

# Community Energy Planning Guidebook



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## Language Glossary

## Key Definitions

### **Baseline study:**

A baseline study is a way to understand the situation at the beginning of the project so that any changes can be tracked. An Energy Baseline study will show how much electricity the community is using including homes, businesses and band buildings. If the community makes any changes to conservation, renewable energy and new buildings, the changes can be tracked.

### **Community Engagement:**

Community engagement means having community members' involvement in the community's decision-making process. The Energy Planner will work with the resource team to do our best to include community input, feedback and questions into the process. A project completed with the community's input is the best way to meet the community's needs.



### **Community Transition:**

When a community makes changes, community members will be affected in different ways. Community transition happens over time working towards community goals.

### **Data gathering and analysis:**

Data gathering is visiting with people, asking for feedback and writing down information needed to better understand the situation. After the data is collected, it is organized and analyzed into groups so that it can be used to make informed decisions. Data could be reading meters, writing down how much fuel the generators use in one year, asking community members if they have an old freezer, etc.

### **Gap Analysis:**

A gap analysis is analysing the difference between the current situation and where the community wants to be. Conducting a gap analysis can help a community examine its goals to determine whether it is on the right path to be able to accomplish them.

### **Needs Assessment:**

A needs assessment is a process where communities write their priorities for making improvements, and allocating community resources.

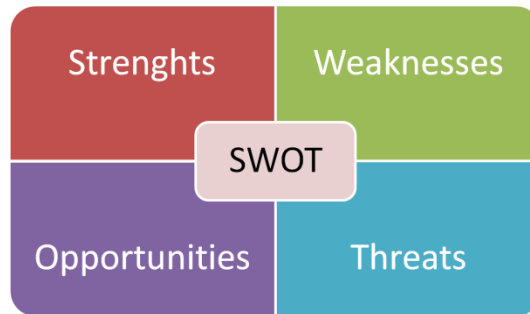
### **Readiness Plan:**

A readiness plan is done to prepare the community and their local organizations to be ready when a new and large change will happen in the community.

## Key Definitions

### SWOT Analysis:

- SWOT analysis helps to identify a community's Strengths, Weaknesses, Opportunities and Threats for long term planning. The community can work together to identify what they are good at, areas where they want to improve, projects that are upcoming and challenges that will have to be overcome.



### Assets:

They are physical assets such as land, vehicles, equipment, machinery, furniture, inventory, stock, bonds and cash. These assets are the backbone of a community.

- Natural Resource Attributes - Example: Land, Forest, Lake, River, Mountain.
- Human Resource - Example: Land planners, Resource Officers, Nurse, Carpenters, Plumbers, Truckers, Trappers, Hunters etc
- Community Infrastructure Assets



There are other assets, such as traditional ecological knowledge, skills, values, cultural knowledge. Some other examples include;

- ready access to local GED offerings;
- distance-learning / e-learning opportunities;
- human resources data such # workers at certain education and training level;
- support of leadership;
- support of Elders;

## Community Energy Planning Introduction

**Community Energy Planning** is a comprehensive long-term plan to:

- Improve energy efficiency                      Use electricity better - new windows and appliances
- Conservation                                      Use electricity only when you need it – hot water timer
- Assess opportunities for renewable energy    Investment in solar, wind, water
- Support sustainability                            The community is growing
- Build capacity and communication            Community ownership, engagement and feedback
- Support economic development                New buildings and businesses

**What is a Community Energy Plan?** A Community Energy Plan is a process to:

- Understand **how energy is used** within a community
- Identify opportunities to **conserve energy**
- Identify **renewable energy opportunities**
- Establish **energy goals** for the community
- Establish **community priorities and identify needed resources**

**A Community Energy Plan** by itself cannot fix challenges with housing renovations, electricity bills and communities who are on restriction. It can however identify these challenges and make recommendations for solutions to housing, caring for those who can't afford to pay their electricity bills and deisel generation upgrade investment.



## Elements of a Community Energy Plan (CEP)



## Seven Steps of Developing a CEP



**ENGAGE YOUR COMMUNITY IN ALL THE STEPS**

## Step 1: Community Worker/Energy Coordinator Profile

### Community Energy Worker/Coordinator

- ▶ Planning starts with our community leadership, elders, youth and members.
- ▶ The CEW is a position filled by a community member and funded through the project.
- ▶ The CEW will:
  - collect information needed for the project
  - visit with community members to share information and get feedback

**Review the Job Description and add with your council, add specific tasks related to your community's needs.**

**Community Energy Worker/Coordinator Job Description in your own words:**



## Step 2: Developing Community Vision & Goals

### What is a VISION in a community energy plan?

- The vision must reflect a long-term solution.
- It should reflect YOUR community. What makes YOUR community unique?
- It should drive ACTION. It should be inspiring!
- Vision what the community will look like 20 -30 years from now.

