Dear Yoonhee Na,

MRV for the EU ETS and Domestic Offset Projects: Experiences from Germany

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MRV of NAMAs as a Key Element of National MRV Systems
Mexico D.F. – March 2014
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Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)

Federal Environment Agency

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Germany in the 1st committment period of the KP

- Germany is an Annex I Party and KP Party in the 1st and the 2nd C.P.
- Germany is the 4th largest GHG-emitter in Annex I,
- Germany produces approx. 20% of GHG-emissions in the EU 27
- KP I: -5%  EU: -8%  Germany: -21%
- Budget (AAU):  973,6 Mio tCO₂eq. p.a.
- Real Emissions: ca. 942 Mio. tCO₂eq. p.a.  (-23,6%)
- UNFCCC Reporting obligations:
  - National Communications: periodically (4-5 years), since 1994
  - NIR and CRF table: annually
  - Biennial Reports, starting 2014
- Eligible to use the flexible mechanisms: CDM, JI and IET
  - Crediting of emission reduction projects under JI
The German National System on Emissions (NaSE)
The EU ETS in Germany / 2nd Trading Period (2008 – 2012)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Installations #</th>
<th>Budget (Mio. EUA p.a)</th>
<th>Share of CO₂-Emissions (%)</th>
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<tr>
<td>Germany</td>
<td>1.625</td>
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<td>50</td>
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<td>EU</td>
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<td>Carbon Black</td>
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<tr>
<td>Flares</td>
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</tbody>
</table>

973.6 mio. t CO₂e Kyoto budget Germany 2008-2012

Installations in operation 379.07 mio. t

Sale/auctioning: 40 mio. t
Additional installations: 9.79 mio. t
Reserve for new entrants: 23 mio. t
MRV in the EU ETS in Germany

- ETS MRV is an independent sub-system for a dedicated set of large-point-sources, generating verified emission data annually.
- MRV is based on an installation-specific Monitoring Plan, which…
  - describes methods used for determination of CO$_2$ emissions
  - explains, how requirements of M&R guidelines are fulfilled
  - has to be approved by the competent authority
- Aggregated ETS data are used for Quality Assurance of inventories but are not directly linked, due to the
  - Different principles and methods for data collection
  - Distribution of responsibilities in Germany
  - Confidentiality of sources, values, parameters, activity data
  - Different data lifetime: corrections by authority vs. recalculations of inventory
- But units surrendered by participants according to their verified emissions have been used for KP compliance (CER/ERU/EUA)
Intersection NIR and ETS based on 2012 data

NIR  939 Mio. AAU (2012)

ETS 453 Mio. t CO₂  (VET 2012)
Intersection NIR and ETS based on 2012 data

NIR  939 Mio. AAU (2012)

ETS 453 Mio. t CO₂  (VET 2012)
German Offset Project Policy 2008-2012

- CDM: investor party to 337 projects, using 169 Mio. CER for compliance
- JI: investor party to 33 projects, using 133 Mio. ERU for compliance
- Permitted amount of international credits: 435 Mio. CER and ERU

- JI Projects hosted by Germany – similar to (c)NAMA / DOP
  - Defined by a federal law, but just a framework
  - Bottom-up approach, open to all project types (search and find by market)
  - Using and adapting JI and CDM modalities, procedures, methodologies, etc.
  - No formal link with national inventory
  - Assessment of additionality (legally and economically) needed
  - Avoidance of direct and indirect double counting with ETS
  - Avoidance of double funding
  - Project approval and registration and ERU issuance by DNA / DFP
  - 25 projects approved, 16 with issuance, 13.6 Mio. ERU issued
Project Categories: N$_2$O – Adipic Acid Production

- 2 Projects (proposed by large chemical companies)
- Credits: 9.4 Mio ERU (highly profitable for the operators)
- According to CDM AM 0021

Baseline
- Pre-project emissions with 90% abatement implemented
- Existing abatement technology must not be removed – legal requirement

MRV
- Direct measurement of emissions as basis for Verification Reports
- Plant specific emissions are reported directly to the inventory – key source

Projects included in EU ETS since 2013
Project Categories: N$_2$O – Nitric Acid Production

- 6 Projects (proposed by large chemical companies)
- Credits: 3.8 Mio ERU (highly profitable for the operators)
- According to CDM AM 0034
- Baseline
  - Disputed: Pre-project emissions or EU BAT Standards (not implemented) ?
  - Decision by administrative court: EU BAT Standards valid to set baseline
- MRV
  - Direct measurement of emissions as basis for Verification Reports
  - Plant specific data are aggregated by industrial association and reported to the inventory guarantee confidentiality (key source)
- All plants / projects included in EU ETS since 2013
Project Categories: Coal Mine Methane Abatement (CMM)

