

Investment Strategies

Introduction

The purpose of this report is to propose possible strategies to finance renewable energy projects in the SouthGrow region. However, an understanding of what renewable energies are available, where they are available and what some of the technologies are, is required entice funding from internal and external sources. Beyond the education, funding can be broken up into 3 sections:

- 1) Internal funding: Funding sources coming from within or largely within the region where the energy project is to be built, example is co-operatives, or personally financed.
- 2) External funding: Funding which is largely sourced from outside the region, geared towards commercial or industrial facilities
- 3) Government funding: Source of funding from federal, provincial or municipal sources. These are typically in the form of production credits, but also can be in the form of grants, or regulated carbon exchange programs.

Sizing

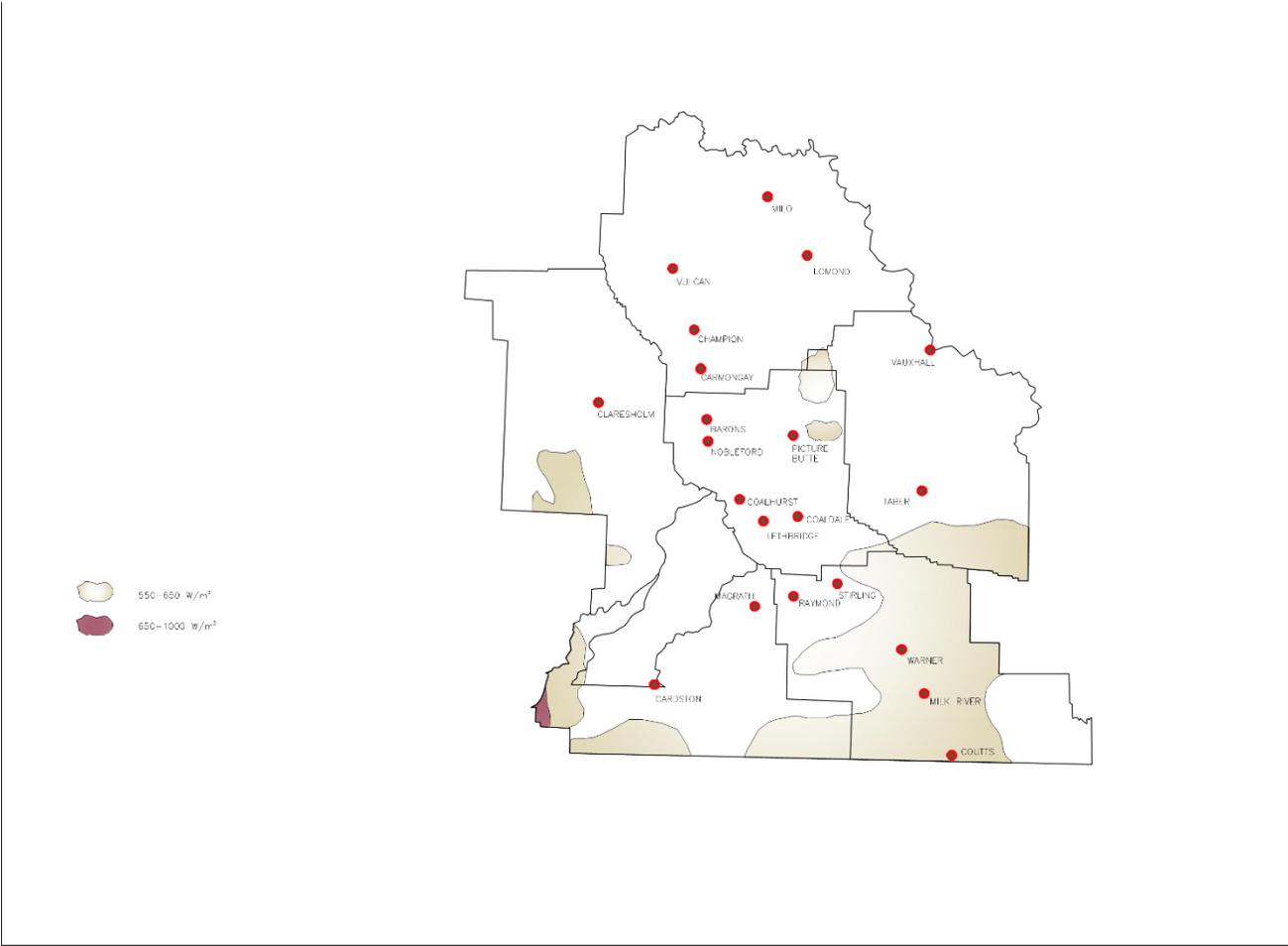
At the same time as considering funding sources available, magnitude of the project must be considered. Renewable energy projects can be categorized into 3 sections:

- 1) <150kW- sized for personal, farm or small business use
- 2) 150kW-1MW- sized for cooperatives, larger business, municipal facilities or large private facilities.
- 3) >1MW- commercial energy generation, specifically for revenue generation.

