

Allocation in phase 3 of EU ETS

Case study: integrated pulp and paper mill

2 May 2011

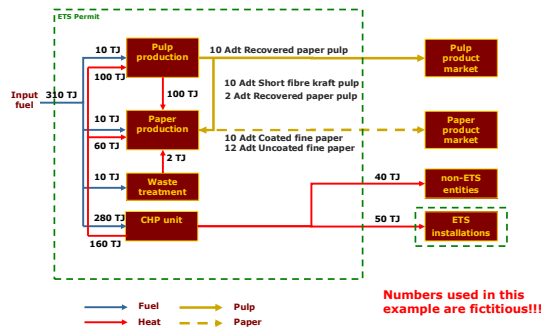
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General information about the pulp and paper mill

- 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**
- Significant changes in capacity? **No**

Integrated pulp and paper mill



Numbers used in this example are fictitious!!!

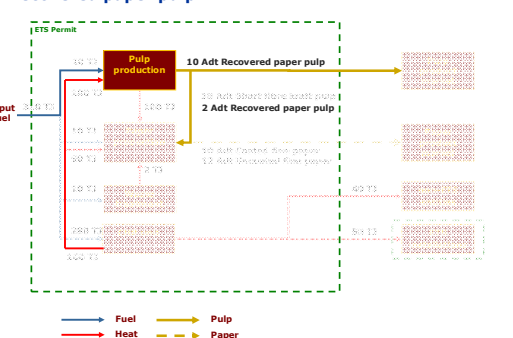
Identify relevant technical connections

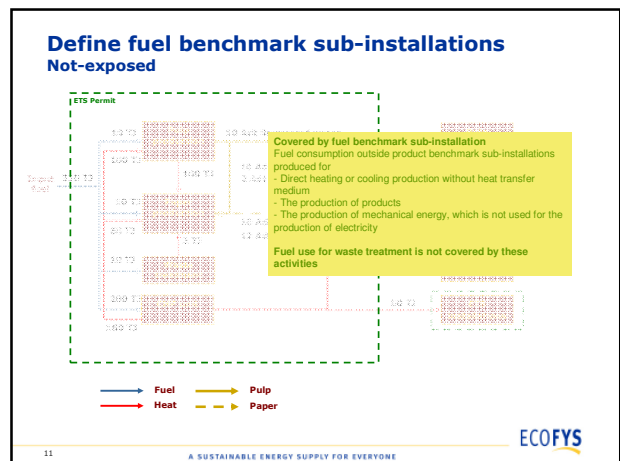
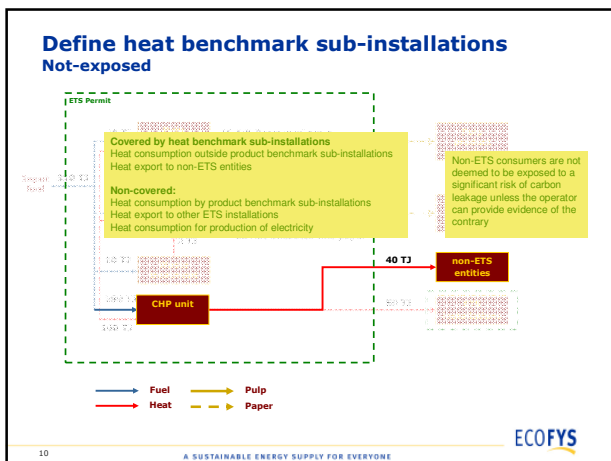
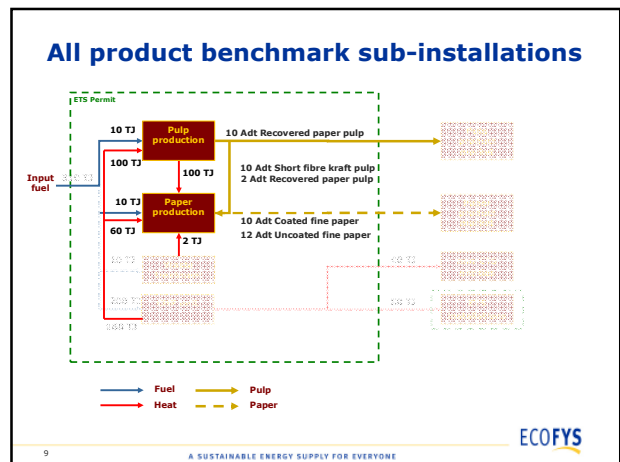
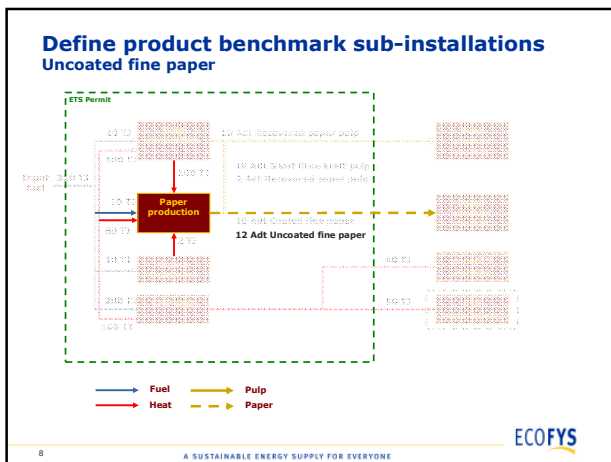
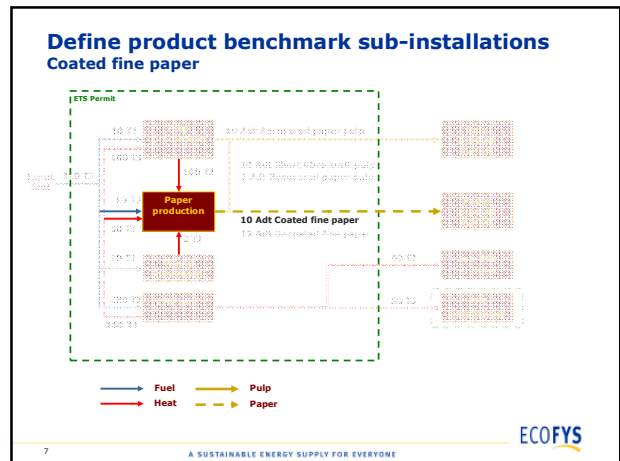
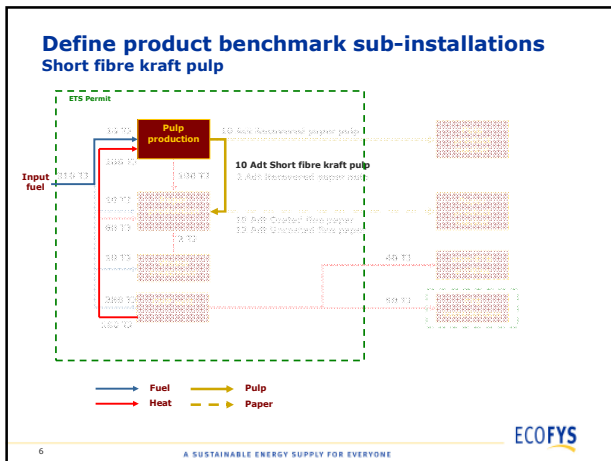
Data collection template: tab A_InstallationData

