

The Clean Development Mechanism & CHP

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The Kyoto Protocol

- In 1997, the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) was established with the dual objectives –
 - *Promoting sustainable development*
 - *Reducing the costs of Green House Gas (GHG) mitigation*
- On Feb. 15, 2005, the Kyoto Protocol came into force
- Average GHG emission reductions (ERs) of 5.2% in relation to 1990 levels by Annex I parties
- First commitment period – 2008 - 2012



The Kyoto Protocol (Contd.)

- The Kyoto Protocol not only help Annex I parties to meet their binding emission reduction commitments, but also assist non-Annex 1 parties to implement their projects that contribute to sustainable development
- Projects starting in the year 2000 if they lead to 'real, measurable and long term' GHG reductions can qualify



The Flexibility Mechanisms

- Joint Implementation (JI)
 - *purchase of ERs from projects in Annex I countries*
- Clean Development Mechanism (CDM)
 - *purchase of ERs from projects in developing countries like India*
- International Emissions Trading
 - *purchase of emission allowances from Annex I countries*



Impact of CDM on Project Viability

- Case 1 – Biomass Based 100% Captive Cogen Project
 - Host industry – Chemical
 - Project capacity – 1.5 MW
 - Estimated ERs – 25,000 tones/year
 - DSCR (without CDM) – 2.26
 - DSCR (with CDM) – 2.91



Impact of CDM on Project Viability

- Case 2 – Bagasse Based Cogen Project
 - Host industry – Sugar
 - Project capacity – 35 MW
 - Estimated ERs – 1,50,000 tones/year
 - DSCR (without CDM) – 2.21
 - DSCR (with CDM) – 2.47



Impact of CDM on Project Viability

- Case 3 – Small Hydro Electric Project
 - Host industry – Textile
 - Project capacity – 10 MW
 - Estimated ERs – 21,000 tones/year
 - DSCR (without CDM) – 1.50
 - DSCR (with CDM) – 1.57



Impact of CDM on Project Viability

- Case 4 – Wind Power Project
 - Host industry – Construction
 - Project capacity – 0.80 MW
 - Estimated ERs – 1,250 tones/year
 - DSCR (without CDM) – 1.52
 - DSCR (with CDM) – 1.90



Mainstreaming of CDM in Developing Countries

- Capacity building of stakeholders / FIs
- Support by bi / multilaterals, buyers for transaction costs
- National level operational entities
- Bundling organizations
- CDM project equity fund
- Cover for non-delivery risks
 - *Pool of carbon*
 - *Intervention by insurance companies*
- Database & information channels



About MITCON

- ✓ MITCON is a domain expert for following sectors from last 17 years
 - Energy efficiency & conservation
 - *Successfully conducted more than 350 energy audits/studies*
 - Renewable energy
 - *Turnkey services for wind power, small hydro, solar energy etc.*
 - Biomass based captive / co-gen power projects
 - *Turnkey services for cumulative 200 MW projects*
 - Environment management & engineering
 - *Environment related consultancy services and MoEF approved lab*
- ✓ Micro & macro level experience in above focused sectors clubbed with national and international network, placed us in an unique position to provide carbon emission trade consultancy services



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