. Today, according to Siemen's website, Wildpoldsried has a wind generation capacity of 15,000 MWh.

With all the excess power that Wildpoldsried feeds into the German grid, they are generating millions of Euros in revenue every year. This extra revenue has enabled the town to undertake construction projects, which included the constructions of nine community buildings, including a town hall, gym, and a school. The town now has more than 250 private homes equipped with solar, a district heating system with 42 connections, four biogas plants, three hydro plants, and numerous locally-owned windmills. Wildpoldsried is a testament to what can be accomplished when policy and community move in the same direction.

Case Study — Rumbling Bridge Community Hydro Society in Kinross, Scotland, U.K.

Project Type: Hydro

Infrastructure: 2 Hydro-Electric Turbines

Generation Capacity: 500 kW

Estimated Project Cost: £ 2,500,000

GHG Reduced: 1.4 million Kgs of CO₂/year

<http://rumblingbridgehydro.coop>



The Rumbling Bridge Community Hydro Society is in the small town of Rumbling Bridge in Scotland. The Society is a co-operative owned business that owns a hydro-electricity project constructed on the River Devon that has brought clean energy to its community. The site is a “run-of river” project which makes use of the natural flows and large vertical drops in the River’s geography to generate electricity. The two installed hydro turbines can generate 500KW of electricity. This is enough to power more than 400 homes in the area.

The project started when Hugh Wallace, the managing director of a local renewable energy development business, began looking into the feasibility of developing a hydro project on the River Devon. Mr. Wallace qualified for a loan under Scotland’s support program called CARES (Community and Renewable Energy Scheme), which supplies loans for the development of community-owned renewable energy projects, allowing him to proceed through the consent and pre-planning stages of the project. To finance the project, Mr. Wallace and Energy4All, a leading social enterprise that is known for developing community energy projects throughout the UK, created the Rumbling Bridge Community Hydro Society to provide the benefits of local ownership to the community. In October of 2015, the Society produced a public share offering which attracted more than 600 members and raised more than £2.5 million to fund the construction/installation of the project. In September of 2016 the turbines on the River Devon officially began producing clean energy for the community. Among the other benefits, the Rumbling Bridge Community Hydro Society will contribute to a community benefit fund.

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The Community Energy Co-operative Toolkit was prepared
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