

Main lessons from previous benchmarking exercises

Lessons from the Flemish and Dutch energy efficiency benchmarking covenants

Important principles (1)

- ETS-target of 10 % most efficient installations requires practical benchmarking based on measurements and good benchmarking methodology
- CO₂-benchmarking is more difficult than energy benchmarking; ETS-benchmarking is simplified because it covers only direct emissions, and all ETS-participants will have interest in a good result
- Every benchmarking exercise has a (high) cost and is time consuming; companies will only benchmark if they have a clear purpose for it

Important principles (2)

- Good data can only be achieved with good measurement systems
- System borders must be well defined ! How to allocate for extra process steps ?
- Hot item 1: “Process Emissions” to be included
- Hot item 2: CHP requires special attention
 - to be included or not ?
 - how to deal with export of electricity
 - contractual requirements with grid operators

Determination of 10 % most efficient (1)

- Will all installations participate in a benchmark ?
 - not so in the existing industrial benchmarks
 - participation could be improved, or made obligatory for ETS
 - new participants need time !

- Performance of participants
 - In the covenants, most participants performed well, but this depended on their place in the benchmark ...
 - Performance and co-operation of consultants is a matter of quality !

Determination of 10 % most efficient (2)

- Exclusion of installations ?
 - only viable installations ?
 - non reproducible random conditions: heat recovery from a nearby installation, availability of renewable energy, CHP-opportunity
 - number of these cases will probably be less for ETS than for the covenants

- Range of products
 - “the” product is not always uniform, but may show a range of quality
 - some benchmarks have an implicit correction for the product range
 - the same applies for the range of raw materials
 - again: number of these cases will be less for ETS

Verification of benchmark curves (1)

It 's not just the shape of the curve ...

Compared with the covenants, many distortions will be avoided now, because of the interest of all ETS-installations, which makes verification easier, but still:

- Quality of data, supplied by the companies
 - very difficult in the covenants' first cycle
 - verification easier in ETS, as emission reports exist (per source !) from 2005, with accuracy requirements
 - independent verification at random desirable ?

Verification of benchmark curves (2)

- Methodology of the consultant
 - Emissions must be well separated between connected installations or energy exports
 - Product range must be well analysed
 - Suitable benchmark for double product processes

- Calculations

How to incentivise greater reductions

As this is subject of another contribution, only two remarks:

- in the covenants, the benchmark is an absolute target, so more a dead limit than an incentive
- In ETS, benchmarks and individual allocation are an initial offset, but no incentive to do better; only the market price of the CO₂-allowances is an incentive

Comparability of sector efforts

Practical benchmarks , based on measurements:

- yield the best available (= proven) technology, in energy intensive sectors
- do not reveal emerging technologies

If ETS-allocation is based on the average of the 10 % best installations, this implies:

- the best achievable level playing field for all sectors, assuming that the benchmarks are assessed with sufficient quality and proper verification
- sectors where the min/max span is high will have to reduce more . Quite fair !
- potential of emerging technology is not covered; it would require a scientific input, which goes beyond the scope of benchmarking, and the preparedness of the participants
- potential of product change is not covered; such changes are caused by many other evolutions than environment