
Factor's experience with CERUPT projects (wind & biomass) in India

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Content

- **The CERUPT tender**
- **The projects**
- **Factor's role**
- **Critical and positive issues**
- **Lessons learnt**
- **Outlook**

Why CERUPT ?

The Netherlands signed UNFCCC and the Kyoto Protocol

- 6 %
2008-2012 vs. 1990

Significant gap to be closed

- 200 Mt CO_{2e}

GHG reduction strategy

- | 50% in-house
- | 50% using flexible mechanisms (JI/CDM/IET)

- 100 Mt CO_{2e}
through FlexMex

Instruments

1. Multilateral international financial institutions
2. SENTER Internationaal (=> CERUPT / ERUPT tenders)
3. Private financial institutions
4. Bilateral purchase-agreements with Host Countries

- 65 Mt CO_{2e}
through CDM only

CDM expected to cover 2/3 of NL's reductions abroad

CERUPT 2001: Procedure

Launch of tender: November 1, 2001

Selection phase (pre-qualification)

- Deadline for Expression of Interests: January 31, 2002
- Selection of suppliers and invitation of proposals: May 2002

PIN

LoE

Contract awarding phase

- Deadline for Proposals: September 29, 2002
- Contract awarding and publication of tender results: ~~November 2002~~

Business plan

PDD

~~January 2003~~

Validation report

March 2003

Next steps

- Contract negotiations
- Re-issuing of PDDs (in line with UNFCCC formats)
- Re-publication for 30 days on UNFCCC website
- Re-issuance of validation reports
- Submittal to CDM EB for registration

CER offer

LoA

Delays and unforeseen obstacles are part of the game...

Contract award criteria & selected projects

Contract award criteria

- CER Price (P)
- Technology preference
 1. Renewable energy excl. biomass (T=1)
 2. Biomass and energy efficiency improvements (T=1.25)
 3. Others, incl. fuel switch, methane recovery, etc. (T=1.67)
- Project feasibility

Selection:

- if $P \times T > 5.5 \text{ €} \Rightarrow$ rejection
- if $P \times T < 5.5 \text{ €} \Rightarrow$ ranking

Selected projects

- Expression of Interest: 78 projects
- Firm proposals: 26 projects
- Contracted projects: 18

**16.7 Mt CO_{2e}
@ 4.7 €/CER**

CERUPT is currently THE buyer of CERs

The projects (1/3):

14.45 MW wind power plant

Technical description & location

- Technology: 17 x 850 kW, type Vestas V52-850 (52m rotor, 60m hub)
- Electricity generation: 46'000 MWh/a (capacity factor 36%)
- Start of operation (planned): November 1, 2003
- Investment costs: 150 mio. INR (13.5 mio. US\$)
- Financing: 30% equity / 70% loan (IREDA)
- Location: Rameswaram, Tamil Nadu
- Project developer: Vestas RRB India Ltd.
- GHG adviser: Factor AG & Winrock International

Power situation in Tamil Nadu:

- 8'691 MW installed
- 14% demand shortage (22% at peak load)
- 903 MW renewables (incl. 833 MW wind)
- PPA of TNEB (for wind): 2.7 INR/kWh (5.6 cents US\$/kWh) over 10 years

CERs offered

- Total amount offered: 272'000 CER
- Delivery period: 2004 - 2012
- Price: 5.5 €/ CER

Relative IRR increase of project due to CER sales: 10%

The projects (2/3):

15 MW wind & biomass power plant

Technical description & location

- Technology: 26 x 500 kW = 13 MW, type Vestas V39-500 (47m rotor, 50m hub) + 2 MW_{el} steam turbine plant, boiler: 10.5 t/h, fuel: rice husks
- Electricity generation: 54'900 MWh/a
- Start of operation (planned): October 1, 2003
- Investment costs: 7.6 mio. INR (15.5 mio. US\$)
- Financing: 30% equity / 70% loan (IREDA)
- Location: Rameswaram, Tamil Nadu
- Project developer: Vestas RRB India Ltd
- GHG adviser: Factor AG & Winrock International India

CERs offered

- Total amount offered: 362'000 CER
- Delivery period: 2004 - 2012
- Price: 5.5 €/ CER

Relative IRR increase of project due to CER sales: 12 %

The projects (3/3):

