



Community Energy Plans

From Concept to Implementation

A case study of the
Chippewas of Georgina Island
Community Energy Plan



Welcome & Introductions

**Michael Jacobs,
Cambium Aboriginal Inc.**

**Vicky Wolske,
Chippewas of Georgina Island First Nation**



What Is A Community Energy Plan (CEP)?

In Simple Terms:

- A community energy plan is a comprehensive long-term plan to:
 - improve energy efficiency
 - reduce electricity consumption
 - assess opportunities for green energy solutions.

Why Would My Community Want a CEP?



- A CEP guides the community toward:
 - The use of less electricity,
 - Reductions in First Nation wide energy costs
 - Reductions in Community members' energy costs
 - An increased understanding about energy by community members of all ages
 - Identification of potential green energy solutions and potential commercial opportunities in energy
 - Other regional reasons that may not apply other places.

Georgina Island First Nation



- Why a CEP?
 - Members and First Nation were upset at Hydro One and wanted evidence to support their claims of unfair charges
 - The community were on the brink of a Wind Project that did not proceed
 - The community was pursuing solar opportunities in the community
 - The Island community had an interest to be net positive in Energy consumption via Climate Change Adaptation Projects
- This led to an investment in a Community Energy Plan

CEP - Where Do You Start?



- A community champion identifies the need based on FN activities
 - Climate Change Adaptation / Investment in Renewables / Complaints from FN members about energy costs
- The champion would initiate and manage the project throughout in most cases.
- This champion consults with relevant community departments and individuals.
- This information gathering phase is needed to identify key components to be understood in the CEP.

Georgina Island First Nation



- **Community Champion:**
 - Economic Development Assistant with a speciality in the environment
- **Project Team:**
 - Cambium Aboriginal - Consultant
 - Leader – Economic Development Assistant
 - Team Members
 - Environment,
 - Transportation,
 - Housing,
 - Infrastructure,
 - Chief and Council Portfolio Rep
 - First Nation Administrator
- **Hired Resource:**
 - Community Energy Liaison

CEP – The Decision

- Once a community decides to develop a CEP, four
 - Once a community decides to develop a CEP, four key questions are asked:
 - How long does it take?
 - What does it cost to produce it?
 - How will we pay for it?
 - What is in it?
 - All great questions and the answers vary due to:
 - Size of community
 - Location of community
 - “Personality” of the community”
 - ~~Amount of information readily available~~ **Amount of information readily available**

Georgina Island First Nation



- How long did it take?
 - Budgeted for 9 months
 - How long did it take?
 - Budgeted for 9 months
 - Took almost 18 months
- Project evolution was allowed for at the expense of time
 - What does it cost to produce it?
Between \$45k - \$60k
 - Time allowances did not hurt budget

Georgina Island First Nation



- How do we pay for it?
 - IESO ACEP Program

**Funding to develop a
NEW Aboriginal
Community Energy
Plan**

- Successful applicants to this stream will receive up to a maximum of \$90,000.

**Funding to UPDATE an
existing Aboriginal
Community Energy
Plan**

- Successful applicants to this stream will receive up to a maximum of \$25,000.

Remote communities are eligible for an additional \$5,000 in funding under either stream.

<http://aboriginalenergy.ca/aboriginal-community-energy-plans>

Georgina Island First Nation



- What's In It?
 - IESO mandatory components
 - Community baseline study which addresses:
 - annual energy usage in the community, a breakdown of energy consumption, occupancy data that includes vacancy rates, space used and operating schedules and building asset data;
 - Assessment of the community's current and future forecasted energy needs;
 - Determination of the community's priorities related to energy use and generation; and
 - Implementation plan

Georgina Island First Nation



- What's In It?
 - GIFN Specific Add-Ons
 - Detailed, In Depth Hydro One Analysis
 - Community Energy Day Event
 - Hiring a Community Energy Liaison To Aid and Understand the Process
 - Community Presentation
 - Community Specific Implementation Plans Based on Community Specific Data Collected

