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Number of product benchmarks, application of fall-back options

ECCP stakeholder group on emissions trading
Ad hoc meeting
Brussels, 6 November 2009

BM team

DG Environment
Unit C.2
European Commission

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Number of benchmarks Annex I activities

- Product benchmarks for each sector and sub sector, to the extent feasible
- In most cases several product benchmarks necessary to cover the emissions of a sector
- Decisions on benchmarks for individual products depend on:
  - Availability of clear product definition
  - Significance of difference in emission intensity (compared to similar products)
  - Share of emissions in the total emissions of a sector (80:20 principle)
  - Share of emissions in the total ETS emissions
  - Number of installations producing a certain product

Number of benchmarks - Additional benchmarks

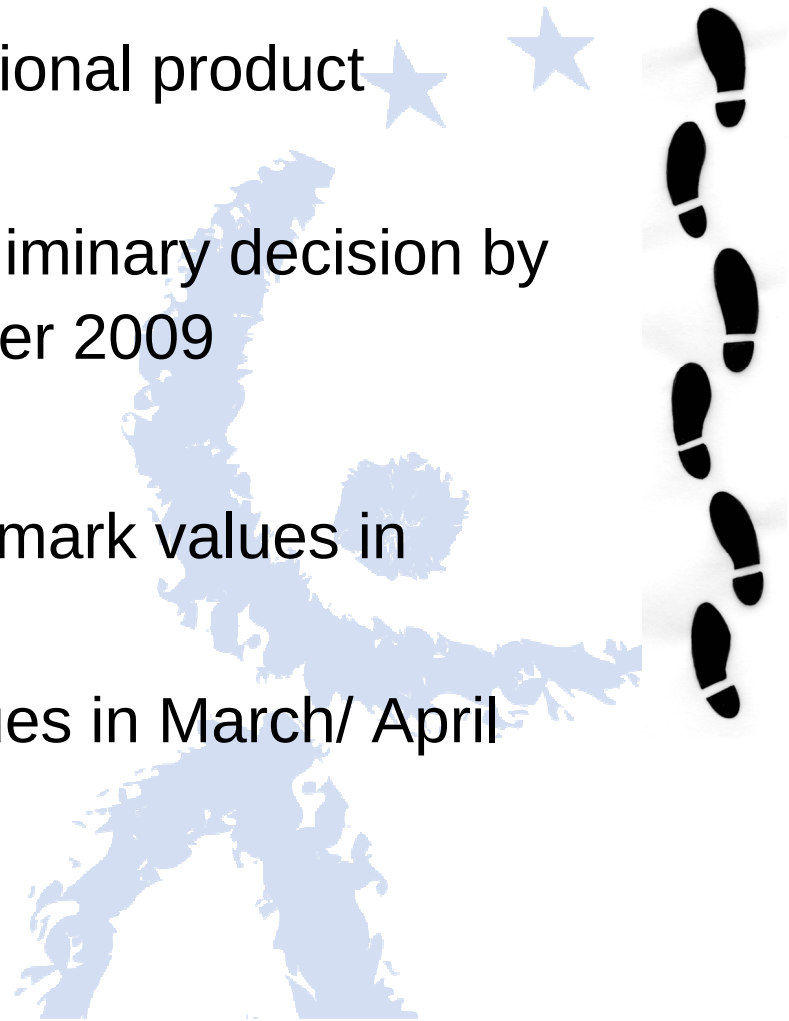
- The priority to develop product benchmarks must be given to the activities explicitly listed in Annex I, but…
- …additional product benchmarks could be considered
- Criteria for such decisions:
  - Homogeneity of product/ availability of clear product definition
  - Share of emissions compared to total ETS emissions/ emissions of activities listed in Annex I
  - Number of installations producing the product
  - Complexity of production process/ allocation complexity
  - Availability and quality of data

Additional product benchmarks – Data needs

- Definition of product and system boundaries
- GHG efficiency of all ETS installations producing the product (no exclusion of installations)
- Full accordance with methodology (e.g. treatment of heat and electricity)
- Verification of benchmark curve by third party

Additional product benchmarks – Next steps

- Stakeholders to propose additional product benchmarks by 30/11/2009
- Discussion with TWG and preliminary decision by Commission & MS in December 2009
- Data collection by 28/2/2010
- Proposal of preliminary benchmark values in March 2010
- Verification of benchmark values in March/ April 2010



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General formula for free allocation

