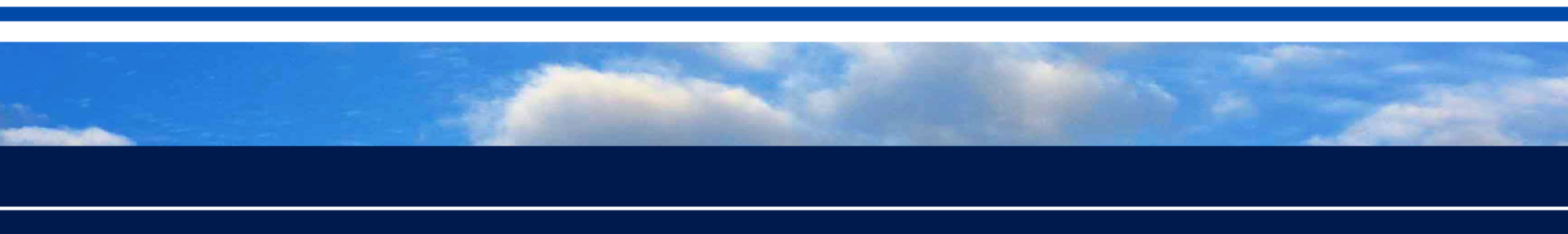
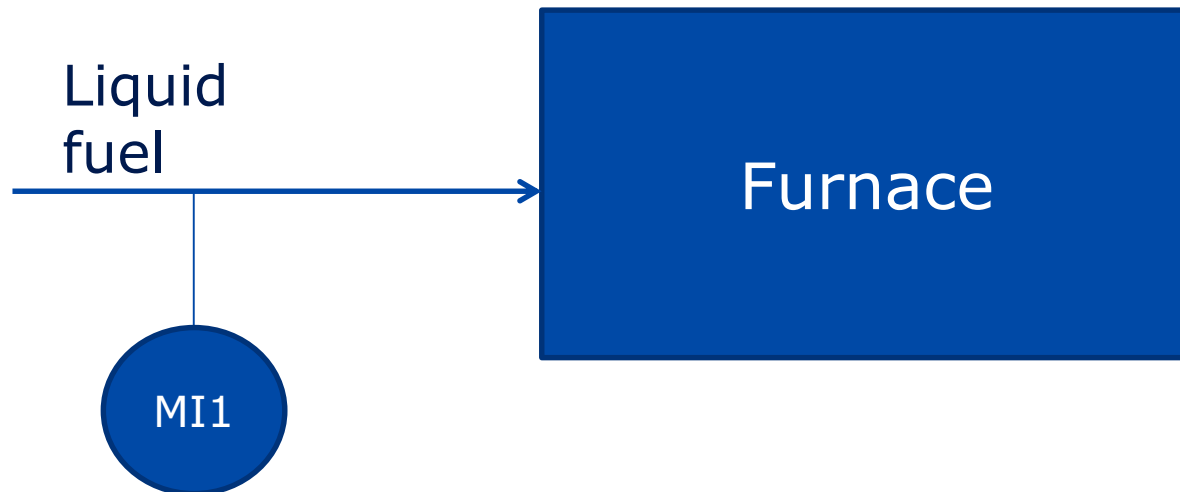


Unreasonable costs

Example and problems



Uncertainty assessment chemical plant



Uncertainty required MI1: 1,5%

Uncertainty achieved MI1: 6%

Unreasonable costs

The operator claims that the costs for replacing the measurement instrument are unreasonable:

ii. Costs of the new equipment or new measures

Please enter here the costs related to new or additional measures or new equipment which would lead to an improvement.

Brief description	Investment costs			O&M costs [€/year]	Other costs [€/year]	Annual costs [€]
	Investment costs [€]	depreciation period [years]	interest rate [%]			
Replacement of the current flowmeter by a coriol	85.000,00	7	6			15.226,48
Sum =						15.226,48

(c) Annual costs (Sum of all "additional" costs) = 15.226,48

(d) Annual Benefits	EUA price [€/t CO ₂ e]	x	Average annual emissions	x	Improvement factor	=	Annual Benefits
	20	x	3.700	x	4,50%	=	3.330,00

Average annual emissions: Those emissions shall relate to a specific source stream, emission source determined by GHG measurement or fall-back approach.

Cost assessment

The cost assessment was based on several steps:

1. Hardware and installation costs based on quotation
 - Electrical connections
 - piping
 - welding inspections
 - safety measures
2. Combining costs of hardware with historical percentages for engineering, overhead etc.
 - Historical percentages are high for low capital costs due to time consuming modifications in existing environment
3. Percentage for contingency costs (20%)

How can a CA perform a check on the cost assessment?

- The operator used a depreciation period of 7 years (trading period) and an interest rate of 6%.

Is this reasonable and can the CA prescribe otherwise?

How to check if specified costs by the operator are true?

Concluding remarks

- Material costs can be based on quotations, but
- For non material costs the assessment by a CA is much more difficult, while the impact and uncertainty of these costs is high.
 - > knowledge of typical costs in the specific sector is needed to assess the costs
- *Is it possible to set up a database (excel) on sharepoint, where we can collect anonimised data on unreasonable costs? And do you think this is useful?*

Thank you for your attention!