TYPE III - OTHER PROJECT ACTIVITIES

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III.J. Avoidance of fossil fuel combustion for carbon dioxide production to be used as raw material for industrial processes

Technology/measure

1. This project category comprises the avoidance of fossil fuel combustion for carbon dioxide production to be used as raw material in industrial processes, provided that the used CO_2 is emitted to the atmosphere at some point in time. The project activity shall replace the carbon dioxide produced by fossil fuel combustion with carbon dioxide captured from a renewable biomass source. Measures shall be a single project or bundle of several projects that result in total emission reduction not exceeding 15 kilo tons of carbon dioxide equivalent annually during every year of the crediting period.

Boundary

2. The project boundary is the physical, geographical site of the carbon dioxide capture process and the industrial facilities at which it is converted to the final product to be used in industrial processes.

Baseline

3. The emission baseline is the current fossil fuel based carbon dioxide production of the facility expressed as amount of CO_2 per unit of output (e.g. kg CO_2/Kg final product). IPCC default values for emission coefficients may be used in order to establish a previous indicator of kg or m^3 of fuel required per kg of final product.

4. The baseline can be calculated using the formulae below:

$$BEy = P * I * F$$

where:

BEy: Emission baseline (CO2e emissions in absence of the project activity)
P: Annual production (mass units of final product, e.g. Ton final product per year)
I: Historical index that shows the relation between mass or volume units of fossil fuel used for carbon dioxide production and mass units of final product (e.g. m^3 fossil fuel per ton final product per year).
F: IPCC CO2e emission factor for the fossil fuel (e.g. Ton CO2e per m3 fossil fuel).
Project proponents must provide 5 years of data, which will be used to determine the value of 'I' in most recent historical base years.

Project Activity Direct Emissions

5. All the CO_2 used as raw material in the industrial process, is set free during the use of the product (for example CO_2 used in beverages). This means that the CO_2 is stored in the product before being released to the atmosphere. When the CO_2 source in the production of the product is biomass, then project emissions will be zero, consequently leading to greenhouse gas emission reductions.

Leakage

6. Biomass leakage calculation is required.

Monitoring

7. The emission reduction achieved by the project activity will be the difference between the baseline emissions and the leakage.

8. The amount of the final product produced shall be monitored on a monthly basis and the annual production thus determined. Leakage effects due to the use and transportation of the renewable biomass shall also be monitored.

9. If during the crediting period the emission reduction achieved is higher than 15 kilotons of CO2e in a particular year, for this particular year the emission reductions are capped at 15 kilotons CO2e.