

EU-China Dialogue and Cooperation on ETS-related Policies and Measures 中欧碳市场政策对话与合作项目

TtT Intensive Training (Day 4)

Unreasonable Costs and Technical Feasibility as part of
the Tier Approach



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Implemented by:
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Let us remember the General Training

‘Proportionality’ in the EU ETS:

- Tier requirements set in proportion to size / scale activity / technical feasibility / reasonable costs
- Size- Annual emissions: Installation categories A, B and C
- Scale - Contribution to total annual emissions: source stream categories: Major, minor, de-minimis
- Activity: Activities defined in Annex I of Directive 2003/87/EC
- Flexibility of approach: calculation, measurement, combination of both
- Deviation from required tiers where monitoring methodology
 - Is technically not feasible
 - Incur unreasonable costs

Special provisions:

- Installations with very low emissions
- Fall-back methodology
- Temporary derogations

Technical feasibility: “Where an operator or aircraft operator claims that applying a specific monitoring methodology is technically not feasible, the competent authority shall assess the technical feasibility taking the operator’s or aircraft operator’s **justification** into account. That justification shall be based on the operator or aircraft operator having **technical resources capable of meeting the needs** of a proposed system or requirement that can be implemented in the **required time** for the purposes of this Regulation. Those technical resources shall include the **availability** of the requisite techniques and technology”

Unreasonable costs: “The competent authority shall consider costs unreasonable where the **cost estimate exceeds the benefit**. To that end, the benefit shall be calculated by multiplying an **improvement factor** by a **reference price of EUR 80** per allowance and costs shall include an **appropriate depreciation period** based on the economic lifetime of the equipment”

Combination of both concepts frequently found: monitoring methodologies might be technically feasible – but only at unreasonable costs!

Typical Situations related to technical feasibility and unreasonable costs

Technical feasibility

- No laboratory offering a required analysis exists
- A suitable sampling point is not accessible
- A fuel, material or product is not homogenous enough to allow for representative sampling, e.g. waste tyres

Unreasonable costs

- Having to replace measurement equipment in order to achieve a higher tier
Accuracy of activity data improved
- Switching from default values to determining calculation factors by actual analyses
- Increase in the number of analyses per source stream
- Shortening calibration and maintenance intervals of measurement instruments
- Improvements to data-flow activities and control activities
Data quality improved – but not accuracy of activity data

Assessment of Unreasonable Costs: Costs > Benefit?

Estimating the Benefit

- What is considered as “benefit”? Definition of benefit aims to consider increase in accuracy, considering annual emissions of the source stream(s) concerned and the allowance cost

$$\text{Benefit} = P \cdot \text{AEM} \cdot I$$

Where:

P specified allowance price = 80 € / t CO₂(e)

AEM Average emissions from related source stream(s) over the three most recent years [t CO₂(e)/year]

I Improvement factor

- Where accuracy of activity data is improved

$$I = \text{CurrentUncertainty [\%]} - \text{NewTierUncertainty [\%]}$$

- Where the improvement of data quality is not related to a change in the uncertainty associated with activity data (see Art. 18.3 of Regulation 2018/66/EC)

$$I=1\%$$

Estimating the Cost

- Only costs additional to those applicable for the alternative scenario taken into account
- Costs estimated on an annual basis during the economic lifetime of the equipment, considering
 - Investment costs, incl interest rate
 - Economic operational life
 - Operation and maintenance costs
 - Other costs

Example

Situation

- An old measuring instrument has ceased functioning properly, a new one has to be installed
- The old instrument was meeting an uncertainty of 3% corresponding to tier 2 for activity data.
- The operator is required to achieve a Tier 3 ($\pm 2.5\%$), he considers whether a better instrument would incur unreasonable costs.
- Instrument A costs 25 000 € and leads to an uncertainty of 2.7% (still tier 2),
- Instrument B costs 60 000 €, but allows an uncertainty of 2.3% (tier 3, $\pm 2.5\%$).
- Depreciation period: 7 years in both cases
- Maintenance costs:
 - Instrument A: 2000 €/a
 - Instrument B 4000€/y
- Average annual emissions of the installation: 200,000 t CO₂/year

Assessment

- **Costs:**
 - Difference in investment costs: 35,000 € i.e. 5000 € /y for 7 years depreciation period
 - Difference in operation and maintenance costs: 2000€/y
- **Benefit**
 - Instrument A:
 - Benefit = 0 (instrument required to operate installation)
 - Instrument B:
 - Difference in accuracy = $2.7\% - 2.5\% = 0.2\%$
 - Benefit:
 $0.002 * 200,000 \text{ t CO}_2/\text{y} * 80 \text{ €/t CO}_2$
 $= 32,000 \text{ €/y}$

$$\begin{array}{rcl} \text{Cost Instrument B} & < & \text{Benefit Instrument B} \\ 5000 \text{ €/y} & & 32,000 \text{ €/y} \end{array}$$

The justification of unreasonable costs cannot be applied in this case!

EU ETS Unreasonable Costs Determination Tool



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This is an optional tool for calculating whether costs can be considered as unreasonable.

(a) Direct impact on accuracy?

Uncertainty currently achieved:

Uncertainty related to the tier required:

(b) Types of costs

i. Current or reference costs

Brief description	Investment costs			O&M costs [€/year]	Other costs [€/year]	Annual costs [€]
	Investment costs [€]	depreciation period [years]	interest rate [%]			
Sum				=		

ii. Costs of the new equipment or new measures

Brief description	Investment costs			O&M costs [€/year]	Other costs [€/year]	Annual costs [€]
	Investment costs [€]	depreciation period [years]	interest rate [%]			
Sum				=		

(c) Annual costs (Sum of all "additional" costs) =

	EUA price [€/t CO2e]	Average annual emissions	Improvement factor	
(d) Annual Benefits	80	x	x	= <input type="text"/>

(e) Costs are unreasonable?

• Voluntary tool, supporting operators to assess whether unreasonable costs could potentially be justified

• You can download the tool [here](#)



Case example on unreasonable costs

Situation:

- An installation conducts sampling and analysis for a specific source stream 3 times per month
- Compliance with Tier 3 requirements demands sampling and analysis at least 4 times per month
- Each sampling and analysis process costs 500 €
- Average annual emissions from the source stream in the last three years amount to 20,000 t CO₂eq/a
- The operator considers, whether conducting sampling and analysis for the source stream 4 times per month would lead to unreasonable costs

Assessment:

- Benefit:
 - Accuracy of activity data not increased - improvement factor of 1%/y assumed
 - Benefit = 16000 €/a = 0.01 * 20,000 t CO₂eq/a * 80 €/t CO₂eq
- Costs:
 - Difference in operation and maintenance costs: 1*12*500€ =6,000 €/y

Benefit > Costs

16 000 €/y 6000 €/y

Conducting sampling and analysis for the source stream 4 times per month would NOT lead to unreasonable costs

Thank you for your attention!

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