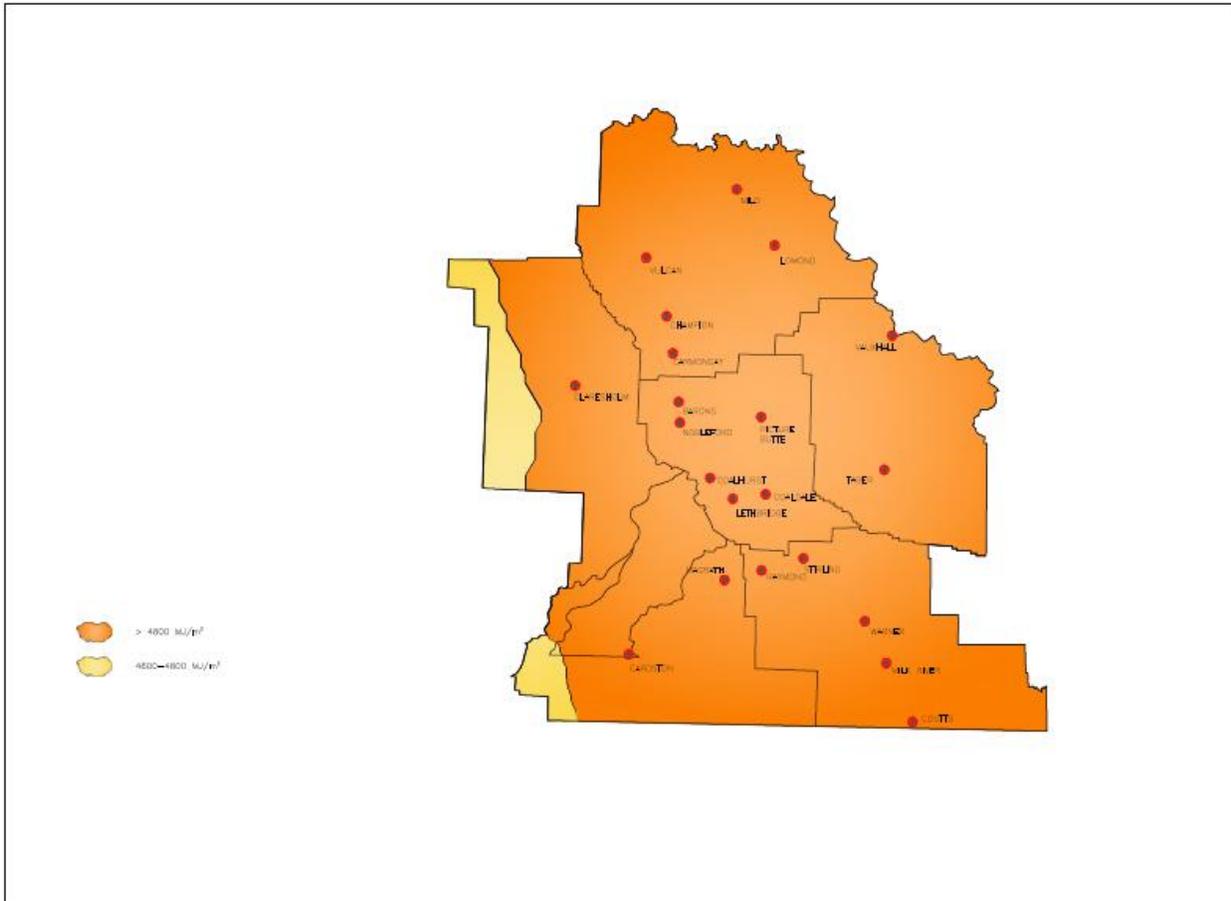
The size of the project proposed will help to determine the possible funding avenues.

Renewable Energy Development

1) Available renewable energy



Wind Energy Map of the SouthGrow Region.



Solar Energy map of the SouthGrow region.