No.	Name of installation or entity	Type of entity	Type of connection	Flow direction
1	Non-ETS entity	Installation outside ETS	Measurable heat	Export
2	ETS installation	Installation covered by ETS	Measurable heat	Export

No.	Installation ID used in CITL	Name of contact	Email address	Phone number
1	128	Maria	maria@entec.eu	
2	128	Maria	maria@entec.eu	

Define product benchmark sub-installations





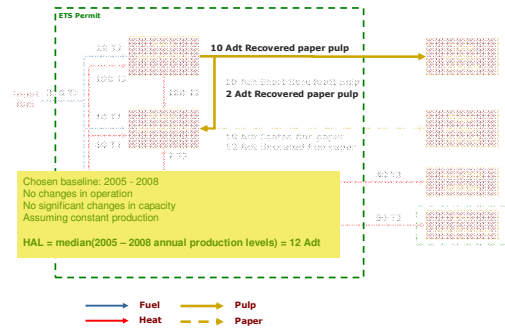
Attribute all (other) emissions, fuel, and measurable heat to sub-installations

- For allocation,
 - Exact data for measurable heat consumption/export is necessary for heat benchmark sub-installation
 - Exact data on energy input is necessary for fuel benchmark sub-installations
 - Exact emissions is necessary if a process emissions sub-installation would be present

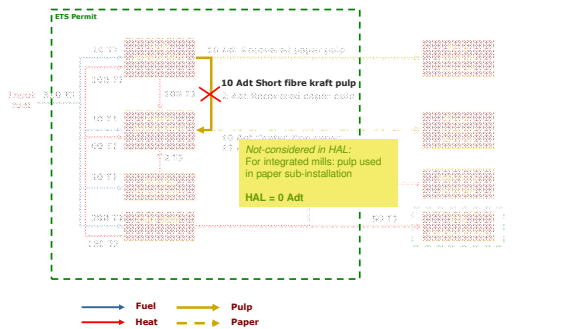
Nevertheless, to be able to check completeness and consistency (Art. 7.7), operators will:

- In the data collection template: estimate the attribution of all other emissions, energy input and measurable heat
- In the methodology report: describe the attribution

