

MS Workshop case studies

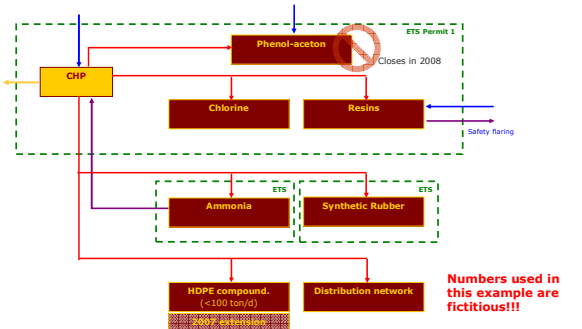
Case study: chemicals production site

2 May 2011

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A chemical site\*



\*Throughout the presentation we take the "ETS PERMIT 1 perspective"  
 The HDPE compounding installation has a small capacity and is therefore outside EU-ETS

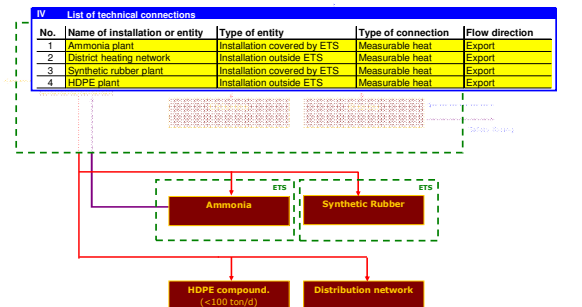
General information

- Is the installation eligible for free allocation? **Yes**
- Is the installation an electricity generator pursuant Art. 3(u)? **No**
- What is the chosen baseline period? **2005-2008**
- Did the installation operate at least one day in each calendar year in the baseline period? **Yes**
- Greenhouse Gas Emissions and Energy input from fuels

Data collection template: tab D. Emissions

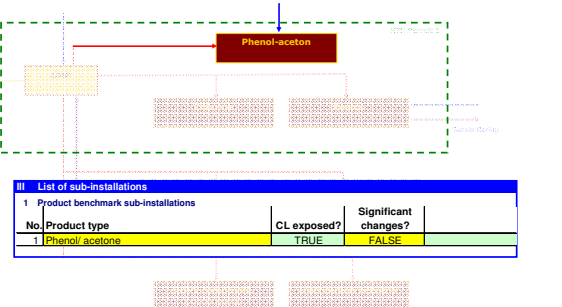
Total Direct Greenhouse Gas Emissions and Energy Input from Fuels					
3 Result of installation level data for use in sheets "D. Emissions" and "E. EnergyFlows":					
Installation level data:	Unit	2005	2006	2007	2008
Total CO2 emissions	CO2 / year	195,000	180,000	176,000	161,000
Memo-item: Biomass emissions	CO2 / year	0	0	0	0
Total N2O emissions	CO2e/year	0	0	0	0
Total PFC emissions	CO2e/year	0	0	0	0
<b>Total direct emission of the installation</b>	<b>CO2e/year</b>	<b>195,000</b>	<b>180,000</b>	<b>176,000</b>	<b>161,000</b>
<b>Total energy input from fuels</b>	<b>TJ / year</b>	<b>3,421.05</b>	<b>3,157.69</b>	<b>3,087.72</b>	<b>2,824.55</b>