Bioenergy explanation

Bioenergy is prevalent in the SouthGrow region, but there is limited data on the quantities of feedstock. Since bioenergy is a very broad category, with many possible feedstocks and methods for conversion of the feedstock (biomass) into bioenergy, possible projects require significant planning and information generation.

2) Purpose for choosing renewable energy (add in content from presentation)

When choosing to develop a renewable energy project, there are many considerations that must be taken into account. Some of these considerations are:

- a. What is the expected financial outcome of the project?
 - i. What kind of return on investment (ROI) is expected?
- b. Are financial returns secondary to the environmental benefits?
- c. Project sizing (general terms)
 - i. How much energy is expected from the renewable energy project?
 - ii. See sizing above
- d. Project budget

- i. Return on investment
 - ii. Capital expenses (CAPEX)
 - iii. Operating costs (OPEX)
- e. Is the project geared towards revenue generation, or electricity offsets.
- f. Will there be more than one energy consumer or developer?

Renewable energy is a fast growing industry with new technology being discovered daily. Growth is largely spurred by government intervention, through feed-in tariffs, production credits, development credits, climate exchange programs and other incentives. In Alberta for wind and solar energy development there is no direct credit or funds for development. Bioenergy, however, has several forms of funding through development grants and production credits. This will be discussed further.

In Alberta industrial renewable energy is growing, mostly in wind, but also in Bioenergy. At the smaller scale growth is primarily in the solar PV energy production. There is development of small wind, but it is not as prevalent as the solar. Using the maps provided above it is clear that wind and solar are available in all of the areas in the SouthGrow region.

The maps above provide a reference for the energy production capacity of the SouthGrow region. Wind energy is not equivalent across the whole region, there are some areas where the wind energy is of higher quality than in others. These areas of higher wind energy are at 50m above the ground and are largely limited to commercial wind turbines. However, in the maps region the wind energy is sufficient for electricity production for small-medium wind turbines. In contrast the solar energy map shows the energy production across the region is relatively constant, allowing for small solar production to be evenly available across the region.

There are 3 categories of energy production as defined by Alberta energy, <150kW, 150kW-1MW and >1MW. The >1MW is largely focused on industrial energy production with revenue generation as the primary purpose of the development. This level of development will not be the focus of this report. Developments <150kW for the purpose of this report are systems for facility or personal use. For developments 150kW-1MW, the primary purpose is for multi stakeholder use, municipal use or large facility use. This report will focus on these levels of development.

Sizing and funding

There are 3 main funding sources for renewable energy projects in the SouthGrow region:

- 1) Internal funding: Funding sources coming from within or largely within the region where the energy project is to be built, example is co-operatives, or personally financed.
 - a. This form of funding is most prevalent in the <150kW sector. The majority of the projects in this sector are household solar energy production systems. However, there are systems for farms, municipal buildings, pivot irrigation systems and high density feed operations.
 - b. Internal funding includes the development of cooperatives. Cooperatives have the potential to increase the size and scope of projects, likely smaller than 1MW, which increases the economic viability of a renewable energy development.
 - c. Internal funding is less often combined with government funding, but has the potential for government funding.

- d. Cooperatives also can form for in large diffuse regions such as the SouthGrow region. These cooperatives can be for energy production or to pool renewable energy production data, which can be used to gain climate exchange credits. Climate exchange credits will be discussed further in this document.
- 2) External funding: Funding which is largely sourced from outside the region, geared towards commercial or industrial facilities
- a. Typically industrial energy generation systems are externally funded, such as wind farms. These sites are typically developed by selling the “clean” energy at a premium to the wholesale electricity production. Furthermore, the amount of “clean” energy produced from these site is large enough to attract climate exchange credits buyers. This is typically a significant source of revenue and increases the economic viability of the commercial developments.
 - b. External funding can be employed for smaller systems, but would be in conjunction with a municipal or large internal company leading the development.
 - c. External funding typically requires shorter ROI, and must be profitable developments when considering the CAPEX and the OPEX.
- 3) Government funding: Source of funding from federal, provincial or municipal sources. These are typically in the form of production credits, but also can be in the form of grants, or regulated carbon exchange programs.
- a. In Alberta there are several forms of government incentives.
 - i. There is the potential to generate energy for a house, farm or small facility for the purpose for electricity cost offsets. This is not designed to generate revenue, only to minimize energy cost to the consumer. These systems are typically less than <150kW. This provides the advantage of energy production to be exchanged from the grid at market value, rather than at wholesale energy costs. <http://www.auc.ab.ca/rule-development/micro-generation/Pages/default.aspx>
 - ii. In Alberta there have been 2 Bioenergy production grants, first for biofuels production, the most recent for energy from waste. The energy from waste grant was to continue to 2016, but was discontinued in April 2013. <http://www.energy.alberta.ca/BioEnergy/1400.asp>
 - iii. Alberta climate exchange program: Alberta’s offset credit system is a compliance mechanism for entities regulated under the province’s mandatory GHG emission intensity-based regulatory system. As part of the 2002 **Climate Change and Emissions Management Act** (CCEMA) and the 2007 **Specified Gas Emitters Regulation** passed by the Alberta legislature, large final emitters (any facility in the province that emits more than 100,000 metric tons of CO₂e of GHGs per year) are required to reduce their GHG intensity by 12% per year. The *Regulation*, which took effect on July 1, 2007, represents the first GHG emissions legislation in Canada. Find more information [here](#).
 - iv. Currently there are not any renewable energy programs available through the federal government.
 - v. Currently there are several municipalities in Southern Alberta that own their own electrical utilities. These municipalities must pay for grid access each year, which can be very costly. In these municipalities development credits to home and business owners may be viable to decentralize the energy production, minimizing grid access charges.