- Allocation based on 4 methods
- Installations might receive free allowances based on several methods

$$F_{total} = F_P + F_H + F_F + F_G$$

F_{total}: total number of free allowances

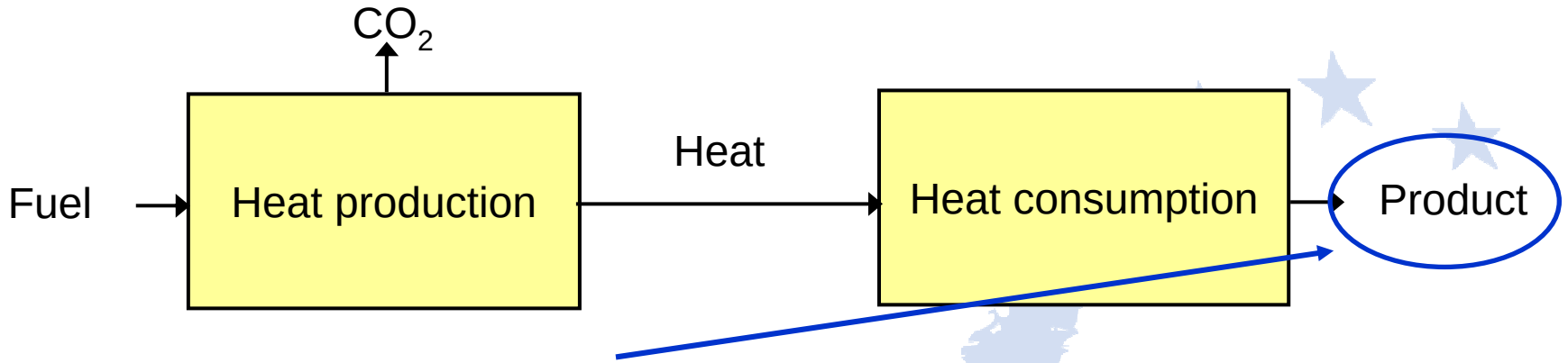
F_p: number of free allowances based on product benchmarks

F_H: number of free allowances based on the heat production benchmark

F_F: number of free allowances based on the fuel mix benchmark

F_G: number of free allowances based on grandfathering

Hierarchy of allocation methods



1. Product benchmark: all relevant emissions related to product output
2. Heat production benchmark: emissions related to energy output (if heat is measurable)
3. Fuel mix benchmark: emissions related to energy input (for non-measurable heat)
4. Grandfathering (for non-fuel related emissions, only if not included in product benchmark)

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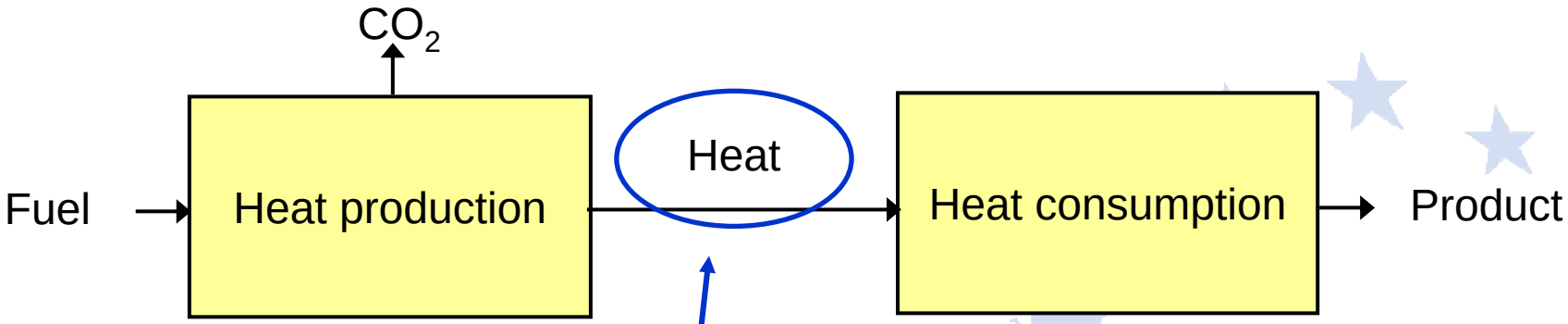

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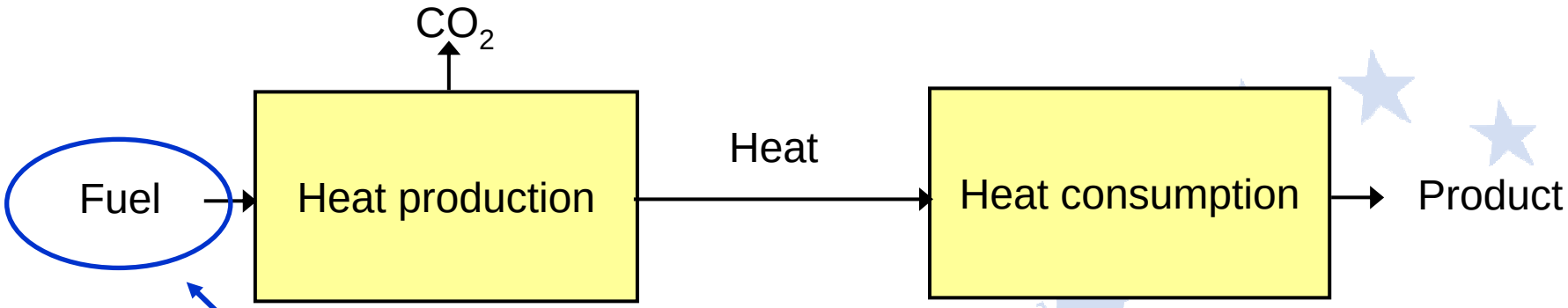

