Allocation in phase 3 of EU ETS

Case study: integrated pulp and paper mill

2 May 2011

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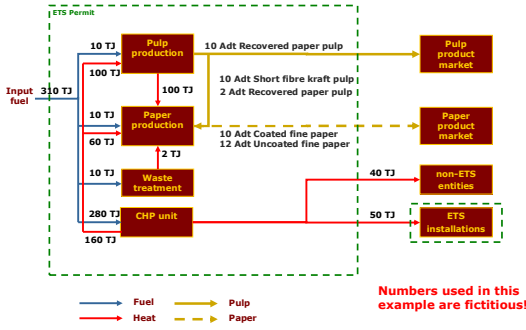
General information about the pulp and paper mill

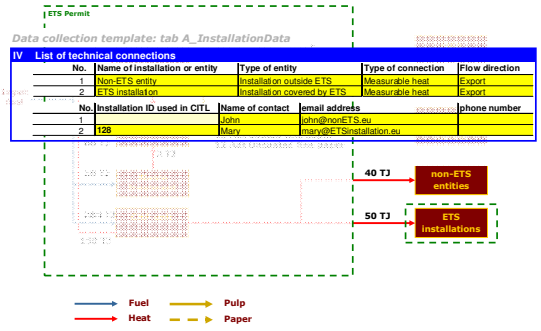
- Is the installation eligible for free allocation? **Yes**
- Is the installation an electricity generator pursuant Art. 3(u)? **No**
- What is the chosen baseline period? **2005-2008**
- Did the installation operate at least one day in each calendar year in the baseline period? **Yes**
- Significant changes in capacity? **No**

Integrated pulp and paper mill



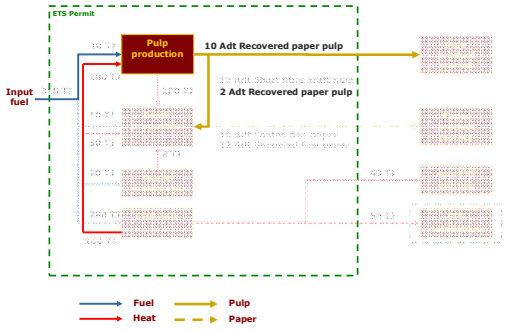
Numbers used in this example are fictitious!!!

Identify relevant technical connections

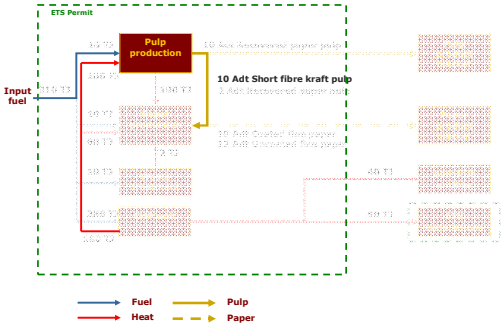


Define product benchmark sub-installations

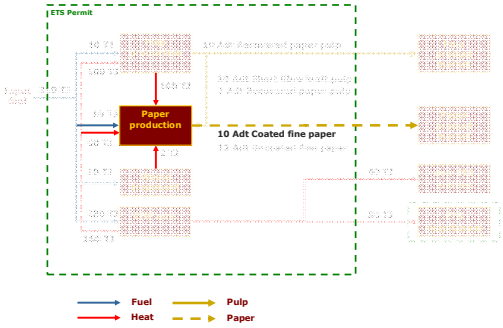
Recovered paper pulp



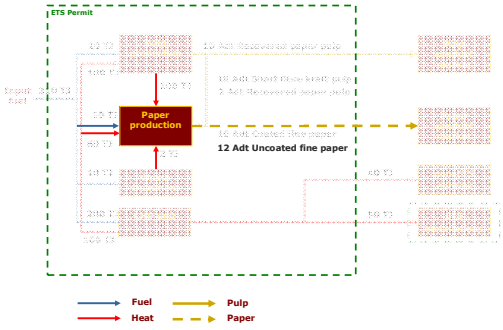
Define product benchmark sub-installations
Short fibre kraft pulp



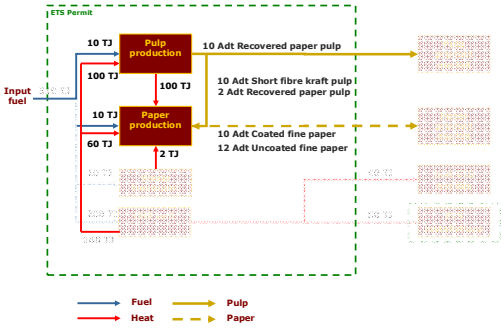
Define product benchmark sub-installations
Coated fine paper



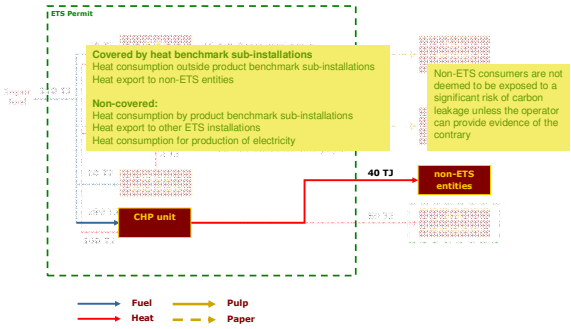
Define product benchmark sub-installations
Uncoated fine paper