Strategies for funding

Renewable energy projects can be started from internal private sector innovators, public innovators or external innovators. Typically, it is internal innovators who begin the process. There are several steps which a municipality can take

- 1) Education
 - a. Develop an understanding what renewable energy is in general terms, with some understanding of the technologies available
 - b. Provide information where and what available renewable energies are available in a region
 - c. Provide reverence to information on renewable energy technology, sizing, courses, land zoning, municipal planning, taxation, installers, and expertise
- 2) Project development
 - a. Make available and known a project development toolkit with a focus on renewable energy.
 - b. There are several reports available, but will also be made available by SouthGrow.
- 3) Planning
 - a. Business plan
 - i. Business plans are the most important piece of information required for to inform and attract investors for a project. Business plans can be developed privately, or can be contracted to consultants for development. A typical business plan outline can be found [here](#).
 - ii. For facility, personal or farm use, justification for project development can be very simple or very difficult. However, a full business plan may not be necessary to secure the funding. This is because this type of development is typically funded internally and privately. Simple analysis of capital expenses and operating expenses, combined with the knowledge of the legal development requirements and installation expertise, may be all that is necessary to justify installation.
 - iii. Larger facility projects, cooperatives and systems between 150kW and 1MW require significantly more planning than systems for personal use. The business plan development should be as detailed as possible, but to be careful to keep within the development requirements of the medium sized microgeneration systems. Furthermore, the business planning and modelling can be very complicated if there are multiple parties involved. This process can be simplified by considering development of the renewable energy project through a incorporated business or development of a cooperation. This simplifies the application under a single party, with corporate governance.
- 4) Internal funding
 - a. Municipalities' Role
 - i. A municipalities' role in the development of internal funding is:
 1. Harbor the development of cooperatives. This can be done
 - a. by setting up an incubator for cooperatives development

- b. Develop bylaws and requirements for formation of cooperatives
- c. Provide a toolkit for the formation of a cooperative
- d. Make information on renewable energy quantification and qualification available to the general public.
- e. Provide information on zoning, taxation, grid access and any other local restrictions on energy production.
- f. Keep inventory of renewable energy projects, their size and scope. This information can be used to maximize energy production, ensure decentralized systems are monitored, and energy is produced safely and efficiently.

5) External funding

a. Municipalities' role

- i. Municipalities' role in external funding development is to expedite information transfer, develop inventory of the available assets and liabilities, entice entrepreneurs to begin development. In appendix 1, this is detailed for investment attraction for industry, from a renewable energy viewpoint. This information combined with the maps of available renewable energy provide the basics necessities to attract external funding.

6) Government funding

a. Municipalities' role

- i. Develop an inventory of grants, tax credits and carbon credits are available for renewable energy production.
- ii. Develop information package for wind, solar, and bioenergy for available grants and tax credits.
- iii. Keep inventory of renewable energy projects, with their production size, scope etc. This inventory may be used to develop a carbon credit cooperative. Carbon credits are typically not marketable less than 1MW, however, projects can be combined and made marketable. There are firm which will take the combined data and make it marketable to the carbon credit purchasers.
- iv. Provide tax credits for buildings and facilities which have incorporated renewable energy production into their energy plan. At the very least ensure that there are not additional taxes for microgeneration systems. Currently there are planning commissions which significantly increase taxes for facilities with micro generation systems.