CEP – The Results

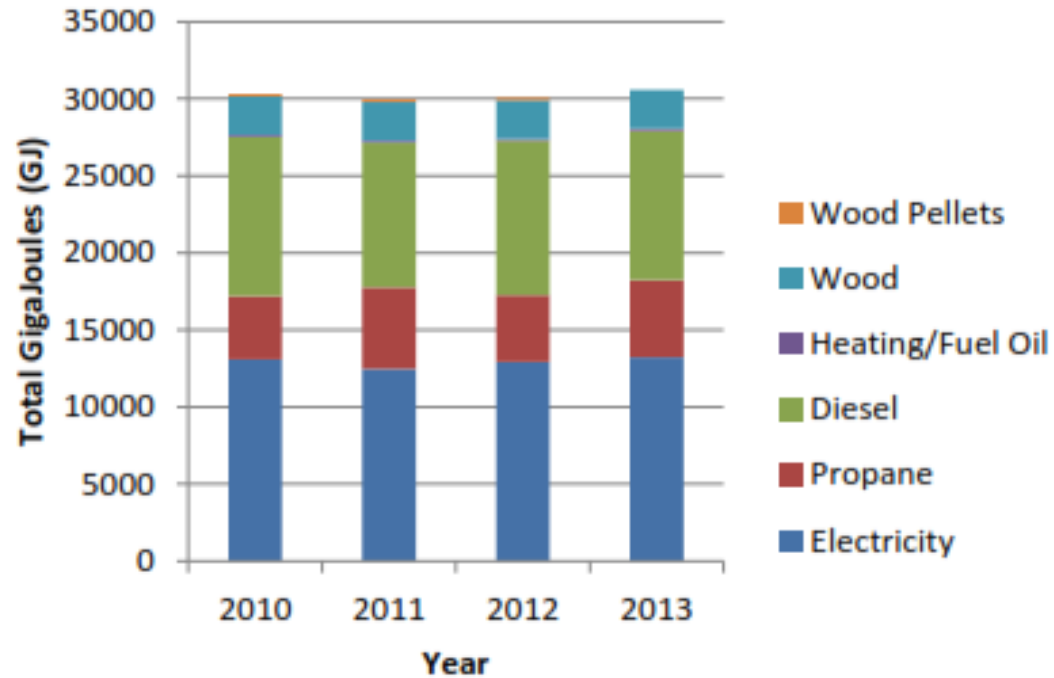
- The main importance of the baseline data is that it can be used to see how much a community is deviating (positively or negatively) from a given data point over time.
- This allows a community to evaluate the success (or failure) of community energy plan objectives.

Georgina Island First Nation



- Results Examples:

Figure 2 - GIFN Total Energy Use (GJ), 2010 - 2013

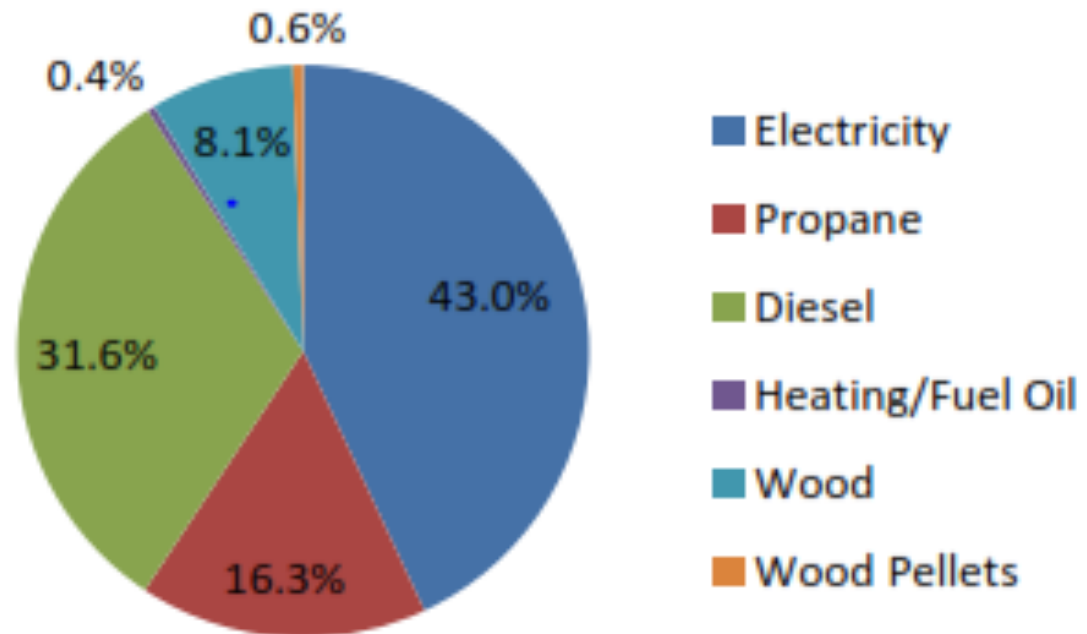


Georgina Island First Nation



- Results Examples:

Figure 3 - Energy Consumption by Energy Type, 2013

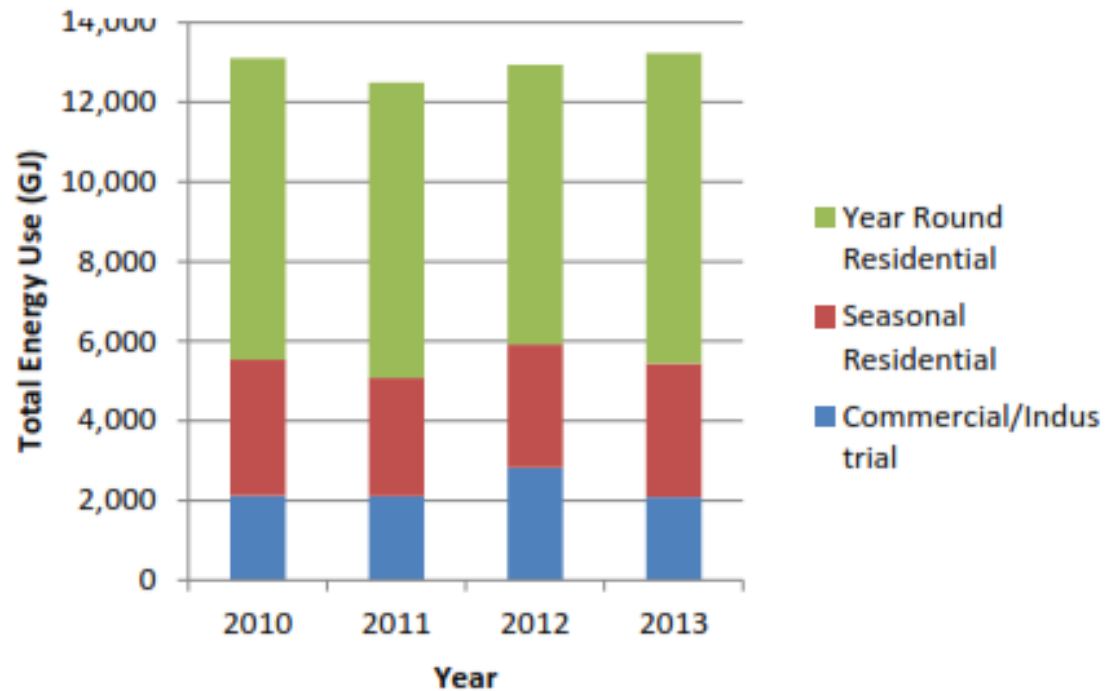


Georgina Island First Nation



- Results Examples:

Figure 6 - Electricity Use by Building Type, 2010 - 2013



Georgina Island First Nation



- Results Examples:

Table 2 - Greenhouse Gas Emissions by Energy Type³

Energy Type	Greenhouse Gas Emissions (kg of CO ₂ e/unit)	Greenhouse Gas Emissions (kg of CO ₂ e/GJ)
Electricity	0.11 kg of CO ₂ e/kWh	30.56 kg of CO ₂ e/GJ
Propane	1.544 kg of CO ₂ e/litre	61.00 kg of CO ₂ e/GJ
Light Fuel Oil	2.735 kg of CO ₂ e/litre	70.49 kg of CO ₂ e/GJ
Diesel Fuel	2.79 kg of CO ₂ e/litre	72.85 kg of CO ₂ e/GJ
Natural Gas	1.891 kg of CO ₂ e/m ³	49.21 kg of CO ₂ e/GJ
Wood	0.37 kg of CO ₂ e/kg	20.49 kg of CO ₂ e/GJ

CEP – Implementation

- Once the plan is complete, there is work to be done.
- An implementation plan is a required component to the energy plan
- How do you make sure implementation happens?
 - Ensure buy-in throughout the process from leadership, staff and community.
 - Review the implementation activities annually at a minimum
 - Update the plan early to show the early signs of success and to build momentum

Georgina Island First Nation



- Implementation Plan (As a result of CEP)
 - Energy Education
 - Community Energy Day
 - School Activities
 - Climate Change Adaptation Programs
 - Energy Issue Report Form
 - Accountability placed on Hydro One
 - Energy Conservation
 - IESO Aboriginal Conservation Program designed to provide customized conservation reduce their electricity use in residential housing, and in commercial and institutional buildings, like stores, schools and band offices
 - Energy Generation
 - 4 PV Solar generating 36,500 kWh
 - Generating some revenues under MicroFit
 - Commitment To Energy

CEP – Initiating in Your Community



- If you think this is a good fit for your community, we would be happy to assist with any questions.
- The next IESO funding intake is October 1st, 2015 leaving time to submit applications.

Thank-you for your time...

Questions about this or other ACEP Case Studies...

Michael S. Jacobs

Vice President and General Manager

Cambium Aboriginal Inc.

m.jacobs@cambiumaboriginal.com

Vicky Wolske

Chippewas of Georgina Island First Nation

Vicky.wolske@georginaisland.com