### Method

Visit with key members of the council, band staff, Elders and youth to ask them what they think. Host a meeting with snacks to ask community members to share their vision.

Some questions you may want to ask:

1. What do you use electricity for?
2. Why is electricity important to you and your community?
3. What do you want your community to look like in 20 years?

### Workshop Ideas with Youth and Community Members

- ▶ Develop a community SWOT Analysis and see what strengths, weaknesses, opportunities and threats are specific to your communities and to assist with changes that have to be made to become more energy efficient.
- ▶ YOUTH: Draw the electricity in your community on the map. Include the things that you can do because you have electricity.
- ▶ Did you know that your community couldn't build a new school without a new generator? What would you like your community to have if you didn't need to worry about buying more generators? Make a list of ideas.

### Step 3: Community Energy Baseline

Energy baseline is a list of community assets that helps describe where the community is today. A technician will visit your community to assist the Community Energy Worker to visit buildings and houses to record the information below with your help including:

- Buildings and Infrastructure (poles, generators, houses, wires, etc.)
- Energy supply – diesel plant capacity, water power and solar panels
- Energy consumption – read meters to record how much each house and building uses
- Costs associated with the energy use – electricity costs at each building and home
- If there are workers to manage and fix the energy infrastructure
- Programs available to support energy conservation and efficiency

#### Template for Baseline Survey (IPA):

| Description                                     |  |
|---|--|
| <b>Name of Community</b>                        |  |
| <b>Population</b>                               |  |
| <b>Power Authority</b>                          |  |
| <b>Contact</b>                                  |  |
| <b>IPA Management</b>                           |  |
| <b>Technical Staff</b>                          |  |
| <b>Number of Residential Buildings</b>          |  |
| <b>Non Residential Buildings</b>                |  |
| <b>Commercial Rate</b>                          |  |
| <b>Residential Rate</b>                         |  |
| <b>Frequency of Meter Reading</b>               |  |
| <b>Commercial Revenues</b>                      |  |
| <b>Residential Revenues</b>                     |  |
| <b>Fuel Costs</b>                               |  |
| <b>Fuel Storage Capacity</b>                    |  |
| Facilities                                      |  |
| <b>Genset 1</b>                                 |  |
| <b>Genset 2</b>                                 |  |
| <b>Genset 3</b>                                 |  |
| <b>Renewables</b>                               |  |
| <b>Total</b>                                    |  |
| <b>Prime Rating %</b>                           |  |
| <b>Last Upgrade</b>                             |  |
| <b>Fuel Storage Capacity</b>                    |  |
| <b>LDC Condition</b>                            |  |
| <b>Emergency and Environmental Plan</b>         |  |
| <b>Conservation Initiatives</b>                 |  |
| <b>Renewable Energy Opportunities</b>           |  |
| <b>Economic Development Strategy Priorities</b> |  |

## Step 4: Identify Energy Efficiency & Conservation Opportunities

Ensuring energy efficiency includes finding ways to use less electricity. Baseline energy assessments can help in identifying existing energy consumption in buildings and houses. Compare the baseline consumption to consumption after changes are made to electricity use or renovations will demonstrate improvements in energy efficiency.

Involving your Tribal Council, utility (HORCI or IPA) in assisting you with determining energy efficiency measures, and in accessing utility and government programs.

Energy is used every day at home, at school, at work, and even at play. By saving energy we are helping to save money on electricity bills and there will be less fuel shipped and burned at the diesel generators.

### What are some ways the community can become more energy efficient?

Workshop YOUTH and Community

- what are some ways that you can use less electricity?
- if you could receive \$500 to use less electricity, what would you use it for? (Eg. new windows, new freezer, timers, lights, etc.)



**HELPFUL RESOURCES & ACTIVITES INCLUDED IN BACK OF GUIDELINES BOOKLET**

## Step 5: Identify Renewable Energy Opportunities

### **Renewable Energy; what options can the Community look at for the future?**

Visit with the Public Works Manager and Economic Development Officer to ask them what studies have been done in the past to assess potential renewable energy.

### **Community Renewable Energy Sources**

- ▶ Potential for run of the river; capacity, location
- ▶ Potential solar development, roof top or ground mount, capacity
- ▶ Wind potential

## **Step 6: Identify Economic Development & Service Needs**

### **Identify Economic Development and Service Needs**

This is an opportunity to identify service needs and potential future opportunities so that a community specific energy plan for the future can be developed based on community priorities and values. Visit with the Economic Development Officer and Public Works Manager in your community to write down any new construction or renovations that will need electricity.