Appendix A

Assets and Liabilities in Remote Rural Industry Development

Course Summary

The purpose of this course is to develop an understanding of the assets, liabilities and deficiencies that exist in a target remote rural area. You will explore the challenges associated with industry development in remote rural areas and contrast that with urban industry development.

With this information you learn to evaluate what industries are available in a region and develop the assessment skills to determine the assets, liabilities and deficiencies for industry development. Understanding the collected information will allow you to focus on the strengths of the region and possibly work on the weaknesses. Finally, this will provide the potential for targeted industry marketing and development.

Module 1 – Rural versus Urban Industry Development.

At the end of this module, you will be able to:

Compare the challenges associated with rural industry development and urban industry development.

- List the physical requirements for industry development
- Determine which requirements are missing from remote rural locations
- Identify government support resources for rural industry development

To show that you have mastered the objective(s), you will:

Use a checklist to review the assets for industry development in a rural community.

Directions

Activity & Instructions	Time
Before presentation: <ul style="list-style-type: none">• Read the material provided below• List any questions you have.• Complete the online survey	2 hour
Tune into the video-conference presentation <ul style="list-style-type: none">• Introductions• Presentation• Questions	1 hour
After presentation: <ul style="list-style-type: none">• Review the resources provided in this module	1 hour

Information

Requirements for industry development

Rail

- Major rail lines are not located in every region in Canada, however even if rail lines run directly through a region there may not be rail access
- Possible stimulation of industry can be the addition of rail access in the form of a rail spur
- See “**Understanding Competitive Rail Access**”

Highways

- The majority of secondary products must be transported by truck. Inadequate highway access or road access can severely hinder the transportation of goods.
- Highway access also includes access of that highway to either a target market or to larger shipping methods or shipping routes.
- Aside from transport of goods proper highway system will increase the ability of a community to retain employees
- See “**Lacombe Country Economic Development Study**”

Seaway

- Access to seaway is of vital importance either directly or indirectly by rail or truck. This will provide potential for the most economically viable method for shipment of goods to international markets.
- However, if the potential target market is regional then there is no need for seaway shipping access.
- See “**Economic Impact of the Great Lakes and St Lawrence Seaway System**”

Waterway

- In highly remote areas, with limited highway access and no rail access, waterway shipping may be the only means.
- Typically waterway access is limited, however could be used in lieu of air airport, small shipping barges, or short transportation to better means of access

Air

- Air is of importance for quick access of parts, employees, and also for recreation for maintaining employees.
- See “**Up in the Air. The Role of Airports for Regional Economic Development**”

Electrical grid access

- Most large, and some small industries require 3-phase power. Stationary machinery to large computer clusters work most efficiently on 3-phase power.
- Electrical generation permits
- The potential to add electricity, large or small provides the possibility for renewable energy development
- Many industries require high peak electricity production, therefore if there is a possibility to access high consumption services, it is an asset

Internet service

- See “**Small Businesses’ Use of Internet: Some Realities**”
- At the very least a community will need basic data service for most industry, from email, to direct payment, most everything uses internet in some form.
- For industries with 10 or more staff, high speed internet will be a requirement, not an option.
- For tertiary industries such as call centers or data centres, high speed high volume internet service is a requirement, this can be provided through fibre optics or new digital wireless.

Service stations

- Lack of service stations do not create a stopping point for employees, and decrease the potential that employees will live in the community and spend money there. This may be as simple as a credit card, card lock service

Restaurants

- To retain employees restaurants are necessary to provide recreation and a stopping point
- Businesses typically do not have cafeterias or food service, therefore for business lunches or simple employee lunch, a quality restaurant is an asset.

Hotels

- Provide lodging for temporary workers, clients, contractors, consultants, etc.
- Provides families the ability have friends and family visit
1.

Water

- See **“Making Water a part of Economic Development”**
- Potable water service is required for all industries.
- For most secondary industries water use is the largest asset requirement, therefore the potential to use high rates of water is necessary.
- Many tertiary industries require massive water for computer cooling, etc.
- Maxed out lagoons or wastewater treatment plants can completely stop development. Keen understanding of the available capacity is necessary.
- Manufacturing or processing industries typically require high strength wastewater discharge capability
- Many industrial waters require that there discharge be high volume and high strength. This is typically not available in a remote region, but can be added in with new infrastructure development

Natural gas service

- Direct natural gas service is a requirement for heating of facilities
- For manufacturing processes requiring heat, access to high volumes of natural gas is essential.

