



# Aggregation in the CDM; Development and Implementation of PoAs

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# Our Vision



**Our Mission is to improve health and the environment and reduce poverty through clean energy projects that reduce carbon emissions**



Impact Carbon generates carbon-emission reductions from household energy projects that improve living conditions in the less-developed communities we serve. We leverage the financial returns from these projects to benefit local partners and people

# Household Energy Technologies



technologies such as efficient cookstoves and water purification systems are a cost-effective opportunity to reduce carbon emissions and achieve development goals

# Experience and Pipeline



- Gold Standard Foundation Cookstove and Water Treatment Methodology
- Consulting to UNFCCC on Standardized Baselines
- Co-chairing Carbon Finance Working Group of Global Alliance for Clean Cookstoves
- 7+ CDM projects under development
- 7+ Voluntary Gold Standard projects under development

Uganda - Cookstoves - Voluntary GS

Uganda - Cookstoves - CDM PoA

Kenya – Cookstoves and Water Treatment – GS VER

Guatemala - Cookstoves + Water - Voluntary GS

Darfur - Cookstoves + Water - Voluntary GS

Mozambique – Ethanol Cookstoves – CDM

Uganda - Cookstoves - Voluntary GS

UNFCCC - NRBB Consulting

Central America - Cookstoves - CDM PoA

Honduras - CDM PoA

India – Combined household energy - CDM PoA

Mongolia – Combined household energy - CDM PoA

Indonesia - Water Treatment – GS VER

Ethiopia - Cookstoves

China – Cookstoves – GS VER

# Cookstoves under CDM: Small Scale, Large Scale, and PoA

2006-2008: Small scale meth AMS I.C only

- Thermal energy from renewables to replace fossil fuel
- Primarily biogas and biomass cogeneration projects
- 4 cookstove and 8 solar cooker projects registered

2008: Small scale AMS I.E & AMS II.G approved

- Non-renewable biomass
- 4 cookstove and 8 biogas projects registered

2009: PoA clarifications added to AMS I.E & II.G

- 3 cookstove PoAs registered (31 stove + 11 biogas projects under validation)
- 17 total PoAs registered to date

2011: Large scale AM0094 approved (0 projects registered to date)

# Aggregation benefits



- Low registration cost compared to multiple small scale projects
  - One time PoA registration, simplified CPA inclusions
- Streamlined crediting
  - Sampling for verification across multiple CPAs
- Scalability
  - No small scale project size limit
  - Ability to scale through CPA inclusions
- Flexibility in scale and technologies credited
  - Eligibility criteria should allow for multiple technologies that meet performance threshold

# PoA Challenges



- Monitoring
  - Decentralized (household) vs. point source (power plant)
  - Heterogeneous project technologies and baseline scenarios
  - Establishing crediting parameters at PoA level vs. CPA level
    - Additionality
    - Baseline fuel/energy consumption
    - Usage rates
    - Biomass renewability
- Managing uncertainty, risk, and liability

# Opportunities



- **Aggregate representative sampling techniques**
  - Statistical significance: 90/10 rule (90% confidence and 10% precision)
  - Clustered random sampling
- **Standardized baselines**
  - Conservative national and/or regional default values, while maintaining option for project-specific monitoring
  - Biomass renewability ( $f_{NRB}$ )
  - Baseline fuel consumption ( $B_{old}$ )
- **Blanket additionality** based on:
  - Technology penetration rates
  - Cost
  - Performance criteria (efficiency and durability)



# Thank you!



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