

Low-Impact, Water-Powered Electricity Generation Protocol

Alberta Protocol Stakeholder Consultations ~ January 2008

Baseline Emissions Management Inc.

Low-Impact, Water-Powered Electricity Generation Protocol

- Seed Materials
 - CDM and WRI protocols
 - EcoLogo Certification Criteria (CCD-003)
- Technical Review
 - Alberta process with gov't and industry stakeholders

Low-Impact, Water-Powered Electricity Generation Protocol

- Project Condition

Where low-impact, water-powered electrical energy facilities energize either loads connected to the electrical utility grid, or off grid loads.

- Baseline Condition

Where the generation of electricity by other facilities are linked to the electrical loads to cover the net generation capacity of the generation facility.

Low-Impact, Water-Powered Electricity Generation Protocol

- **Emission Reduction Mechanisms**
 - Reduce use of fossil-fuels to generate electricity
 - Implementation of renewable power generation technologies to displace a proportion of fossil-fuel derived electricity from the grid.
- **Applicability criteria:**
 - Appropriate measurement and metering of all SS as described in the protocol;
 - EcoLogo certification eligibility (audit/verification report, attestation, or certification certificate);
 - Rigorous accounting practices.

Low-Impact, Water-Powered Electricity Generation Protocol

- Flexibility mechanisms
 - Where the generation facility energizes an off-grid load, a site specific emission factor, reflecting the source of generation displaced under the project condition may be used.
 - Calculation methodology must be robust.

Note: Definition of low-impact, water-powered electrical energy generation

Low-Impact, Water-Powered Electricity Generation Protocol

Project Condition

Upstream SS's During Project

P2 Fuel
Extraction/
Processing

P3 Fuel
Delivery

Upstream SS's Before Project

P4
Development
of Site

P7
Construction
on Site

P5 Building
Equipment

P8
Transmission
Infrastructure

P6
Transportation
of Equipment

P9 Testing of
Equipment

On Site SS's During Project

P1 Facility
Operation

Downstream SS's After Project

P10 Site
Decommissioning

Downstream SS's During Project

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Baseline Condition

*Upstream SS's
During Project*

**B1 Electricity
Generation**

*Upstream SS's
Before Project*

On Site SS's During Project

*Downstream SS's
After Project*

Downstream SS's During Project

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$$\text{Emission Reduction} = \text{Emissions}_{\text{Baseline}} - \text{Emissions}_{\text{Project}}$$

$$\text{Emissions}_{\text{Baseline}} = \text{Emissions}_{\text{Electricity Generation}}$$

$$\text{Emissions}_{\text{Project}} = \text{Emissions}_{\text{Facility Operation}} + \text{Emissions}_{\text{Fuel Extraction and Processing}}$$

- **Data Capture**

- Electricity sales receipts;
- Fuel purchase receipts;
- Metering of electricity consumed (In the case where the generation facility energizes an off-grid load; and

Low-Impact, Water-Powered Electricity Generation Protocol

- Questions and Comments
 - Technical issues?
 - Policy concerns?
 - Questions?