

# Solar Electricity Generation Protocol

Alberta Protocol Stakeholder Consultations ~ January 2008  
Baseline Emissions Management Inc.

# Solar Electricity Generation Protocol

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

# Solar Electricity Generation Protocol

- **Project Condition**

Where solar-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.

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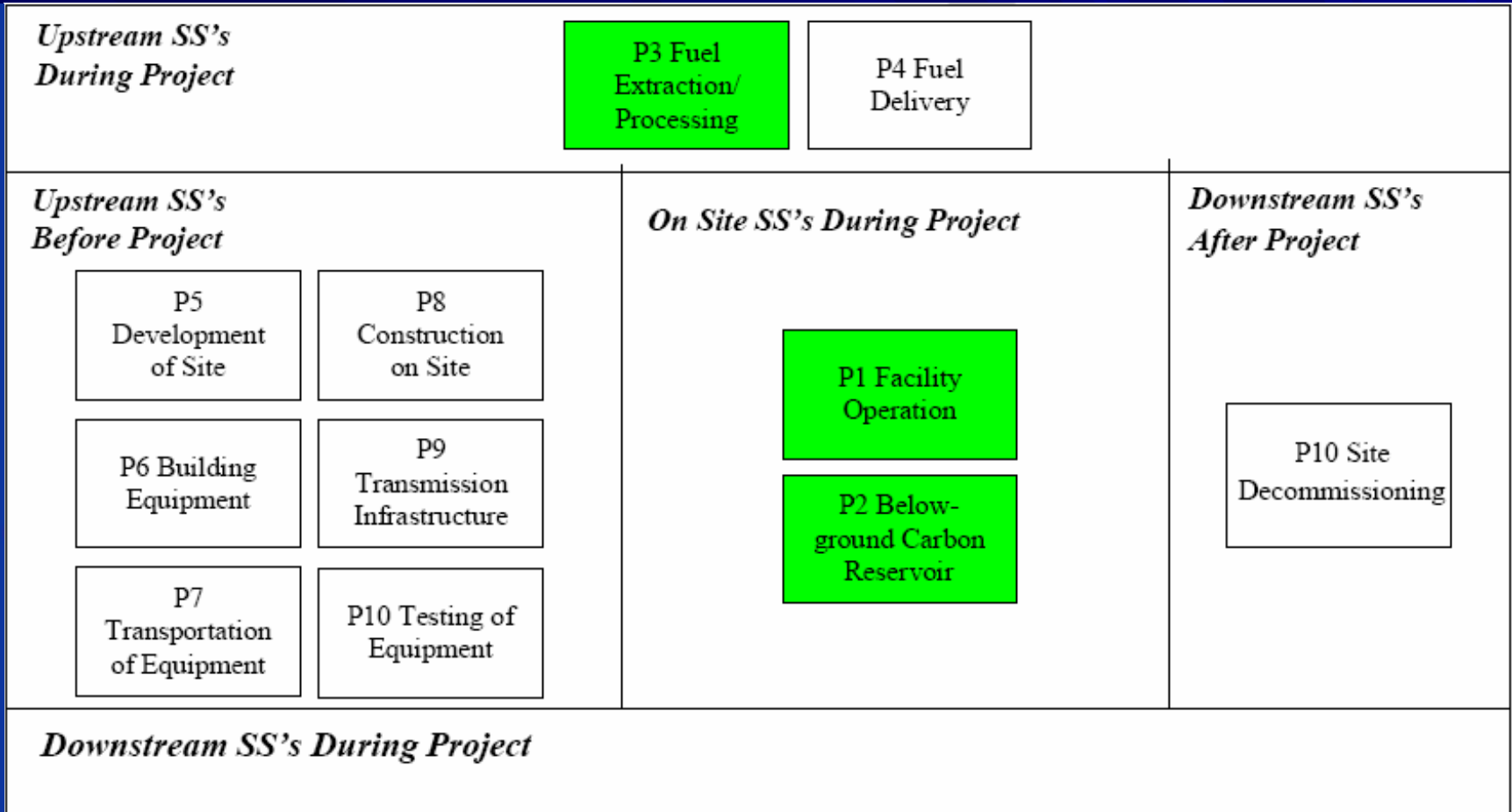
- **Emission Reduction Mechanisms**
  - Reduce use of fossil-fuels to generate electricity
    - Implementation of renewable power generation technologies to displace a proportion of fossil-fuel derived electricity from the grid.
- **Applicability criteria:**
  - Appropriate measurement and metering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

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- 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.
  - For projects where the land area cleared to make way for electrical energy generation is less than 1 hectare, onsite sink B2. Above-ground Carbon Reservoir can be excluded because of the negligible amount of canopy cleared.

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## Project Condition



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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*

B2 Above-  
ground Carbon  
Reservoir

B3 Below-  
ground Carbon  
Reservoir

*Downstream SS's  
After Project*

*Downstream SS's During Project*

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

$$\text{Emissions}_{\text{Baseline}} = \text{Emissions}_{\text{Electricity Generation}} + \text{Sequestration Above-ground Carbon Reservoir}^1 * \text{Assurance Factor}$$

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

- **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
- Sales receipts/harvest record of cleared vegetation.

# Solar Electricity Generation Protocol

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