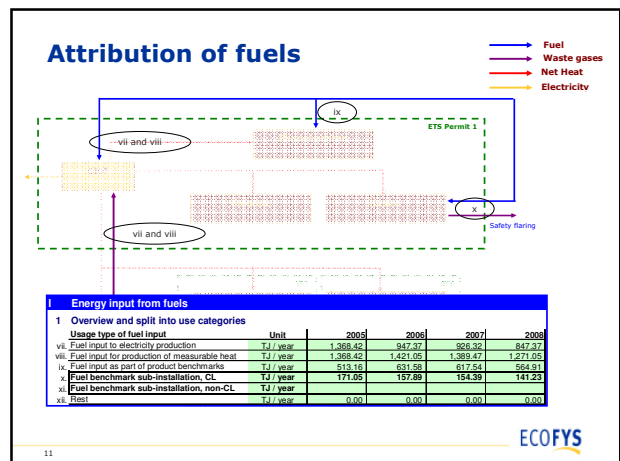
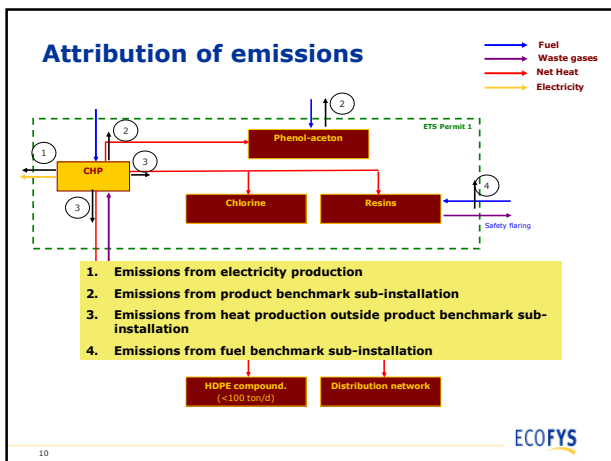
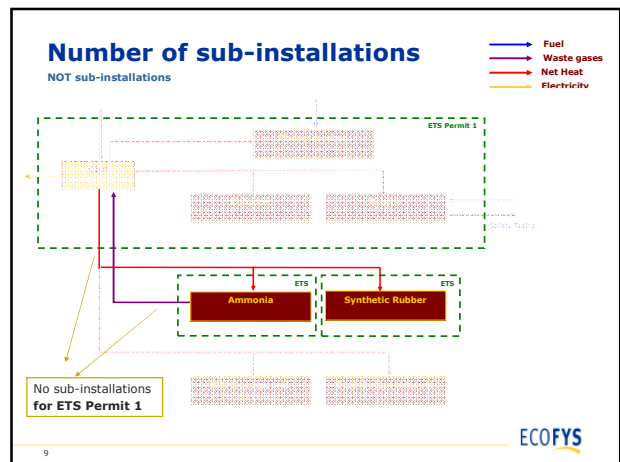
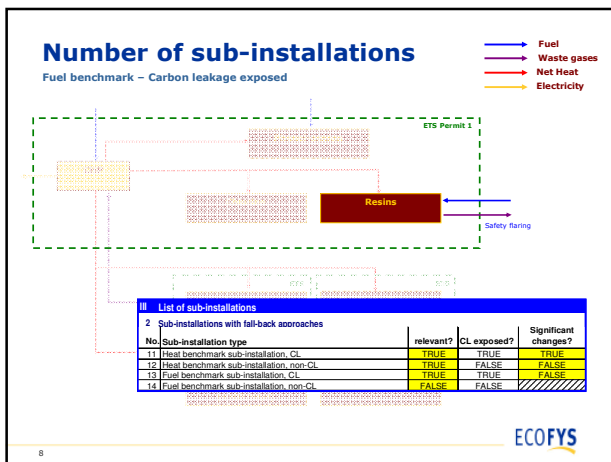
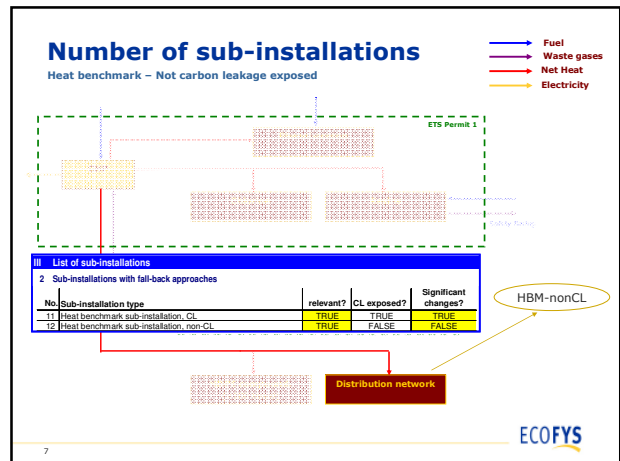
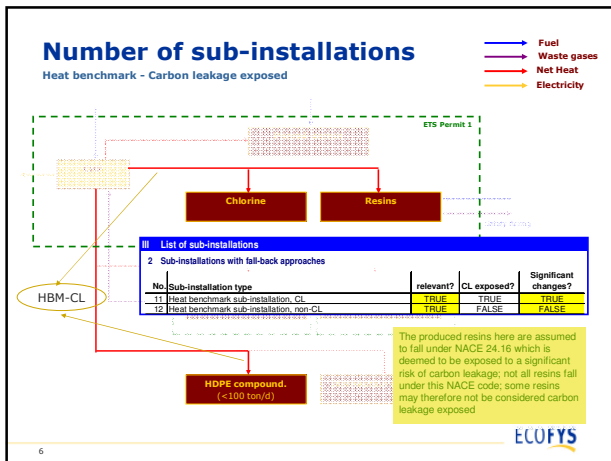
Relevant technical connections