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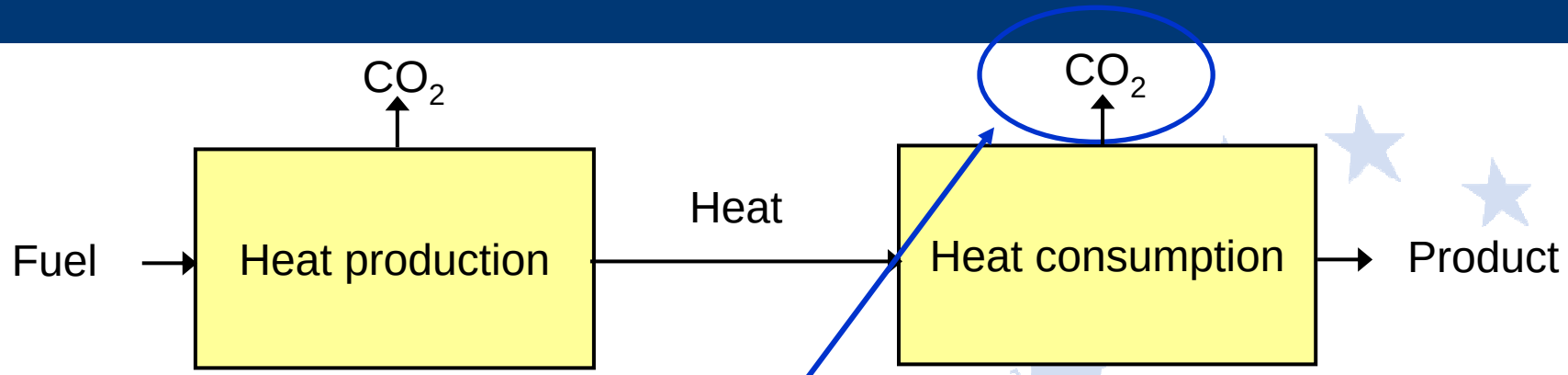

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Allocation based on product benchmark

$$F_p = \sum_{k=2013}^{2020} \left(\sum_{i=1}^{n} \left(BM_i \times HAL_i \times EF_{i,k} \times LF_{i,k} \right) \times CF_k \right)$$

F_P: number of free allowances based on product benchmarks

BM_H: product benchmark for product i

HAL_i: historical production of product i

$EF_{i,k}$: exposure factor of product i in year k

$LF_{i,k}$: linear reduction factor of product i in year k

CF_k: uniform cross-sectoral correction factor in year k

Heat production benchmark

- Benchmark value based on natural gas as reference fuel and an efficiency of at least 93%

$$F_H = \sum_{k=2013}^{2020} \left(\sum_{i=1}^{n} \left(BM_H \times HAL_i \times EF_{i,k} \times LF_{i,k} \right) \times CF_k \right)$$

F_H: number of free allowances based on the heat production benchmark

BM_H: heat-production benchmark

HAL_i: historical heat production used for production of product i

$EF_{i,k}$: exposure factor of product i in year k

$LF_{i,k}$: linear reduction factor of product i in year k

CF_k: uniform cross-sectoral correction factor in year k

Fuel mix benchmark

- Benchmark value based on natural gas as reference fuel

$$F_F = \sum_{k=2013}^{2020} \left(\sum_{i=1}^{n} \left(BM_F \times HAL_i \times EF_{i,k} \times LF_{i,k} \right) \times CF_k \right)$$

F_F: number of free allowances based on the fuel mix benchmark

BM_F: fuel mix benchmark

HAL_i: historical fuel consumption for production of product i

$EF_{i,k}$: exposure factor of product i in year k

$LF_{i,k}$: linear reduction factor of product i in year k

CF_k: uniform cross-sectoral correction factor in year k

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Grandfathering

$$F_G = \sum_{k=2013}^{2020} \left(\sum_{i=1}^{n} \left(HE_i \times EF_{i,k} \times LF_{i,k} \right) \times CF_k \right) \times IF$$

F_G: number of free allowances based on grandfathering

HE_i: historical emissions related to the production of product i

$EF_{i,k}$: exposure factor of product i in year k

$LF_{i,k}$: linear reduction factor of product i in year k

CF_k: uniform cross-sectoral correction factor in year k

IF: improvement factor

- Improvement factor to ensure that allocation based on grandfathering is treated similar to benchmark-based allocation (share of free allowances compared to the historical emissions)

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Thank you for your attention

Any comments, questions?