

Standardising baselines for CDM projects different issues for different sectors

Jane Ellis, OECD

Kitakyushu, 29 August 2001



Presentation structure

- Background
- Standardisation:
 - issues across all sectors, general results
- Sector-by-sector discussion
 - energy supply
 - energy demand
 - industry
 - transport
- Conclusions

Case studies can be downloaded from:
<http://www.oecd.org/env/cc/freedocs.htm>

Baselines background

- A “baseline” is the hypothetical level of GHG emissions in the absence of a project
- Needed to quantify CDM project benefits
GHG benefits = Baseline emissions - actual emissions
- Different type of baselines possible e.g. project-specific or standardised (“multi-project”)

Baselines background (cont.)

- **An ideal baseline:**
 - is environmentally credible, transparent, simple
 - limits crediting uncertainty for project developers.
- **Increasing interest in standardised bl**
- **Standardised approaches can:**
 - increase consistency and transparency
 - limit transaction costs and gaming

What does a standardised baseline look like?

- Absolute values, or rates
- If rates, standardisation could be for:
 - values/output
 - methodologies or
 - parameters
- could vary by sector and project type
- ... so determining project categories is an important step.

How do you standardise baselines?

(1)

- Standardise “without project” assumptions for:
 - technology
 - energy source
 - how technology would have been used
 - (possibly) how much a technology would have been used
 - if/how long these factors are consistent over the project lifetime



How do you standardise baselines? (2)

Determine for each project category:

- geographical boundaries
- which gases and emission sources to include
- standard units for baselines
- crediting lifetime

This can be a lengthy process!

Guidance on standardising baselines

- **Limited, but increasing, e.g.:**
 - SEI/STEM Estonian district heating sector
 - ERUPT (Dutch JI guidelines, 5 sectors)
 - OECD/IEA (energy, industry, transport, *forestry*)*
 - UNEP/OECD/IEA workshop report*
- **Work underway, e.g.:**
 - for Japanese environment ministry (energy, industry, reforestation)
 - for EU (selected energy, forestry categories)

* available at <http://www.oecd.org/env/cc/freedocs.htm>

General results (UNEP/OECD/IEA workshop)

- Projects may need baselines and other additionality “checks”
- National/sectoral circumstances important, e.g.:
 - level of competition within sector/country
 - size of projects
 - legislation changes

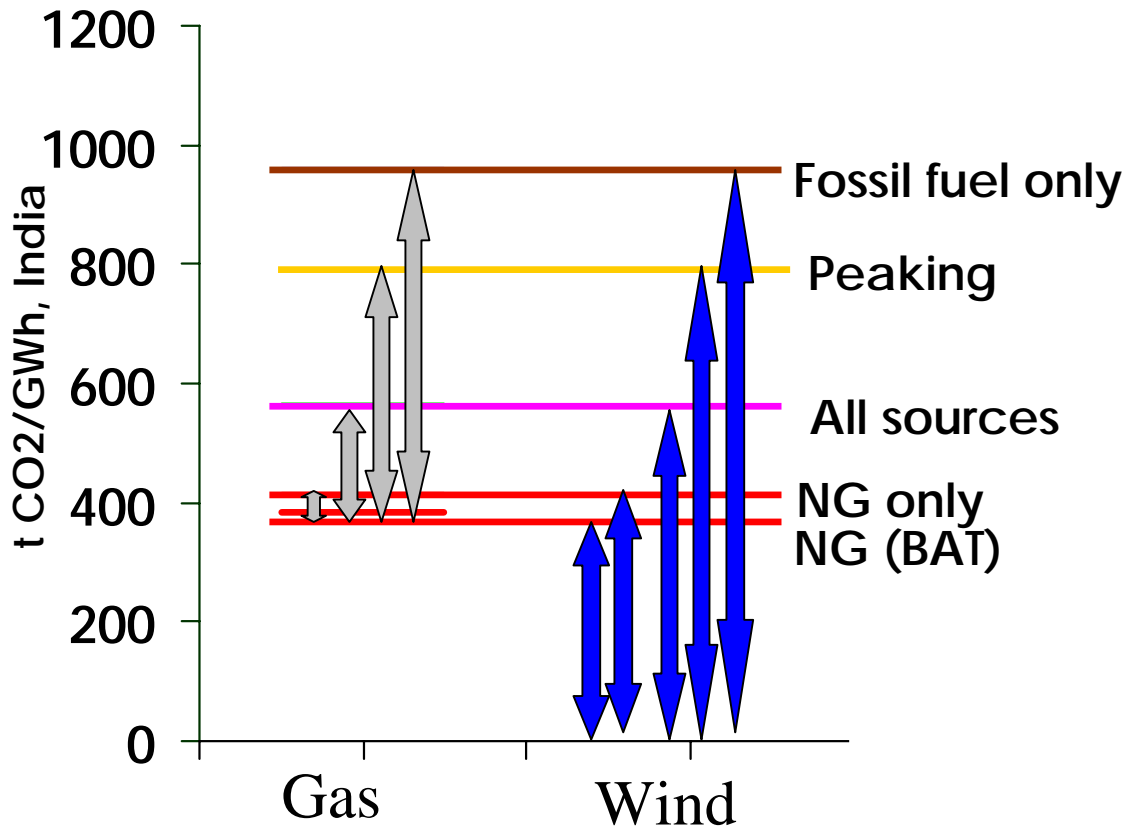
General results (2)

