

Workshop on The Carbon Credits Market”

VALIDATION AND VERIFICATION *ISSUES WITH* CDM BIOMASS AND HYDRO PROJECTS

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WHEN YOU NEED TO BE SURE



- ✚ SGS Global Presence
- ✚ SGS Service Sectors
- ✚ Background and Facts of SGS Climate Change Programme
- ✚ CDM Project Cycle
- ✚ Validation and Verification issues with CDM
 - Biomass Projects
 - Hydro Projects
 - Wind Projects
- ✚ Risks Involved with Validation and Verification

SGS GROUP WORLD-WIDE



With more than 43'000 employees, SGS operates a network of over 1'000 offices and laboratories around the world.

SGS SERVICES SECTORS



Agricultural Services



Automotive Services



Consumer Testing Services



Environmental Services



Industrial Services



Life Science Services



Minerals Services



Oil, Gas & Chemicals Services



Systems and Certification Services



Technical Staffing Services



Trade Assurance Services

- ✦ Carbon offset verifications established in 1997 by SGS UK Ltd.
- ✦ SGS accredited for
 - CDM (DOE),
 - JI (AIE),
 - EU Emissions Trading Scheme (25 countries),
 - UK Emissions Trading Scheme,
 - California Climate Action Registry,
 - Chicago Climate Exchange
 - Gold Standard
 - VCS
 - ISO 14064...
- ✦ Objective is to be an accredited service provider to all credible GHG emission trading schemes and registries

SGS has trained resources for Validation and Verification of Emission Reduction Projects in -

- UK
 - Netherlands
 - Germany
 - India and South East Asia
 - China
 - Brazil
 - Chile
 - Africa
 - Russia
 - New Zealand and
 - USA
- SGS India Team has been actively involved in validation and verification of CDM projects in Asia-Pacific and African region

- **SGS is accredited as a validator and verifier for following sectoral scopes**
 - ⊕ **Scope 1 Energy industries (renewable - / non-renewable sources)**
 - ⊕ **Scope 2 Energy distribution**
 - ⊕ **Scope 3 Energy demand**
 - ⊕ **Scope 4 Manufacturing industries**
 - ⊕ **Scope 5 Chemical industries**
 - ⊕ **Scope 6 Construction**
 - ⊕ **Scope 7 Transport**
 - ⊕ **Scope 10 Fugitive emissions from fuels (solid, oil and gas)**
 - ⊕ **Scope 11 Fugitive emissions from production / consumption of halocarbons / sulphur hexafluoride**
 - ⊕ **Scope 12 Solvent use**
 - ⊕ **Scope 13 Waste handling and disposal**
 - ⊕ **Scope 15 Agriculture**

- **and pursuing accreditation for the Scope 8, 9 and 14**

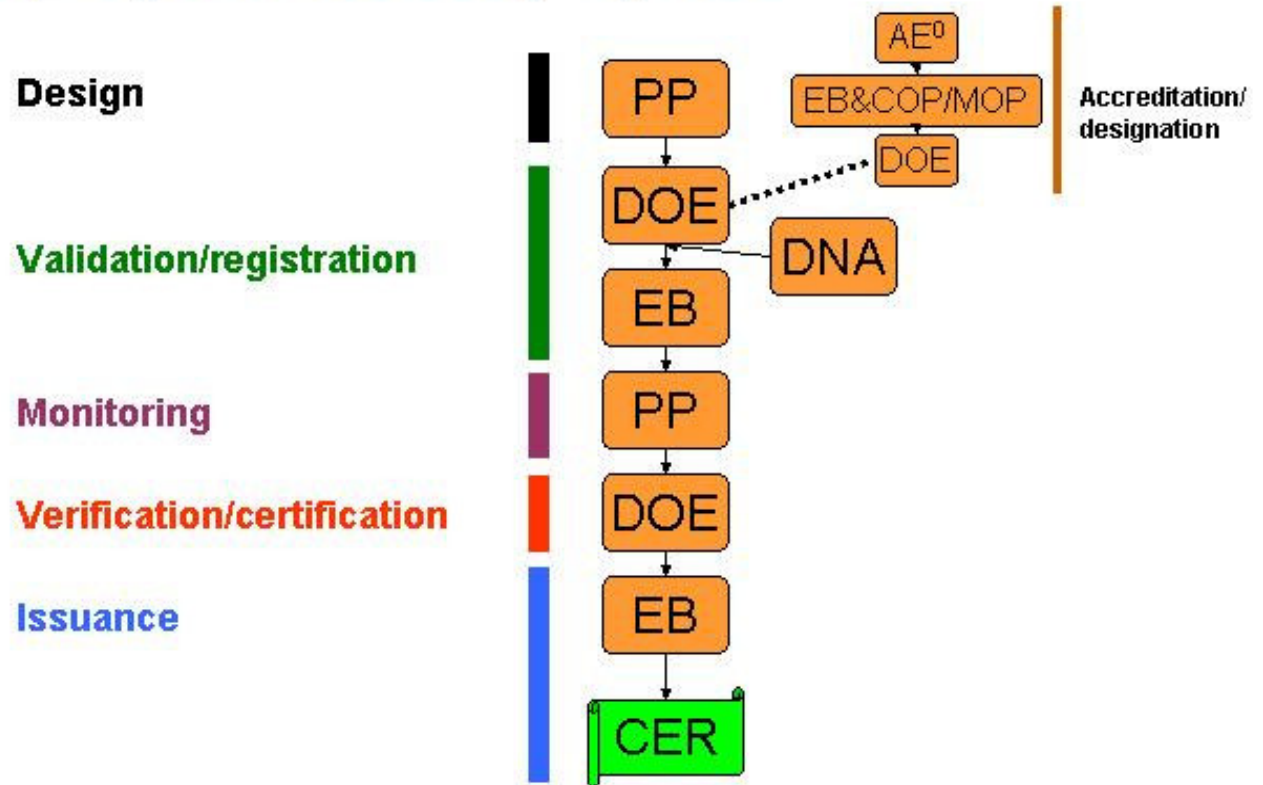
■ SGS Share in CDM projects

(as on 08/01/2008; ref: CD4CDM website)

