Baselines

different issues for different sectors

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Risoe, 7 May 2001

Presentation structure

- **Background**
- **Standardisation:**

  issues across all sectors
- **Sector-by-sector discussion**
  - energy supply
  - energy demand
  - industry
  - transport

AIXG case studies:
http://www.oecd.org/env/cc/freedocs.htm

- **Conclusions**

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Baselines background

- **Used to quantify GHG benefits**
- **Ideal baseline:**
  - environmentally credible
  - transparent
  - simple
  - limit uncertainty.
- **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 defining 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
- **Assess if/how long these factors vary over the crediting lifetime**

How do you standardise baselines? (2)

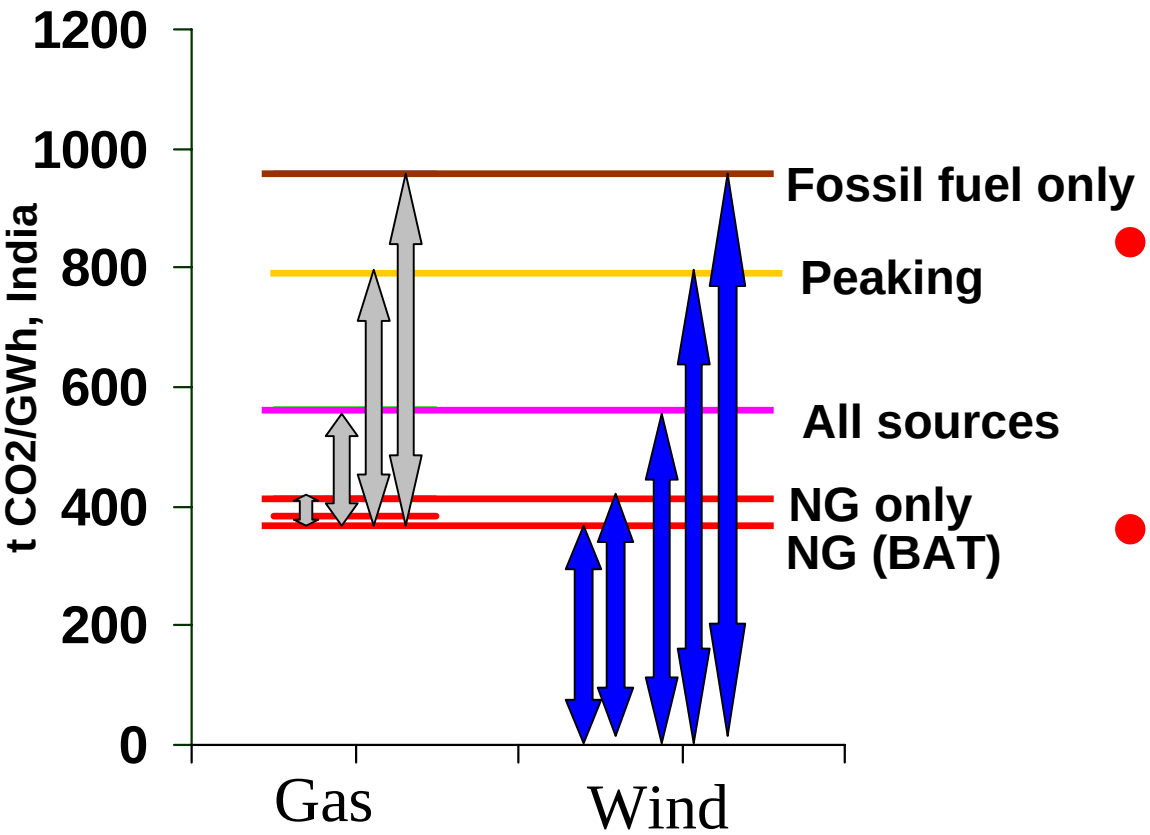
Determine:

- clear project categories/types
- geographical boundaries
- which gases and emission sources to include
- standard units for baselines
- crediting lifetime

Energy supply baselines - focus elec.

- Large and growing emissions source
- Wide range in potential project size
- Could standardise methods and values
- *Recently* installed capacity better marker than *average* capacity, but...
- … more complicated data reqts., difficult for some countries
- possible need to disaggregate within countries

Energy supply baselines - which assumptions?