Zoned land

- A business cannot develop without properly zoned land. Making land available for purchased which is already zoned to industrial, with access to the utilities is essential.

Population

- Businesses need the ability to choose employees without having to bring new people on every occasion (an employee pool)
- Skilled labour is an asset to the development of manufacturing or large infrastructure business

- For emerging industries, tertiary industries or high tech industries high value educated people need to be accessed.
- Required to fill support positions and to build long term employment
- Support workers such as consultants, contractors and support infrastructure access fill the knowledge and skills gap within a company or business.

Challenges for rural industry development

- Population instability or low population because community is based off of boom industry
- Lack of rail access
- Most municipalities in southern and central Alberta do not have issues with highway access. This is more of an issue in very remote locations.
- Seaway access for a rural area is not available directly, however combined with rail access, ports are available for shipping
- Waterways are typically not available for attracting industry, other than tourism
- Most small municipalities do not have close access to a paved or improved airport.
- Many municipalities do not have 3-phase power available in the community, and is a significant drawback to industry attraction
- In Alberta there is the potential for electrical generation at the small scale and the large scale. Permits are required, but are accessible to most communities.
- If the community is not on the grid, there is more potential to produce electricity for local consumption.
- Most rural areas have no access to high rate power, however, this is not typical of historical industries, and is focused more on new industry development.
- Currently most areas with phone (mobile or land line) have access to basic internet. But more companies are relying on the internet for remote access.
- High speed internet is now the norm for small business, but it is not available in most small municipalities
- High speed high volume data is reserved for urban areas, and is typically focused in a specific region. This is not available anywhere in rural Alberta at this time.
- Many municipalities have service or gas stations, but also many are unreliable.
- In many small municipalities good restaurants are lacking.
- Typically in a small community there are available hotel rooms, but typically are labourer level hotels. 3-star hotels are lacking
- Excess potable water is usually not available
- High water usage may be available, but not sustainable
- Typical lagoon systems are not designed to handle industrial wastewater.
- Typically older collection systems in these municipalities are not capable of handling high strength wastewater, or solids.
- High volume and high concentration waters may not be acceptable to the collection system or lagoon system.
- In most areas of Alberta there is natural gas service. If there is not, it limits the potential for industries which require process heat.
- Most areas in Alberta have access to high rate natural gas, but there are some communities with limitations due to local.

- Industrial zoned land may be available in municipalities, but typically not in the quantity required or it is too restrictive.
- Low volume of people to choose from
- Skilled labour may or may not be available
- Specific industries require specific labour resources
- High value educated people are usually lacking in small municipalities especially in remote locations
- Unskilled labour is usually available but in limited quantity.
- Consultants, contractors, etc. are usually not available.
- There are fewer new industries as natural industries are not developing, agriculture is becoming more centralized, and oil and gas is becoming sporadic.

A rural location may have a few of the above requirements, but may not be the right combination. They may not market themselves to the right industries. Additionally, they often do not know what resources are available or not available

In order to attract entrepreneurs and new business you must understand what an entrepreneur is looking for in a suitable location for a start-up. The following link has a basic checklist that an entrepreneur is looking at before he/she will invest:

Use this [link](#) to provide an **Industry Analysis Checklist**.

This link will provide you with needed information for **Developing an Industry Competitiveness Strategy: Tools and Examples**.

The following resources are available from the government:

- **Regional Economic Development**
- **Community Economic Development**
- **Aboriginal Economic Development**
- **Municipal Economic Development**
- **Alberta Economic Development Authority**

Module 2 – Local Industries

At the end of this module, you will be able to:

Evaluate what industries exist in the region

- Collect information about a rural area in order to make an assessment of the industries already existing.
- Use a checklist to assess the infrastructure in a given rural area

To show that you have mastered the objective(s), you will:

- Summarize the industries that exist in a case study of a rural area.

