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# CEPS Benchmarking

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# Key messages on benchmarking



- Benchmarking may only be seen as “transitional” for the EU ETS before a move to auctioning, but:
  - Could be a longish transition.
  - It may be an essential tool to link to other schemes, via sectoral crediting mechanisms.
- We have a lot to learn so use all available experience:
  - For example, Refining has 25 years of voluntary, global benchmarking experience.
  - It has been used to drive performance improvement
- The goal is improvement in carbon efficiency, so be pragmatic and flexible in application of the EU ETS Directive:
  - To get as many sectors as possible with realistic systems.
  - If benchmarking really not feasible, then some other equitable system to drive improvement

# Recommended ground-rules for benchmarking as part of EU ETS



- **Do not damage competitiveness of EU versus other regions:**
  - Whilst still stimulating emissions reductions.
- **Equitable treatment of all sectors “exposed to significant risk”**
  - Directive does not differentiate between exposed sectors.
  - Sector benchmarks should require similar effort.
- **Equitable treatment of all installations within a sector:**
  - Financial stakes are high.
  - Must not distort competition within a sector.
  - Allows differentiation between installations on CO2 efficiency – rewards early movers.
- **Be sufficiently transparent to:**
  - Allow someone with reasonable technical knowledge (but not necessarily sector specific) to understand.
- **Be applicable in practice:**
  - Fit for purpose for the sector concerned: one size will not fit all.
  - “Ex ante” benchmarks based on single reference period to give predictability for business decisions.
  - Be verifiable.

# What are the specific factors to consider when characterising Refining?

- Refining is a “co production” process:
  - Typical production includes LPG, naphtha, gasoline, kerosene, diesel/gasoil and fuel oil.
  - Yields of each product vary between refineries, but not possible to produce just one or two products.
  - Not possible to allocate CO2 by product.
- Broad range of size and degree of upgrading:
  - EU refineries range from 2 to 20 MTe per year in production.
  - Although almost all Refineries start with Crude Distillation, each individual refinery has a different combination of units and technology to produce its own final product mix.
- A Refinery total energy use and therefore emissions are not simply the “sum of the parts”:
  - Combining or heat integrating units optimises energy use and reduces emissions.
  - Energy typically represents over 50% of Refining cost, so most sites have made major steps in this optimisation.
- The methodology should ideally reflect these factors:
  - Characterise emissions from all Refineries with multi product mixes.

# Solomon Associates were chosen by Concawe to help



- Solomon Associates are recognised experts in performance comparison in refining and petrochemical sectors.
- Ecofys Consultation Paper for the Commission (May 2009) recognises the suitability of this approach to meet Directive needs
- Solomon has gained great credibility with global Refining:
  - Worked for 25+ years on performance benchmarking and has developed expertise and huge data base.
  - Over 80% of EU refineries participate in the biannual survey - on a fee basis.
  - Over 50% of world wide refineries also participate – potential for linking if future sectoral approaches develop.
- Solomon approach has also been accepted by some Authorities:
  - NL and Be Authorities have also used Solomon to set efficiency standards.
  - Their benchmarking surveys allow performance comparisons between Refineries without breaching competition rules.

# Define the methodology to compare sites CO2 efficiency is only the first step.

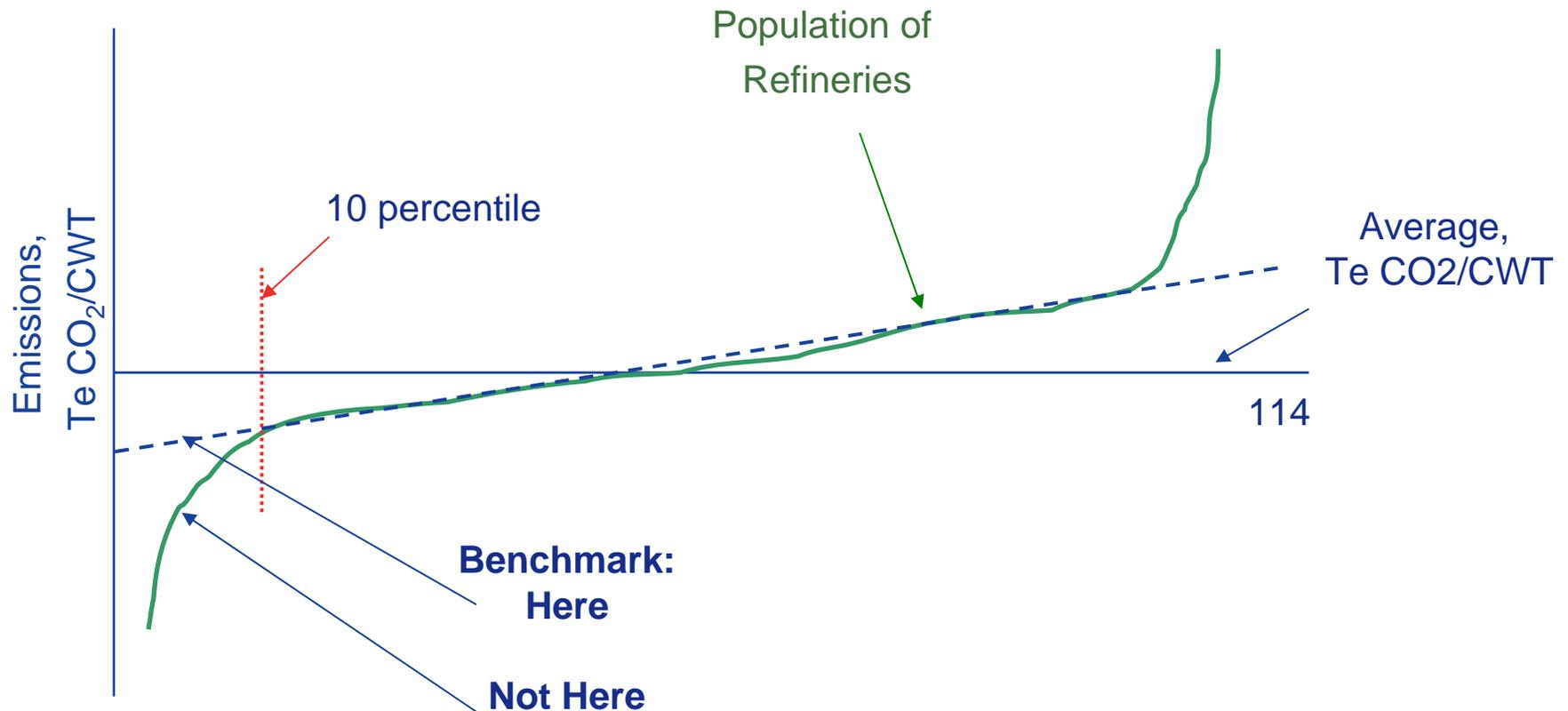


How to apply the methodology to allocate free allowances and create incentives for improvement?

Two of the issues include:

- The benchmark challenge: is it realistically achievable by all sites? How to exclude outliers?
- How and when do the individual sectors' benchmarks apply to ensure the 21% reduction of the Cap is achieved?

# How to derive the average of the best 10%: excluding the outliers by regression?



# Setting the “benchmark” for an EII sector: when should it apply?

