

Subgroup 3: Fuel Transportation and Use (solid biomass)

Participants:

Germany (lead)

Japan

the Netherlands

Sweden

USA

EU

EEA

IEA



contributions

The diagram consists of a vertical list of participant names on the left and the word 'contributions' in bold on the right. Five arrows originate from the right side of the list: one from 'Germany (lead)', one from 'the Netherlands', one from 'Sweden', one from 'USA', and one from 'EEA'. All five arrows point towards the word 'contributions'.

Transport Boxes 6 and 8

6. Transport of biomass

Biomass is transported from farm/plantation/forest to processing plant (Y or N)

If yes:

1. ___ The biomass transported in a different commodity type.

1a. ___ A description of intermediate processing steps is available.

1b. ___ Emissions associated with intermediate processing are accounted for (including, e.g., electricity used for processing).

2. ___ There is a multi-stage transport chain (e.g. truck to ship to truck or train).

2a. List all stages in the transport chain.

2b. Specify the stages for which stages emissions are accounted.

3. Transport from the production site to the use processing plant is dedicated to this purpose. (Y or N)

If Yes:

3a. ___ All transport emissions are included

If No:

3b. ___ A portion of transport emissions are allocated, and the allocation methodology is described.

4. ___ Return run of transport equipment is accounted for.

4a. During the return run, transport equipment is:

___ empty ___ otherwise utilized

8. Transport of fuel

Fuel is transported from processing plant to use site (Y or N)

If yes:

1. ___ The fuel transported in a different commodity type.

1a. ___ A description of intermediate processing steps is available.

1b. ___ Emissions associated with intermediate processing are accounted for (including, e.g., electricity used for processing).

2. ___ There is a multi-stage transport chain (e.g. truck to ship to truck or train).

2a. List all stages in the transport chain.

2b. Specify the stages for which emissions are accounted.

3. Transport from the processing plant to the use site is dedicated to this purpose. (Y or N)

If Yes:

3a. ___ All transport emissions are accounted for.

If No:

3b. ___ Transport emissions are pro-rated, and the methodology for pro-rating is described.

4. ___ Return run of transport equipment is accounted for.

4a. During the return run, transport equipment is:

___ empty ___ otherwise utilized

Box 9: Fuel Use

9. Fuel use

For solid biomass fuel:

Emissions from usage:

1. Identify the conversion/combustion technology used:

- 2a. List significant GHG emissions known to be specifically associated with the applied conversion/combustion technology (e.g., N₂O in CFB-type boilers, CH₄ in low level or small-scale techniques) _____
- 2b. ___ If 2a was left blank, evidence is provided to exclude the occurrence of such specific GHG emissions
3. ___ The biomass is tainted with fossil material (e.g. in case of waste sources)
 - 3a. ___ Analyses of degree and content of tainting are available.

For use occurring in a CHP facility:

1. The GHG assessment addresses:
___ electricity ___ heat (thermal energy) ___ both
If electricity is included:
2. ___ The electric efficiency of the use process is reported.
3. ___ The electricity is sent to a general grid.
4. ___ The reference system for GHG comparisons with other sources of electricity is reported. (e.g., national average grid, typical fossil fuel mix, etc.)
If heat is included:
5. ___ The thermal efficiency of the use process is reported.
6. ___ The reference system for GHG comparisons with other sources of heat is reported.

For use associated with a technology upgrade (e.g. pile burning to modern energy technology):

1. ___ Data on the replaced technology are available.

For biomass derived from waste products:

1. ___ Waste treatment processes are accounted for.
 2. ___ An alternative waste treatment exists
 - 2a. ___ Emissions comparisons are provided.
 3. ___ Waste is allowed to decay.
 - 3a. ___ Emissions from biomass decay (CH₄, N₂O) are accounted for.
-

For liquid fuel:

1. Kilometers per energy unit: _____
2. ___ Tail pipe emissions are accounted for.

Subgroup Note: need to add a blue box for gaseous fuels

Special results

Transport:

- **common point of view:** Long transport distances are perceived to be a crucial aspect.

- **LCA results tell:** transports provide minor contribution to GHG balances.
(in the range of actual ranges).

- **in Practice:** Transports cannot be neglected in order to
 - give evidence on their low influence (most cases)
 - identify (special) cases where their contribution is significant

Special results

Use:

- The “use” of biomass is the core process converting the carbon feedstock into the non-fossil CO₂ replacing fossil fuel and therefore fossil CO₂ emissions.
- **in Practice:** use phase is often neglected in biofuel GHG schemes
- **but:** use efficiency is significantly influencing the GHG performing (related to the reference system).

By the way:

Currently it is intensively debated in Europe whether use efficiency should be considered or not within the schemes