Directions

Activity & Instructions	Time
Before presentation: <ul style="list-style-type: none">• Read the material provided below• List any questions you have.	1 hour
Tune into the video-conference presentation <ul style="list-style-type: none">• Outline and goal of presentation• Presentation• Questions	1 hour
After presentation: <ul style="list-style-type: none">• Summarize the industries that exists in a case study of a rural area	2 hour

Information

In rural areas there are typically one or two industries that are the cornerstone of the economy. These industries are usually easily identified and are typically agriculture, oil and gas or forestry. Along with these cornerstone industries there are associated support businesses and industries. In industries such as agriculture the life cycle in a given area is very long, and possibly indefinite. However, oil and gas exploration, drilling and production are industries of boom and bust, where the lifecycle of the industry in a given area is finite, from finite resources. The agriculture industries and oil and gas industries contrast in their lifespan but also in their rate of expansion. Typically agriculture is slow growth and slow decline, whereas oil and gas is fast growth and fast decline. This is just the basics of growth and expansion in rural areas.

When assessing an area for what industries are available it may be as simple as saying that there is just agriculture or just oil and gas, however typically it is more complex than this. One large industry can be the cornerstone of an economy and the majority of the businesses in a region are to service that major industry. However, detailed industry assessment should be completed every few years in a community to monitor trends and to be move with trends.

Before attempting to attract new industry it is necessary to assess the community for current industry and understand the assets, liabilities and deficiencies that exist.

Use this table to guide your assessment of current industries in a given rural community.

What is the most obvious major industry?	
Are there more than one?	
Approximately what percentage of the community is employed directly by this industry?	
Create a list of all of the businesses in the area	
Create a cash flow diagram - what businesses are supporting the major industry directly? (if there are two major industries, the flow may be a complex web)	
Indirectly?	
Are there any businesses left?	
If so what industry are they in?	
Can this industry be expanded or are there constraints in its growth?	
If possible, create a list of businesses that have failed or left in the last 10 years, include the date	
Of these businesses how many are to support the major industry? Directly or indirectly	
Are there any not associated with the major industry, or were a new branch of the major industry?	
What was the main reason that they failed? (aside from not enough business)	
Is there a common factor in the business decline?	
In the last 10 years what new businesses have started and succeeded (with dates)?	
Can these new businesses attribute their success to 1 or few things?	
What are the commonalities of the successful businesses?	
What are the commonalities of the unsuccessful businesses?	
Businesses not supporting the major industry, can the reason for success be pinpointed?	

Use this table to assess infrastructure in a rural community.

Infrastructure	Of the following what is available in the region?	Y/N	Excellent	Very good	Good	Decent	Needs improvement	Poor
Transportation								
	Rail							
	Highway							
	Seaway							
	Waterway							
	Air							
Electrical grid access								
	3 phase power							
	Electrical generation permits							
	Electric grid access, high consumption							
Internet service								
	Basic data service							
	High speed internet							
	High speed high volume data							
Support businesses								
	Service stations							
	Restaurants							
	Hotels							
Water								
	Potable water service							
	High water availability							
	Wastewater discharge capability							
	High strength wastewater discharge							
	Industrial wastewater capability							
Natural gas service								
	Direct natural gas							

	service							
	High rate use natural gas							
Zoned land								
	Industrial zoned land							
Population								
	Employee pool							
	Skilled labour							
	High value educated people							
	Unskilled labour							
	Support work							

Use the following table to assess the political, social and public factors in a rural community

Social	
Political	Is there a set development application process?
	Can it be done without having to approach council for every step?
	Is there a political desire for industry?
	If so what are the limitations?
	Would the taxes be considered high?
	What is the political history with new business and industry development?
	If there is already political focus, what is it?
	Does the council have to be lobbied to approve each development step?
Public	Is there public support for new industry development?
	What are their limitations?
	Is there already public focus, if so what is it?
	What is the unemployment rate?
	Is there any labour that has worked outside of the major industry?
	What are the expectations for an industry?
	How involved does the public expect to be in the development process?

Module 3 – Assets and Liabilities

At the end of this module, you will be able to:

Evaluate the assets, liabilities and deficiencies for remote rural industry development.

- Determine what deficiencies can be turned into an asset.
- Determine what liabilities can be turned into an asset.
- Collect a list of assets and potential assets in a community.

To show that you have mastered the objective(s), you will:

- Summarize the assets, liabilities and deficiencies in a given rural community.

Directions

Activity & Instructions	Time
Before presentation: <ul style="list-style-type: none">• Read the material provided below.• List any questions you have.	2 hour
Tune into the video-conference presentation <ul style="list-style-type: none">• Outline and goal of presentation• Presentation• Questions	1 hour
After presentation: <ul style="list-style-type: none">• Summarize the assets, liabilities and deficiencies in a given community.	1 hour

Information

Assets, Liabilities and Deficiencies: What are they?