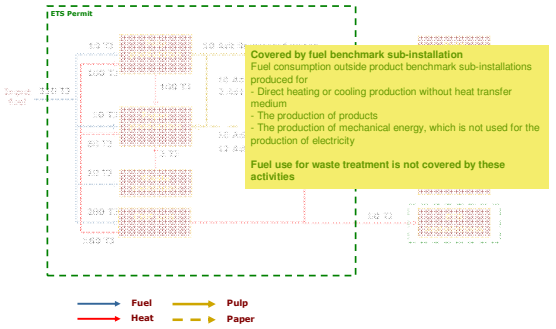
All product benchmark sub-installations



Define heat benchmark sub-installations
Not-exposed



Define fuel benchmark sub-installations
Not-exposed



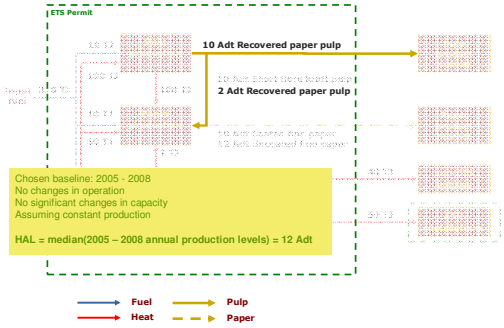
Attribute all (other) emissions, fuel, and measurable heat to sub-installations

- **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

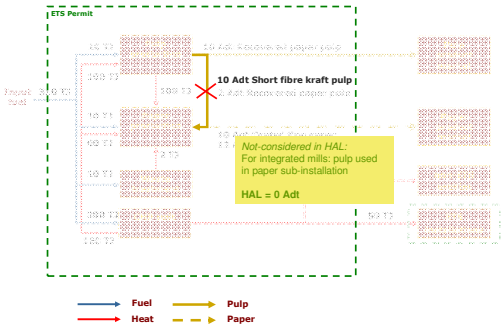
Nevertheless, to be able to check completeness and consistency (Art. 7.7), operators will:

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

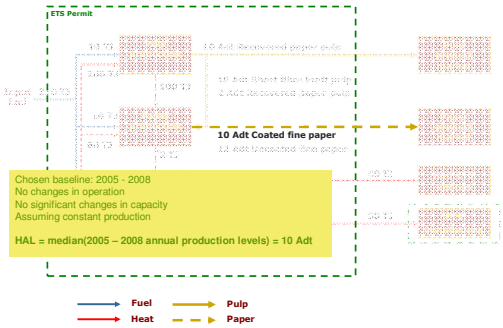
Determine historical activity levels
Recovered paper pulp sub-installation



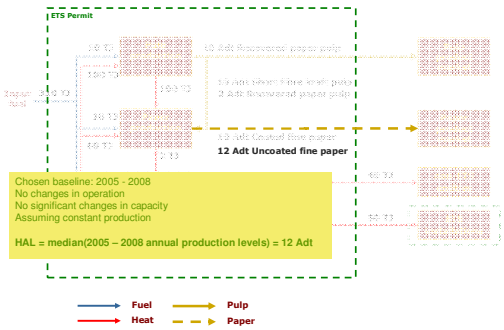
Determine historical activity levels
Short fibre kraft sub-installation



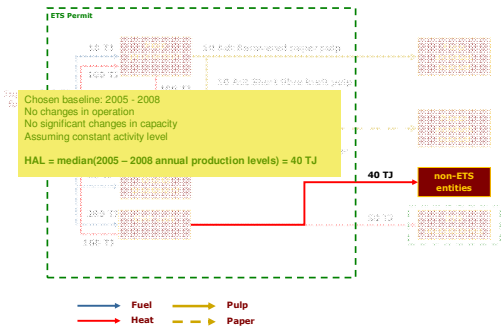
Determine historical activity levels
Coated fine paper sub-installation



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]*	x HAL_{Pulp} *[Adt]*
Short fibre kraft pulp sub-installation:	BM_P *[EUA/Adt]*	x HAL_{Pulp} *[Adt]*
Coated fine paper sub-installation:	BM_P *[EUA/Adt]*	x HAL_{Paper} *[Adt]*
Uncoated fine paper sub-installation:	BM_P *[EUA/Adt]*	x HAL_{Paper} *[Adt]*
Heat benchmark sub-installation not exposed:	BM_H *[EUA/TJ heat]*	x HAL_H *[TJ 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]*	x HAL_{Pulp} *[Adt]*	*x CLEF*
Short fibre kraft pulp sub-installation:	BM_P *[EUA/Adt]*	x HAL_{Pulp} *[Adt]*	*x CLEF*
Coated fine paper sub-installation:	BM_P *[EUA/Adt]*	x HAL_{Paper} *[Adt]*	*x CLEF*
Uncoated fine paper sub-installation:	BM_P *[EUA/Adt]*	x HAL_{Paper} *[Adt]*	*x CLEF*
Heat benchmark sub-installation not exposed:	BM_H *[EUA/TJ heat]*	x HAL_H *[TJ heat]*	*x 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:

Final allocation = $F_{instal,prel.}$ (k) x CSF (k)

$F_{instal,prel.}$(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:

Final allocation = $F_{instal.prel}$(k) – 0.0174 x $F_{instal.prel}$(2013) x (k – 2013)

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