
2008 Long Term Acquisition Plan



APPENDIX B3

Clean or Renewable Electricity Guidelines

BRITISH COLUMBIA'S CLEAN OR RENEWABLE ELECTRICITY DEFINITIONS

Electricity generated in British Columbia may be reported as Clean or Renewable Electricity if:

1. The facility is in compliance with all applicable Federal and Provincial environmental regulations;

AND

2. The facility satisfies one of the following requirements:
 - a. The electricity is generated in a facility that uses a Clean or Renewable Electricity Resource or Technology as defined in this document.
 - b. The electricity is generated in a facility that fulfills one of the following requirements:
 - It can be demonstrated that the facility meets the certification criteria for “electricity -- renewable low-impact” as defined by Environment Canada’s Environmental Choice™ Program; or
 - The facility maintains Environmental Choice™ Program certification.
 - c. Electricity is generated using a process, resource, or technology that is not recognized as Clean or Renewable in this document, but receives recognition from the Minister of Energy, Mines and Petroleum Resources as Clean or Renewable Electricity.

BRITISH COLUMBIA'S CLEAN OR RENEWABLE ELECTRICITY RESOURCES

Resources and technological applications that may qualify as a source for Clean or Renewable Electricity production are listed below:

BIOGAS ENERGY - means electricity generated from a system that captures biogas for combustion or conversion to electricity. Biogas means the gaseous products (primarily methane and carbon dioxide) produced from organic waste material. Facilities producing biogas include landfill sites, sewage treatment plants, and anaerobic digestion organic waste processing facilities.

BIOMASS ENERGY - means electricity generated from the combustion or gasification of organic materials. Biomass includes, but is not limited to:

- Clean wood biomass, meaning
 - wood residue within the meaning of the *Forest Act*,
 - wood debris from logging, construction, or demolition operations,
 - organic residues from pulp and paper production processes, and
 - timber, within the meaning of the *Forest Act* infested by the mountain pine beetle;
- Liquid fuels derived from biomass including bio-oil, ethanol, methanol, and bio-diesel;
- Dedicated energy crops; and
- Clean organically sourced material separated from municipal solid waste (MSW) and processed to serve as a combustion fuel.

Clean biomass does not include organic material that has been treated with inorganic substances such as paints, coal-tar creosote, pentachlorophenol or chromated copper arsenate, to change, protect, or supplement the physical properties of the materials.

If a facility co-fires fuels, or uses a mix of fuels that includes fossil fuels, only the proportion of the total electric output that can be attributed to the use of a clean or renewable fuel source qualifies as clean or renewable electricity. The proportion of the total electric output that qualifies as clean or renewable electricity must be calculated based on the proportion that clean or renewable energy constitutes of the total energy input used by the renewable energy system to generate electricity, or if practicable, separate metering.

ENERGY RECOVERY GENERATION (ERG) - means electricity produced from the recovery of waste energy from an industrial process that would otherwise have been vented or emitted into the atmosphere. ERG represents a net environmental improvement relative to existing energy production because it uses the waste of other processes to generate electricity. Therefore, all output from an ERG facility is considered Clean or Renewable Electricity.

GEOTHERMAL ENERGY - means electricity produced using the natural heat of the earth and all substances that derive an added value from it, including steam, water and water vapour heated by the natural heat of the earth and all substances dissolved in the steam, water or water vapour obtained from a well. This does not include hydrocarbons or water that has a temperature less than 80°C at the point where it reaches the surface.

HYDROCARBON ENERGY - means electricity produced from a facility combusting or converting fossil fuel using a closed-loop process whereby all greenhouse gas emissions from the operation of the facility are either deemed to be zero, negligible, or subject to long-term sequestration from the immediate receiving environment. Such a system requires approval of the Minister of Energy, Mines and Petroleum Resources for classification as Clean or Renewable Electricity.

HYDRO ENERGY - means electricity generated from a system or technology that converts either the potential or kinetic energy of water.

HYDROGEN - usually recognized as an energy carrier, hydrogen can also be used as a primary fuel source for internal combustion engines. Hydrogen produced from either a clean or renewable resource, or captured as a waste by-product of an industrial process, and then converted into electricity, is considered Clean or Renewable.

MUNICIPAL SOLID WASTE (MSW) - incineration of MSW to produce energy has both positive and negative environmental impacts. The release of carbon dioxide and other emissions is a negative impact, but reducing the amount of materials in landfills has benefits. Therefore, the combustion of MSW for electricity generation may be considered Clean or Renewable Electricity. A MSW incineration system requires approval of the Minister of Energy, Mines and Petroleum Resources for classification as Clean or Renewable Electricity.

MSW can also be converted to synthetic gas, which in turn is used to generate electricity. The electricity produced using such a process may be considered Clean or Renewable Electricity. A MSW-synthetic gas-generation system requires the approval of the Minister of Energy, Mines and Petroleum Resources for classification as Clean or Renewable Electricity.

SOLAR ENERGY - means electricity generated by converting the radiant light or heat energy of the sun through the use of photovoltaic and concentrating solar thermal technologies.

TIDAL ENERGY - means electricity produced by harnessing the natural rise and fall of the tides in the ocean.

WAVE ENERGY - means electricity produced by harnessing the natural rise and fall of waves in the ocean.

WIND ENERGY - means electricity produced from a system of airfoils or blades that spin a drive shaft to capture the kinetic energy of the wind.

OTHER POTENTIAL CLEAN OR RENEWABLE ELECTRICITY SOURCES - can include a project where the proponent or electricity distributor can demonstrate to the satisfaction of the Minister of Energy, Mines and Petroleum Resources that a project or application of technology otherwise excluded by this guideline, or not qualifying for certification under the Environmental Choice™ Program, should be recognized as producing Clean or Renewable Electricity.