- Use “single most likely” or “average most likely” value?
- Values may vary substantially within a country
- Same method gives different values for different countries

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Energy demand (1)

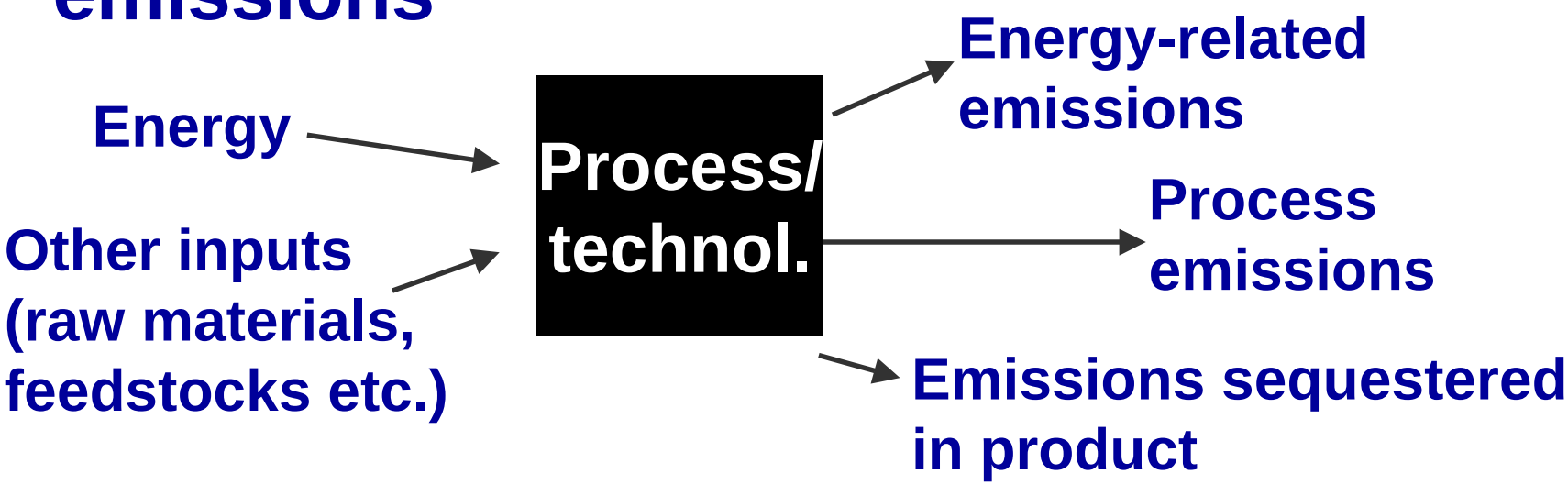
- **Diverse project types**
- **High potential for cost-effective energy efficiency (EE) measures**
- **Barriers to EE projects sometimes high**
- **How to deal with feedback effects?**
- **Baseline calculated in two steps:**
  1. Calculate energy use baseline
  2. “translate” to GHG (e.g. using electricity bl.)

Energy demand (2)

- **Key features of EE baselines:**
  - need to estimate change in efficiency trend
  - project may include many dispersed sources ..
    .. so determining sample size, data collection methods important
  - national level data may not be appropriate
  - standardisation options: data collection methods, operating parameters, standardising energy use indicators (vary by project)

Heavy Industry (1)

- Important source of CO_2 and non-CO_2
- Potentially complex relationship between energy input and GHG emissions



Heavy Industry (2)

- **Industry-specific questions**:
  - **baseline: whole project or process step(s)?**
  - **baseline expressed in terms of intermediate product, or final product?**
  - **projects often large scale, refurbishments**
  - **“intl.” industries may not need country-specific baselines**
- **Determining whether a project is additional as complex as quantifying additionality**

Transport (1)

- **High-growth emissions sector**
- **Many potential mitigation activities (changing fuel, fuel efficiency, transport mode; increasing load factor; decreasing activity) in different sub-sectors (private/public, road/rail etc.)**
- **Similarities to EE baselines:**
  - many dispersed sources; national data unlikely to be appropriate; may need std. methods for data collection; feedback effects likely

Transport (2)

- Defining “project activity” may be tricky
- Should baselines use sub-sector forecasts of activity (uncertain, but may be most appropriate for large-scale projects) ...
- … or activity “benchmarks” based on historical data (appropriate for smaller projects, but data often unavailable)?

Conclusions - Standardisation

- **Potential varies by sector:**
  - Data collection standards needed for projects that cover small dispersed sources
- **No one criteria for crediting lifetime**
- **Data challenges widespread (but not insurmountable)**
- **“Single most likely” or “ave. most likely?”**
  - Answer also varies by sector