

HAUDENOSAUNEE DEVELOPMENT INSTITUTE

ENERGY POLICY

First Nations Communities and their residents are required to have access to various forms of energy to function successfully in today's society.

The delivery and distribution of energy sources are challenged by geography, reliable suppliers and costs.

Various forms of energy required for:

Transportation	Communication
Health Care	Recreation
Education	Home Life
Economic Development	

Currently available technologies to facilitate these societal needs are based on:

Petroleum fuels example: gasoline, diesel, propane etc.

Natural gas

Electricity, generated by several methods

Wood

Emerging technologies based on renewable biological sources are increasingly important. The processes produce either liquid fuels to replace petroleum fuels or methane gas and synthetic gas, which can replace natural gas. Thus biological based sources can be used for either transportation or electrical generation.

The Need for an Energy Policy

Policy principles are intended express clearly the fundamental values of the populace, in this case the Haudenosaunee People living in the community of the Six Nations of the Grand.

Policy principles should permit a clear evaluation of various energy sources to be made available for a community by comparing them to the three criteria listed in **Policy Principles** below.

Various forms of energy are available for use in today's society. Some of the alternative forms are consistent with the Haudenosaunee values, some are not.

The people who will receive the energy should play a vital role in its generation and delivery. First Nations communities have often been marginalized from the process of development, construction and operation.

Finally, energy policy guidelines are necessary because, over history, First Nations communities, as proven by history, are often directly impacted by the development of energy production facilities. Unfortunately these facilities are usually developed for markets far removed from the First Nation home community.

Policy Principles

Energy policy, in terms of Haudenosaunee principles, should be centered on three criteria:

Sustainability

Conservation

Low Environmental Impact

Any energy initiative within a community should be judged against these criteria.

Working definitions for use within this policy document are as follows:

“Sustainable” - an energy source that meets the needs of the present without compromising the ability of future generations to meet their own needs.

“Renewable” -many energy technologies are based on natural resources which are known to be of finite supply. Other technologies employ natural environmental phenomena or feed stocks that can be re-grown easily and regularly.

“Low Impact” -The environment within which the energy source is located should be impacted as little as possible, with regard to air emissions, noise, dust, displacement of people and their activities.

“Conservation” – To preserve and carefully manage energy sources. To be used minimally, only using what is really needed.

Energy Policy Scope

Several forms of energy are required for society to function. The territory of the Six Nations of the Grand River is no different in this respect than other communities within the Grand River Valley.

The Energy Policy is comprised of the following elements:

Part A. Electricity

Part B. Transportation

Part C. Conservation

Part D. Sustainability

Part A: Electricity

While energy can be classified in many ways such as by type (radiant, chemical, potential, kinetic, or atomic), end use (transportation, home heating, industrial process) or fuel source (petroleum, wood), this policy document focuses on the subset of radiant energy known as electricity.

Different forms of energy can be converted into electrical energy through physical and chemical processes.

This policy document is intended as a guide to select among the various processes available for the creation of electricity so that the Policy Principles of the Haudenosaunee are not compromised.

Ranking of Electricity Supply Options

Listed below are various supply of options for meeting the needs of People of the Six Nation of the Grand and the people of Ontario in general. They are ranked in order of preference for implementation on the assumption that the supply of electricity to Six Nations will continue to be integrated into the electrical distribution grid of Ontario but that Six Nations has a right not only to an opinion on how that energy is generated when generating activity impinges on traditional territory, but also an obligation to the next Seven Generations to impose responsible stewardship of resources used in the creation of that electricity.

Preferred Options

1. Conservation

The use of electricity must be managed responsibly so that no one wastes electricity and causes valuable

natural resources to be consumed to supply necessary needs.

Energy conservation must be promoted. Energy audits of homes and offices should be carried out to identify areas of savings and then changes implemented.

Conservation can save not only fuel, but land, the environment and even capital.

2. Renewable Energy

Renewable sources include water, wind, solar radiation and biomass.

Renewable energy alternatives are both sustainable and offer low impact on the environment.

Current and renewable technologies that employ renewable sources must be supported.

Energy created from biomass such as animal manure or renewable crops is acceptable provided they provide further useful byproducts for food, fiber, or fertilizer and do not and do not reduce the organic matter and life in the soil.

Many processes also absorb carbon dioxide and offer reduction from greenhouse gas emissions increases.

Electricity produced from municipal waste or end use items such as animal renderings or waste cooking oil is also acceptable.

Unacceptable Options

The policy rejects the use of generation of electricity from non-renewable fossil fuels such as natural gas and petroleum oils. Documented studies show that these fuel sources have a fixed remaining life, are not renewable and are too valuable for servicing the needs of people and industry to waste on mass electrical generation. Information is available to support these conclusions.

Also unacceptable is the burning of source bio products such as whole grains. Even at low selling prices, grains are too valuable to burn. Whole grains are filled with proteins, carbohydrates and minerals. The grain constituents can be separated to form foods, converted to fuels, while the remainder is still suitable for animal feed. Even chaff and low value residue from processing has value as fuel.

Transitional Sources

Electricity generated from coal would be acceptable under the following conditions:

- Coal is clearly identified as a transitional mode of generation to be used until new renewable technologies become commercially viable and reliable.

- Coal has a much longer lifetime of availability than either oil or gas, on the order of hundreds of years.

- Coal burning stations can and are being equipped with scrubbers to reduce undesirable emissions.

- Coal can be combined with biomass to further reduce the emission of undesirable elements.

- Coal can be gasified and carbon dioxide sequestered to provide a cleaner fuel for combustion without drawing on natural gas reserves.

There is an inventory of coal type generators with associated transmission line rights of way which already impose a considerable impact on the natural landscape. Building new stations elsewhere simply consumes more land for the same end use.

Emerging Technologies

New technologies are being developed to permit the production of fuels and electrical energy from biological sources. These technologies rely on the following processes, many of which occur naturally in nature:

- i) fermentation to create liquid fuels such as ethanol in place of gasoline
- ii) crushing of oil seeds to make diesel from the oil
- iii) decomposition rotating garbage, manure or green hay, to make methane gas
- iv) combustion burning dry bulk low value materials such as corn cobs, wood chips, for heat or with coal for electric generation

Some countries such as Brazil already power most of their cars with ethanol which has a lower impact on the environment than gasoline.

Research is underway on various specialty crops that could be grown purposely for conversion to fuel by converting plant cellulose to fuel and returning the residue to the field.

Because plants absorb Carbon Dioxide as they grow, and burning of the fuels they produce releases Carbon Dioxide, it is hope that the closed loop of crops to fuel and back again can help restrain the growth of Carbon Dioxide in the atmosphere.