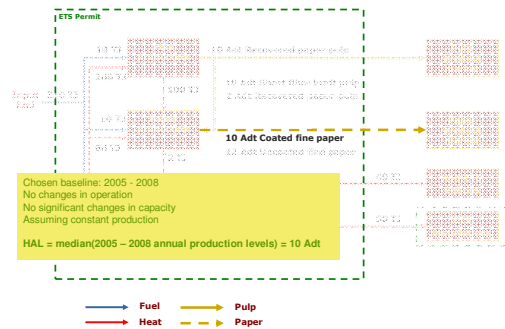
Determine historical activity levels Recovered paper pulp sub-installation



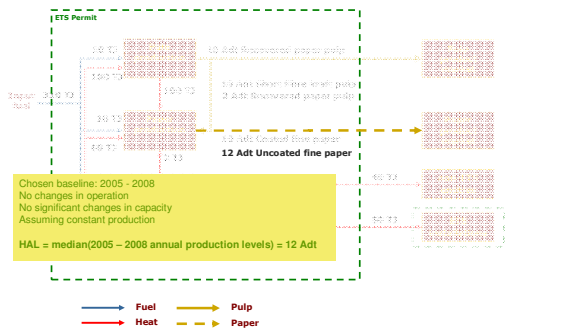
Determine historical activity levels Short fibre kraft sub-installation



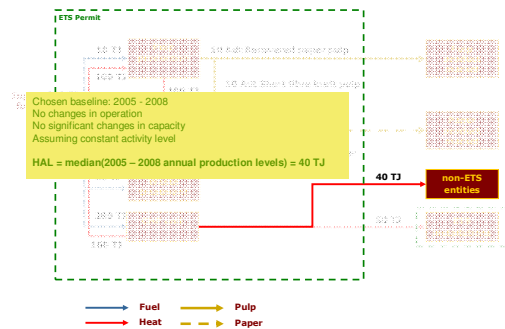
Determine historical activity levels Coated fine paper sub-installation



Determine historical activity levels Uncoated fine paper sub-installation



Determine historical activity levels Not-exposed heat benchmark sub-installation



Determine preliminary total allocation Not considering carbon leakage status

Recovered paper pulp sub-installation:	$BM_p [EUA/Adt] \times HAL_{Pulp} [Adt]$
Short fibre kraft pulp sub-installation:	$BM_p [EUA/Adt] \times HAL_{Pulp} [Adt]$
Coated fine paper sub-installation:	$BM_p [EUA/Adt] \times HAL_{Paper} [Adt]$
Uncoated fine paper sub-installation:	$BM_p [EUA/Adt] \times HAL_{Paper} [Adt]$
Heat benchmark sub-installation not exposed:	$BM_H [EUA/TJ \text{ heat}] \times HAL_H [TJ \text{ heat}]$
Preliminary total allocation: (not considering CL-status)	Sum of the above

BM: Benchmark
HAL: Historical activity level
EUA: Allowances

Determine preliminary total allocation Considering carbon leakage status

Recovered paper pulp sub-installation:	$BM_p [EUA/Adt] \times HAL_{Pulp} [Adt] \times CLEF$
Short fibre kraft pulp sub-installation:	$BM_p [EUA/Adt] \times HAL_{Pulp} [Adt] \times CLEF$
Coated fine paper sub-installation:	$BM_p [EUA/Adt] \times HAL_{Paper} [Adt] \times CLEF$
Uncoated fine paper sub-installation:	$BM_p [EUA/Adt] \times HAL_{Paper} [Adt] \times CLEF$
Heat benchmark sub-installation not exposed:	$BM_H [EUA/TJ \text{ heat}] \times HAL_H [TJ \text{ heat}] \times CLEF$
Preliminary total allocation: (not considering CL-status)	Sum of the above

BM: Benchmark
HAL: Historical activity level
EUA: Allowances
CLEF: Carbon leakage exposure factor
- For exposed sectors (80% in 2013, 30% in 2020)
- For not-exposed sectors (100% from 2013 to 2020)

Determine final total allocation (not in NIMs)

In this case the installation is not an "electricity generator" (pursuant to Art 3(U)); so:

$$\text{Final allocation} = F_{\text{instal,pret.}}(k) \times \text{CSF}(k)$$

$F_{\text{instal,pret.}}(k)$: Preliminary allocation considering CL-status in year k
CSF(k): Cross-sectoral correction factor in year k (if applicable)

In case the installation would have been an "electricity generator", then:

$$\text{Final allocation} = F_{\text{instal,pret.}}(k) - 0.0174 \times F_{\text{instal,pret.}}(2013) \times (k - 2013)$$

$F_{\text{instal,pret.}}(k)$: Preliminary allocation considering CL-status in year k
0.0174: Linear reduction factor