Sectoral Crediting Mechanisms: Governance Issues and Implications for the Aluminium and Electricity Sector

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Presentation outline

- Background
- Common SCM requirements
- Aluminium sector insights
- Electricity sector insights
- Conclusions

Background (1)

- **Starting point: an interrogation**
  - **Could a crediting mechanism be broadened to whole sectors to encourage more GHG mitigation and sustainable development?**
- **How would this work?**
  - **A country could decide to enter a GHG crediting framework on the basis of a sector's or sub-sector's emissions**
  - **A baseline would be needed at the appropriate level**

Background (2)

- **Why electricity?**
  - **Single largest contributor to CO_2 emissions globally – and rising fast**
- **Why aluminium?**
  - **A homogenous product**
  - **Produced and traded internationally**
  - **A source of various GHG (CO_2, PFCs)**
  - **A source of indirect emissions – and potential emission reductions**

Three Options for SCMs

- **Policy-based**
  - **Evaluate and credit reductions pertaining to well-identified policies**
- **Fixed limits**
  - **Fixed caps on sectors' (and installations') emissions**
- **Rate-based**
  - **Baseline set in terms of t CO_2-eq per unit of output**

➢ ***Baseline: national or international?***

➢ ***Critical issue: what level of disaggregation is needed?***

Account for various processes, or fuels, etc?

Common themes

- **Environmental effectiveness more determined by baseline level, rather than by the option considered (e.g. rate-based, policy-based)**

Insights: aluminium

- This study: Focus on primary production
- International-level, rate-based mechanism seems most appropriate
  - Yet significant differences in GHG intensity across processes and plants worldwide
- Issues to be resolved:
  - how to encourage participation? (voluntary agreements exist)
  - boundary definition (include electricity emissions?)
  - fairness/competitiveness: would sectoral crediting reward "laggards"?

Initial insights: electricity

- **National-level SCM seems most appropriate**
  - Fuel resources and power generation mix vary significantly (e.g. Brazil and China)
- **Issues to be considered vary. For instance:**
  - Policy-based: need ex-post estimates of GHG reductions ➔ uncertain credit levels ex ante
  - Rate-based: various baseline options exist (national average tCO_2/MWh…) Fuel by fuel: discourages fuel switching, but takes local conditions into account. Does not encourage demand side energy efficiency.
  - Fixed limit: could lead to a relatively high baseline as sources wish to secure some reductions (and thus an overly-generous allocation of credits)

SCM: Policy Challenges (1)

- From CDM, P-CDM to SCM?
- Is a single international baseline feasible?
  - Or should an international approach to baseline setting be used?
- What would it take to make SCM effective?
  - Institutional capacity may be a barrier
  - Once domestic systems are in place, transaction costs could be minimised

SCM: Policy Challenges (2)

- **Governance**
  - Who would supervise SCM internationally?
  - How would baselines be negotiated?
  - Role of international industry federations?
- **How much credits could SCM trigger?**
  - Should all GHG-reducing policies be credited? Including clear "win-win" options?
  - If SCM were feasible, would there be a demand level matching a potentially large quantity of credits?