7.5 MW biomass power plant

Technical description & location

- Technology: 7.5 MW_{el} steam turbine plant, boiler: 35 t/h, fuels: cotton stalks, sugarcane trash and rice husk
- Electricity generation: 49'000 MWh/a
- Start of operation (planned): November 1, 2003
- Investment costs: 27 mio. INR (5.7 mio. US\$)
- Financing: 30% equity / 70% loan (IREDA)
- Location: Nanded, Maharashtra
- Project developer: Ind-Barath Energies Ltd
- GHG adviser: Factor AG & Zenith Corporate Services

Power situation in Maharashtra:

- 12'960 MW installed
- 15.5% demand shortage (during peak load)
- 34 MW renewables

CERs offered

- Total amount offered: 300'000 CER
- Delivery period: 2004 - 2012
- Price: 4.0 €/ CER

Relative IRR increase of project due to CER sales: 14 %

Factor's role

Factor in brief

- | Swiss consultancy, 10 experts in Zurich and Berlin,
- | Specialising in sustainable energy use and climate change mitigation
- | Covering the whole CDM project cycle (from project identification until CER sales)
- | But we're more than just a GHG consultant...

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Factor's role in the CERUPT projects

- | Overall co-ordination and responsibility for CDM part
- | Methodological advice to Indian partners and project developers (baseline, etc.)
- | Quality assurance

Factor's partners in India

- | Zenith Corporate Services, Hyderabad
- | Winrock International India, New Delhi

Factor is known for delivering high quality on time

Critical issues on the tender side

Early mover risks

- CERUPT rules (set by mid 2001) not 100% in line with evolving CDM scheme
=> example: projects have to be validated again
- Political risk still there
=> Kyoto Protocol not in force yet
=> Registration of projects by CDM EB pending

How strict will „additionaliy“ be interpreted?

Why stating a CER price maximum?

- Maximum price clause ($P \times T \leq 5.5\text{€}$) avoided probably submission of real (= “strictly additional“) CDM projects

Value of validation reports doubtful

- “Every” project finds a validator...

Still room for improvements...

Critical issues on the project developer side

Credibility of CER revenues still too low

- ▮ Currently low CER prices
- ▮ CER price projections highly speculative (depending on “hot air”, interpretation of additionality, etc.)
- ▮ Too high uncertainties for investors to incorporate AND RELY on CER revenues in projects' cashflow statements (and therefore no strictly additional projects...

Host country endorsement and approval

- ▮ Still a nightmare (institutions, people, timing and/or costs)
- ▮ Hopes exist that situation improves as institutional capacity improves

CERUPT specific: tough contract conditions

- ▮ High penalties in case of non-delivery !
Example: 2.5% of agreed purchase price per month of delay (if <70% delivered)

The CDM EB has it in the hands...!?

Positive aspects

CERUPT is pioneering the implementation of the CDM

- | **Rather clear operational guidelines (cooking books) long before CDM EB**
- | **Stimulating a market which is largely illiquid yet**
- | **Putting the critical issues on the table
(e.g. “additionality”, see reaction of CDM watch)**

Offering a fair deal:

- | **Political risks (partly) carried by Senter**
- | **Elaboration of proposals compensated**
- | **Open for discussions / inputs**

Without CERUPT the CDM would be far more behind...

Lessons learnt (so far) by the GHG consultant

Local partner(s)

- Local and reliable partner(s) of utmost importance
- Intercultural differences not to be underestimated
 - have readiness to learn from each other
- GHG capacity building of the local partners needs time but is a worthy investment

Additionality

- Remains a headache
- Cautious with projects which reached already financial closure

Small Scale CDM

- New SSC modalities very promising (“cooking book for non-cooks”)
- But at the same time: Role of European GHG consultant (on project level) likely to be re-defined

We are ready for the next projects !

Outlook

Further CERUPT tenders? This year?

Registration (and the corresponding) criteria of first projects by CDM EB keenly awaited. When?

Factor is probing the seller market

=> VER auction, see: www.factorag.ch

Factor's role in CDM projects likely to shift

=> from elaborating (standardised) PDDs to financial assistance, i.e. broker-like tasks for CER sales / other project financing support

Remember: We're more than a GHG consultant...!

**Factor's experience with
CERUPT projects
(wind & biomass) in India**

THANK YOU !