From the last module, there is a list of assets and liabilities of the community. The answers from each question will give an understanding of the development environment.

From the list of questions, it may be quite apparent what the assets, liabilities and deficiencies of the community are. What deficiencies can be changed into an asset?

- a. In many cases deficiencies are there because there has not been physical industry assessment for the community, but can be addressed relatively easily. For example, high speed internet can be drawn from satellite, microwave or fibre optics and can be brought to a community relatively easily.
- b. Also, in many cases a deficiency exists because there is no possibility for the asset to exist. For example, in remote northern communities, there is no access to the electrical grid, and their electricity comes from generators. Some community generators are 3-phase, but many are not, in that case it may not be feasible to gain 3-phase power

c. For the remainder,

Can the deficiency be filled?	
If so, is there an outside connection that needs to be made? Where? How far?	
If it is infrastructure development, what infrastructure is necessary? What is the capital cost?	
Can the infrastructure cost feasibly be covered by the community?	
If not, are there grants or private funding options available?	
If there is limited labour pool, how can people be retained in the community?	
If businesses have been leaving, why? Can the cause be pinpointed? Can the cause be justified?	
If it can't be justified by major industry downsizing, is the justification social, political or physical?	
From the above can the deficiency be filled?	
What is the cost to fill the deficiency?	
If there is not a monetary cost, can an action plan be implemented to alleviate the deficiency?	

- 2) From the questions above, implement a tentative action plan to fill the deficiencies. The deficiencies that can be feasibly be filled, and the assets gives a starting value for marketing to business.

Understanding the community liabilities is as important as understanding the assets for assessing industry potential. Liabilities that are not found or understood can stop industry development.

Typical liabilities are:

Political uncertainty	<p>Is the political situation unstable? Do neighbouring municipalities have conflicting ideologies? If there is not a political desire for industry, how can a business be developed? Are the bylaws in place for zoning, water use, electricity use etc? If not that can be a hurdle and a road block. When is the next election? Election processes will hinder new business development in a small community</p>
Physical	<p>Lack of sanitary sewer, if there is a lack of sanitary sewer system; it is not likely that this can be solved easily for an industry.</p> <p>Class 1 or 2 solid waste services are not available.</p> <p>Wastewater treatment/discharge. For a lagoon or wastewater treatment plant the discharge point is as important as the treatment system. If the discharge is in an environmentally sensitive area, it will shy away many industries</p> <p>No process water. If there is not process water, only potable water, then costs can become too high for development.</p> <p>Land available is too close to housing, schools etc, this will stop industry because of the public perception</p> <p>Land available is on or near environmentally sensitive areas</p> <p>Industry taxes are too high</p> <p>There are no support industries or potential for support, ex no potential for a gas station because gas transport costs are too high.</p>
Social	<p>There is a public desire to remain a small quiet community</p>

	<p>There is public apathy towards industry growth</p> <p>There is a push to support dying industries</p> <p>Low community spirit, a business does not want to work where people do not want to live</p> <p>Housing prices are declining, seemingly attractive, but a sign of a dying community</p> <p>Cost of living is too high</p> <p>Crime rate is high</p>
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It is possible to turn some liabilities into assets.

Examples:

It is possible to recycle lagoon water for agricultural or industry purposes, limiting the discharge to sensitive waterways or recreational waterways. This is also a possibility to increase the utility water potential in a community

Environmentally sensitive areas can be reserved as green space unimproved parks. This will increase the quality of life for the residents increasing the employee retention.

In communities off of the grid which operate off of diesel generator to develop electrical production industry to provide for themselves with green energy. The green energy can be developed from solar, wind and bioenergy such as willow biomass.

Convert wastewater bio-solids into biogas for heating or electricity.

Module 4 – Community Potential

At the end of this module, you will be able to:

Recommend a plan for potential industry development in a rural community.

- Evaluate all the information gathered about a rural community to recommend potential industry development.
- Predict challenges to suggested industry development and make suggestions to mitigate them.

To show that you have mastered the objective(s), you will:

- Assess the potential for new industry development in your own rural community.

Directions

Activity & Instructions	Time
Before presentation: <ul style="list-style-type: none">• Read the material provided below.• List any questions you have.	1 hour
Tune into the video-conference presentation <ul style="list-style-type: none">• Outline and goal of presentation• Presentation• Questions	1 hour
After presentation: <ul style="list-style-type: none">• Complete assessment for your own rural community.	3 hour