# Cement, iron and steel

## report from Group 3

Risoe, 8 May 2001

UNEP RISØ OECD IEA

# General characteristics

- Significant growth expected (NAI), and this may differ between countries
- Sectoral improvements (energy efficiency, emissions) slow
- Performance improvements linked to level of competition (national, global)
- Differences between cement, iron and steel (I&S), linked to level of competition

# Potential project types

- **Greenfield (high std. potential)**
- **Brownfield (medium std. potential)**
  - fuel switch/substitution
  - process upgrade/modification
  - upgrade controls
  - replacement of individual equipment/units
- **Input modification: raw materials (medium std. potential)**
- **Product modification (diff. to standardise)**

# Geographical boundaries

- **National circumstances important**
  - Issues to consider:
    - type and size of projects
    - ownership of units
    - availability of infrastructure/resources
    - level of industrial activity
    - level and access to technology
    - capital endowment (in industry/country)

# Data issues

- **Not simple: availability and quality vary among countries, project types, production routes**
- **Possibility to have different levels of standardisation according to data availability:**
  - stringency essential where reliable data is not available
- **Difference between manufacturer´s specifications and operating performance data should be reflected in baseline**

# Temporal boundaries

- **Suggested 5y minimum of crediting before baseline revision**
- **Possible options could include:**
  - Shorter, fixed crediting lifetime
  - longer crediting lifetime with revision(s)
- **Crediting lifetime can be a function of stringency**

# Comprehensiveness

- Both direct, indirect and process GHG emissions can be significant
- Include any significant emissions source in baseline
- Inclusion of indirect emissions crucial to baseline when significant proportion of overall GHG emissions

# Baseline methodology

- **Should start with production route (technology/process)**
- **Then fuel-specific baselines (benchmark at an average value)**
  - Different baseline may be needed at a variation > y% in input
- **Product-specific baselines may be required on project boundaries**

# Baseline methodology (2)

- **When your brownfield project increases capacity:**
  - need to justify if increased capacity gets same level of credit as a greenfield project
  - answer may vary depending on how capacity is increased or utilised

# Baseline units

- Rate-based baselines for standardised baselines (X per ton product)
- May need possibility to use absolute units for project-specific baselines
- For many project types, baselines can be expressed per ton intermediate output (ton crude steel, clinker)

# Additionality

- **Does baseline = additionality check?**
  - Maybe yes, if baseline stringent enough
- **Other additionality checks (simple questions) may be needed**
  - e.g. national policies/standards and their implementation, knowledge additionality

# How to deal with perverse incentives

- **Are they really significant? Studies need to establish tradeoff between perverse incentives, stringencies etc.**

# Small project potential?

- ”fast track” opportunities should not be limited to energy projects (e.g. rural industrialisation projects using scrap)
- May be applicable to some production routes (e.g. EAF based on scrap), but not to others (e.g. ISP)
- Definition of small linked to product manufacturing capacity
- Use average standardised baseline (global/regional)

# Recommendations (industry)

- **Develop regional, industry-specific assessments for baseline methodologies (cement, iron & steel) for identified project types**
- **Develop a single format for:**
  - data collection and organisation (including system boundaries, units)
  - temporal boundaries
  - determination of ”significant” emission sources
- **Build on existing work e.g. INEDIS, OECD/IEA reports, LBNL**

# Recommendations (2)

- More work required to confirm whether further additionality checks besides baselines are needed/feasible
- Explore inclusion of ”small” industrial projects (e.g. scrap-based EAF) in ”fast-track” proposals
- Future workshops on industry baselines should be held after recommended studies undertaken

# Cross-cutting issues

- Energy inputs
- Products
- Additionality
- Greenfield projects