- **Registered projects - 111**
- **Validation projects (pipeline)- 251 and increasing**
- **Verification projects (pipeline and competed) – 84 and increasing**
- **% of share in CER issued – 40%**



CDM project activity cycle





**VALIDATION AND VERIFICATION
ISSUES WITH
CDM BIOMASS AND HYDRO PROJECTS**

■ VALIDATION

- Independent evaluation of a project activity by a **DOE** against the CDM guidelines.

■ VERIFICATION

- Periodic **independent review** and **ex post determination** by the DOE of the **monitored reductions** that have occurred as a result of a registered CDM project activity during the Monitoring Period.

In general

- **Monitoring Plan** during **VALIDATION** is PROMISES by PROJECT PROPONENT while during **VERIFICATION** **Monitoring Plan** is REALIZATION OF THE FACT



Project Proponent has to follow the registered PDD and MP during the entire crediting period

If there is/are any non-compliance/s found by verifying DOE at any verification; The DOE may suggest Project proponent to seek a deviation to CDM-EB and future course of action will depend on the acceptance or rejection of deviation.

GENERAL ISSUES WITH VALIDATION

- ATTENTION is NOT ONLY required to provide for
 - Evidence against the project additionality
 - Additionality tool and it's requirement
 - Transparency in IRR/ NPV/ levelised cost analysis while using the investment barrier for demonstration of additionality
 - Baseline scenario for the project activity
 - Project boundary
 - Conservative estimation of baseline emission factor/s
 - Conservative estimation of baseline emissions
 - Applicability criteria of the monitoring methodology
 - Common Practice Analysis (large scale projects)

during Validation

■ BUT ALSO FOR

- Conservative estimation of leakage and project emissions
- Data monitoring practice adopted and same mentioned in Monitoring plan and Methodology referred
- Consideration of grid evacuation system and transmission line losses and electricity monitoring for project activity involved
- Capability of the data monitoring team
- Training to the monitoring team
- Specifications of the data monitoring equipment
- Project technology specifications written in PDD. These should be same as mentioned in the purchase order or on the name plate of the particular equipment included in CDM project activity
- QA and QC policy for data monitoring, archiving and reporting
- Calibration frequency mentioned in PDD and actual practice followed at the site

to have a easy verification

GENERAL ISSUES WITH VERIFICATION

For a *SUCCESSFUL VERIFICATION* following points are required to provide ATTENTION !

- Registered PDD and Monitoring plan mentioned therein
- Actual practice adopted at site for the data monitoring and recording
- Is there any DEVIATION exists? If it is there then pls. seek for deviation
- Monitoring plan mentioned in PDD (PROMISES made)
- All documents/evidences regarding data recording and monitoring and Calibration certificates with traceability are required to provide
- Conservative approach for emission reduction calculations
- Monitoring Report should reflect
 - ✓ Reference to the registered project PDD
 - ✓ No. of Monitoring period and period covered under Monitoring period
 - ✓ Current status of the project activity
 - ✓ Project activity Operation and shut down period
 - ✓ Emission reduction calculations
 - ✓ Monitoring plan as per PDD



BIOMASS PROJECTS – VALIDATION & VERIFICATION

Following points are required to provide ATTENTION !

- Definition of renewable biomass as per CDM EB
- Surplus availability of Biomass needs to check for estimation of leakage and project emissions
- Transportation of biomass and associated emissions
- Biomass assessment study report
- Heat and Mass balance for large scale projects
- Type of biomass fired in project activity and data recording/ monitoring practice adopted
- Conservative estimation/measurement/calculation of NCV of fuel fired
- Basis and Justification of scenario selected as per methodology (specially for use of ACM0006)



BIOMASS PROJECTS – VALIDATION & VERIFICATION

contd...

- Monitoring of electricity generated, auxiliary consumption and net supply to the connected grid in case of electricity generation projects and measurement of heat generated in case of thermal project and evidence like bills from electricity board or fuel consumption records or steam generation record



HYDRO PROJECTS – VALIDATION & VERIFICATION

Following points are required to provide ATTENTION !

- Evidence against the cost escalations and finance plan for the project activity
- Cross check of reservoir area and Energy density in W/sq.m
- Type of Hydro power plant (run-of-river or new) and reservoir capacity before and after hydro power project
- Monitoring of electricity generated, auxiliary consumption and net supply to the connected grid and evidence like bills from electricity board



WIND PROJECTS – VALIDATION & VERIFICATION

Following points are required to provide ATTENTION !

- Common practice analysis for Wind Projects in the region
- Monitoring of electricity generated, auxiliary consumption and net supply to the connected grid and evidence like bills from electricity board
- For wheeling projects electricity board deduct 5% as wheeling charges and hence net electricity supplied to grid i.e. wheeling is 95% of total electricity supplied to grid. CDM benefits in this case are on these 95% of electricity



RISKS INVOLVED

■ Project Proponent

- Project under review may delay the registration and thus not able to meet the commitment given to CER buyer
- Rejection of project at validation/ issuance stage may lose revenue sought

■ DOE Risk of losing accreditation

- Risk of losing Accreditation
- Risk of losing clients/market share

Plus damage to the Corporate Name of every one involved in project



THANK YOU

for your attention

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