



CDM Programs of Activities in Energy Efficiency

Klaus Oppermann

Carbon Finance Unit, The World Bank

CarbonExpo, Cologne, May 3, 2007

Demand-side energy efficiency programs: types



- Individual investment programs: one company, limited number of ex ante known activities: (SSC) bundling.
- Incentives programs for accelerated replacement/retrofitting of old equipment (motors, pumps, chillers, boilers, energetic building rehabilitation, buses..): contracts with investors, identification of each single activity: EB PoA approach.
- Market transformation programs:
 - Price discounts (efficient light bulbs, cooking stoves).
 - Enforcement of regulation (labeling of appliances, vehicle inspection, building codes..).Eligible under PoAs but EB approach challenging.

India accelerated Chiller replacement program –PoA (NM197: B)...



- Accelerated replacement of old CFC chillers by more efficient HFC chillers:
- Financial Intermediary is offering grants to chiller owners refinanced out of GEF, MLF of the Montreal Protocol, Carbon finance + commercial loans: removal of financial barrier for chiller owners (additionality).
- GEF, MLF as seed funding for first chiller generation than self-financing out of CDM revenues.
- Only CO₂ emission reductions out of power savings are claimed (CFC not covered under Kyoto Protocol, GEF incremental cost approach).
- Expected number of chiller replacements 2008-12: > 500.
- Expected volume of CO₂ ERs up to 2012: > 2.3 m t CO₂.

..India accelerated Chiller replacement



- Chiller owners sign contracts with financial intermediary:
 - Grants for CER ownership: no double counting of CERs.
 - Establishing “power consumption function” for old chillers: baseline emissions.
 - Scraping of old chillers: exclusion of leakage.
 - Data locker for new chillers: project emissions.
- Financial intermediary is CDM project participant:
 - Contracting chiller owners: submitting CPA-DDs.
 - Monitoring power savings (remote access to data locker): claiming CERs.
 - Use of CDM revenues: incentives for chiller owners.

Ghana AC labeling program – PoA (NM158: C)..



- Government of Ghana passed a minimum energy efficiency standard for room air conditioners, policy by law not effective until implementation infrastructure created.
- CDM program is the implementation of an efficiency testing, consumer labeling and quality-assurance program for air conditioners in Ghana (countrywide).
- Currently more than 100.000 ACs p.a. are sold in Ghana (close to 100% imported), fast growing market: program ensures that more efficient ACs will be bought.
- Estimated ERs: more than 3 Mio t CO₂e over 7 years.
- More efficient ACs do not cost (significantly) more than BAU ACs, energy savings for consumers: more than 60 Mio USD p.a.; costs: about 2 Mio USD (financed out of CDM revenues (additionality, CDM as provider of missing link)).



..Ghana AC labeling program

- CDM Methodology: monitoring increase of market penetration of efficient ACs beyond historical trend (correction for rebound effect, size effect), sampling to get operational hours of ACs under project.
- Challenges:
 - Individual users of ACs cannot be identified only aggregate data on an ex post basis.
 - Additionality/baseline can only be assessed on market level not on individual level: exclusion of exogenous influence factors (e.g. changes in electricity tariffs).
 - Attribution of ERs to project activity (exclusion of exogenous factors: size effect, rebound, electr. tariffs).

Some questions on EB rules for PoAs



- Registration of PoAs: Is CPA inclusion procedure (validation of CPA-DDs and EB submission) in line with COP/MOP1 decision: (..) registration of project activities under a programme of activities as a single CDM project activity”?
- Why start of CPA crediting period only with EB inclusion approval?: substantial loss in CERs (e.g. lighting projects).
- Bundling of PoAs resulting from limiting PoAs to one approved methodology and to one technology?
- How to deal with the size threshold criteria for simplified methodologies for SSC CDM activities within PoAs?

Thank you, koppermann@worldbank.org