### **List of planned renovations or new construction that require electricity**

Examples: New Clinic, School, Houses, Youth Centre, Street lights

### **List of Economic Development and Public Works Priorities**

Examples: Fire Hall, New businesses, Run of the River Water Power

## Step 7: Implementation

### Community Involvement

**Communication:** Good advertising includes posters, social media or radio to get the word out about upcoming meetings/events. Visit with community members. Approach active members of the community and ask for their support as well to spread the word.

**Make it Meaningful:** The goals and objectives should be achievable and meaningful to the community. The plan should be written so that it can be read, understood and used by technicians, council and community members. A community presentation would help to provide information to community members and give them a chance to ask questions for clarification.

**Action Plan:** Make sure there is a clear action plan with some things that can be done right away. Having short, medium and long-term objectives identifying people to do the work will ensure that the plan makes positive changes. Small positive changes made right away will get more people involved and show positive results.

## Community Energy Planning Work Plan

| ACTIVITY |  | YEAR 1 (By Month) |   |   |   |   |   |   |   |   |    |    |    | YEAR 2 (By Month) |   |   |   |   |   |   |   |   |    |    |    |
|----------|--|-------------------|---|---|---|---|---|---|---|---|----|----|----|-------------------|---|---|---|---|---|---|---|---|----|----|----|
|          |  | 1                 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1                 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| <b>1</b> | <b>PROJECT INTRODUCTION &amp; COMMUNITY ENGAGEMENT</b>                 |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 1.1      | Background Review & Education Component                                | █                 | █ |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 1.2      | Workshop   |                   |   | █ |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 1.3      | Open House #1 (KO in FNs)  |                   |   | █ |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 1.4      | Collect Existing Records   |                   |   | █ |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 1.5      | Progress Report #1 (Video Conference)                                  |                   |   |   | █ |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| <b>2</b> | <b>CEP: COMMUNITY VISION &amp; PROFILE</b>                             |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 2.1      | Vision & Guiding Principles  |                   |   |   |   | █ | █ |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 2.2      | Meeting #2 (video-conference)  |                   |   |   |   | █ | █ |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 2.3      | Community Profile  |                   |   |   | █ | █ | █ |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 2.4      | Progress Report #2 (Video Conference)                                  |                   |   |   |   |   |   | █ |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| <b>3</b> | <b>ENERGY BASELINE</b>   |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 3.1      | Collect electricity consumption/use information (KO & C in FNs)        |                   |   | █ | █ | █ |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 3.2      | Complete Baseline Summary Report                                       |                   |   |   | █ | █ | █ | █ |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 3.3      | Electricity Growth Projection  |                   |   |   | █ | █ | █ | █ | █ |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 3.4      | Energy Initiative Review & Summary                                     |                   |   |   |   |   |   | █ | █ | █ | █  | █  |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 3.6      | Progress Report #3 (Video Conference)                                  |                   |   |   |   |   |   |   |   |   |    |    | █  |                   |   |   |   |   |   |   |   |   |    |    |    |
| <b>4</b> | <b>ENERGY PLANNING</b>   |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 4.1      | Identification of energy conservation and energy generation priorities |                   |   |   |   |   |   |   |   |   |    |    |    |                   | █ | █ | █ |   |   |   |   |   |    |    |    |
| 4.2      | Meeting #3 (Video Conference)  |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   | █ |   |   |   |   |   |   |    |    |    |
| 4.3      | Develop Energy Conservation Plan                                       |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   | █ | █ | █ |   |   |   |    |    |    |
| 4.4      | Develop Energy Generation Plan   |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   | █ | █ |   |   |   |    |    |    |
| 4.5      | Open House #2 (KO in FNs)  |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   | █ |   |   |   |    |    |    |
| 4.6      | Draft Community Energy Plan  |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   | █ | █ | █ |   |    |    |    |
| 4.7      | Gather Feedback for CEP  |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   | █ |   |    |    |    |
| 4.8      | Finalize Community Energy Plan   |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   | █ |    |    |    |
| 4.9      | Progress Report #4 (Video Conference)                                  |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   | █  |    |    |
| <b>5</b> | <b>PROJECT CLOSE-OUT</b>   |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    |    |    |
| 5.1      | Meeting #5 (Video Conference)  |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   | █  |    |    |
| 5.2      | Final Reporting  |                   |   |   |   |   |   |   |   |   |    |    |    |                   |   |   |   |   |   |   |   |   |    | █  |    |

## Key Contacts

| Name: | Title: | Community: | Phone: | Email: |
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