Number of sub-installations

Product benchmark





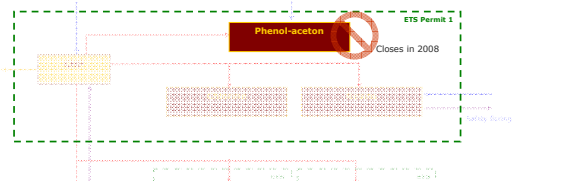
## Attribution of measurable heat

- For allocation,
  - Exact data for measurable heat consumption/export is necessary for heat benchmark sub-installation

The data collection template contains a 'simple' and a 'complex' tool to determine the balance of measurable heat flows.

## HAL

Product benchmark



Historic Activity levels and disaggregated production details					
1 Sub-installation with product benchmark 1:					
Main activity level:	Unit	2005	2006	2007	2008
Phenol-acetone	tonnes	200,000	190,000	190,000	0
i. From sheet "I" SpecialBM"	tonnes	200,000	190,000	190,000	0
ii. Values used for calculation:		200,000	190,000	190,000	0

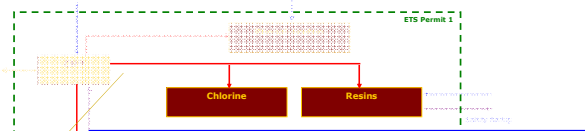
## HAL – how to establish

Product benchmark

- In this example the production stops 1<sup>st</sup> of January 2008. Significant capacity changes in the period between 1-1-2005 and 30-6-2011 impact the HAL. Is there a 'significant change in capacity' in this case?
- No. Because there **is NO physical change** in the installation and therefore the 'change in capacity rule' does NOT apply.
- However, partial cessation of operations will apply (article 23, 2.) meaning that preliminary allocation will have to be changed as of 2013.
- So still: no allocation for closed sub-installation!

## HAL

Heat benchmark – Carbon leakage exposed



Historic Activity levels and disaggregated production details					
1 Fall-Back Sub-installation 1:					
Main activity level:	Unit	2005	2006	2007	2008
Heat benchmark sub-installation, CL					relevant
Heat benchmark sub-installation, CL	TJ	1000	1000	800	700

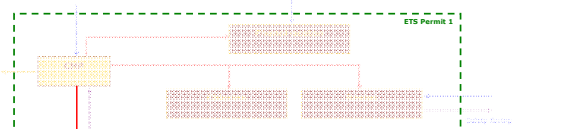
## HAL – how to establish

Heat benchmark-CL

- In this example the HDPE compounding installation (<100 t/day) significantly increases production (but still <100 t/day) and associated heat demand. Is this also regarded as a significant increase of the heat benchmark subs installation?
- See guidance document 6, section 4.2:
  - In this example, the additional amount of heat is delivered by using existing spare CHP capacity without any physical change at the CHP.
  - Due to the absence of physical change at the CHP, this significant change of HDPE heat consumption does not constitute a capacity increase of the HBM-CL sub installation.
  - Therefore, standard calculation of HAL: median values of the annual historical activity levels in the baseline period

## HAL

Heat benchmark – Not carbon leakage exposed



Historic Activity levels and disaggregated production details					
2 Fall-Back Sub-installation 2:					
Main activity level:	Unit	2005	2006	2007	2008
Heat benchmark sub-installation, non-CL					relevant
Heat benchmark sub-	TJ	700	500	600	600