- 2 Projects approved / 45 projects rejected
- Credits: 95,400 ERU
- According to CDM ACM 0008, but not applicable to abandoned mines
- Baseline
  - Full emission without abatement / power generation assumed!
  - Feed-in tariff for power generation and methane destruction is the baseline
  - Decision by administrative court: double funding has to be excluded – project situation is the baseline scenario
- MRV
  - Data lack in the inventory: No emissions from abandoned coal mines known
  - Association of coal industry compiled only data on active mines or abatement plants – need for update of inventory
- Projects continued without crediting or ended due to exhaustion of CMM

- 4 Projects (Programmatic Approach, mainly for SME)
- Credits: 75,073 ERU
- According to CDM AMS I-C and II-D,E; PoA - Structure
- Baseline
  - Provision of heat with existing installation, use of fossil fuel
  - Public funding schemes may exist, but must not be used by participants
- MRV
  - Fuel saved calculated from heat provided
  - Reduced amount of fuel consumed reflected automatically in the inventory
  - Regional specification necessary to avoid double membership in programs
  - Biomass from regional sources, changes in carbon stock not considered
- Projects continue without crediting due to savings in fuel expenditures

- Other: 1 Transport project (rail vs. road)
- Other: 1 PCF in aluminium production
Lessons learnt and Recommendations

- Be lucky to be able to start from the scratch!
- Keep specific sub-systems as aligned as possible!
- Keep focused on significant sources and aim for annual improvement!
- CDM-Methodologies, the PoA-Structure and existing PDD are a valuable source for MRV at project level!
- In the long term, all credits come from „a budget“, not from a void!
- Fuel savings usually are reflected properly!
- Emissions associated with biomass production are critical (LULUCF, ILUC)
- Make clear arrangements for sharing the benefits!
- Crediting or not – a question of the host countries‘ Low Emission Development Strategy!
- Offering a carbon price to the private sector entities may produce some „strange“ ideas - guidance should be given to developers and individual assessment is needed!
Thank you for your attention!

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Backup
Participants in EU ETS in the 3rd trading period

1. Participants in the trading period 2008-2012 and
2. additional participants according to the ETS Directive und German Greenhouse Gas Emissions Trading Act (TEHG):

- All combustion installations with a total rated (cumulated) thermal input > 20 MW, Exceptions:
  - Units < 3 MW
  - Emergency flares and generators
  - Units which exclusively use biomass
  - Installation with exclusive combustion of dangerous or municipal waste
- Industries like Refinery, Iron and Steel, Metal roasting and Sintering, Cement, Lime, Glas, Pulp and Paper, Ceramic
- + Further emissions intensive industry activities (CO₂): Ferrous and non-ferrous metals, gypsum, bulk organic chemicals, ammonia, primary aluminum, hydrogen and synthesis gas, soda ash, CCS
- + Further greenhouse gases: N₂O from chemical activities and PFC from production of processing of primary aluminum
- + Aviation
Legal basis

- European regulations for Monitoring and Reporting (MRR) as well as for Accreditation and Verification (AVR); additionally, more stringent rules in the national law may reflect the individual situation in MS

Monitoring and Reporting

- Reporting is based on an installation-specific Monitoring Plan, which…
  - describes methods and procedures in detail used for determination of CO₂ emissions in accordance to the MRR
  - has to be approved by the competent authority
Linking between ETS data and Inventory (Germany)

**Present situation**

- ETS reporting data are not directly included in the inventory because of different principles for data collection (different in MS) and
  - Distribution of responsibilities in Germany
  - Confidentiality of sources, values, parameters, activity data
  - Different data lifetime: corrections by authority vs. recalculations of inventory
- Aggregated ETS data are used for Quality Assurance of inventory
Required situation from 2015 on

- based on new EU Monitoring Mechanism Regulation (MMR)
  ETS data must be somehow identifiable/deductible from the
  inventory to calculate non-ETS emissions data
Cooperation - flow of information

- **EUTL / VET**: Verified Emission Data
- **NIR / CRF**: DEHSt
- **ZSE - > CRF**: MRR
- **NaSE**: ca. 1800 Emissions Reports per Year
- **GPGAUM UNFCCC Guidelines**: Industrial Statistic
- **Energy Statistic Questionare**: National Energy Balance

Activity rate + emissions by single entity