- For different project categories, need to distinguish baselines between:
 - JI and CDM
 - new and retrofits
 - small versus big
 -
- Rate-based baselines often appropriate
- Data availability often a problem

Sector results: electricity generation

- High potential for standardisation
- Baselines should be based on national/sub-national grids
 - distinguish between grid and off-grid projects
 - develop default value for off-grid renewable projects
- Include all direct on-site emissions

Electricity (cont.) - which assumptions?



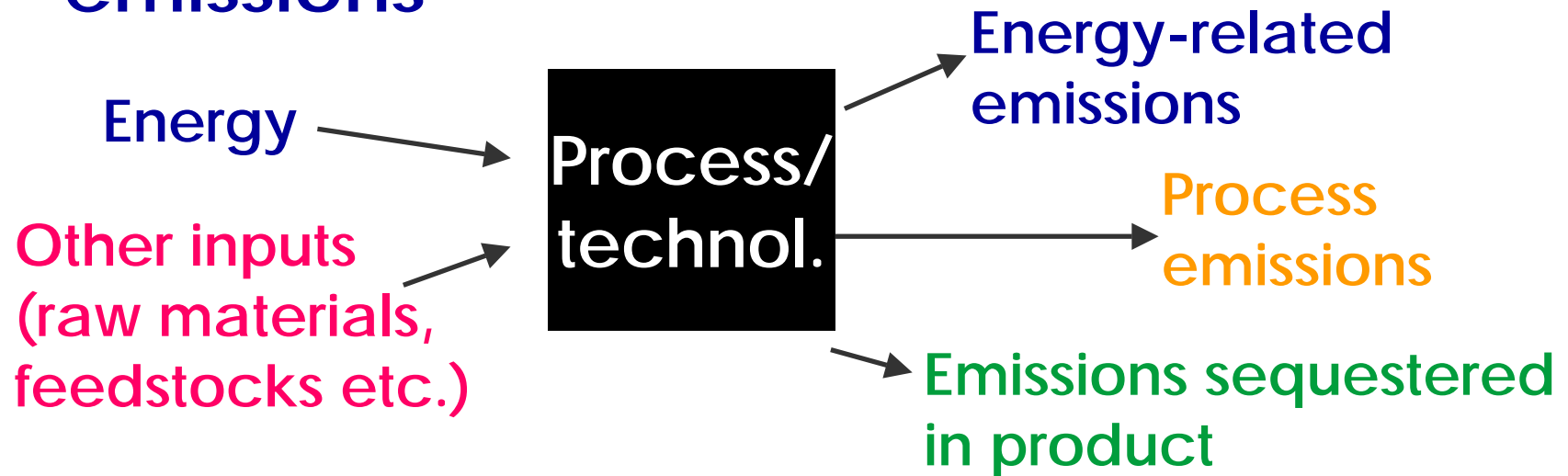
- Many possible data sets: which should be used?
- Take data constraints into account when determining methods

Sector results: Energy efficiency

- Many diverse projects possible: standardisation potential limited
- Impacts of EE projects can be difficult to assess (feedback effects)
- Baseline calculated in two steps:
 1. Calculate energy use baseline
 2. “translate” to GHG (e.g. using electricity bl.)
- Units will vary by project type

Sector results: Heavy Industry (1)

- Potentially complex relationship between energy input and GHG emissions



- ... so distinguish by different production routes (and fuels)

Heavy Industry (2)



- Baselines expressed in terms of an intermediate product may be appropriate
- Determining whether a project is additional can be as complex as quantifying additionality

Transport

- Defining “project activity” may be tricky
- Standardisation potential varies (depends on project type)
- Feedback effects likely and need to be accounted for
- Other similarities to EE baselines:
 - many dispersed sources; national data unlikely to be appropriate; may need methods for data collection

Cross-cutting issues

- **How to deal with projects that:**
 - increase capacity or
 - result in “rebound” effects (e.g. greater efficiency leading to higher consumption)
- **Developing a single format/definition for:**
 - data collection and organisation (including system boundaries, units)
 - determination of “significant” emission sources

Conclusions - Standardisation

- Standardised baselines could facilitate a prompt start of the CDM ... while also taking into account different national circumstances, project contexts
- Need to know up front if emission baseline is the only additionality “check”
- Standardisation potential varies by sector and project category

Conclusions (2)

- **Data problems widespread (but not insurmountable)**
 - Data collection standards needed for projects that cover small dispersed sources
- **Guidance needed on appropriate assumptions**
 - e.g. “Single most likely” or “ave. most likely?”