Agenda item 4.1 (c) (i)
Paragraph 21 of the annotated agenda

AMS-III.xx: Trip avoidance through equipment improvement of freight transport

CDM EB 104

Bonn, Germany, 9 to 12 September 2019

Background

- New methodology (SSC-NM103 – “Trip avoidance through equipment improvement of cargo transport”) was submitted on **31 December 2018** by Atmosphere Alternative SAS and CAIA Ingeniería SAS.

Scope

- The methodology is applicable for project activities that results in reduced fuel usage and GHG emissions by **improving the freight transportation equipment.**

Applicability conditions

- Design and implementation of new technologies for freight **transportation equipment** used to load and store the freight, such as **use of lighter materials in the equipment structure**;

Examples of freight transportation equipment are trailers (connected to tractors or motorcycles), rigid trucks, cargo tricycles and vans.

Applicability conditions (cont)

- Does not cover **calculation of ERs** from:
  - fuel switching;
  - improvement in fuel efficiency; and
  - changing the engine of the vehicle hauling the freight;

- Not applicable for **modal shift**;

Applicability conditions (cont)

- Vehicle fleet:
  - Centrally controlled;
  - Use different energy sources and engine types

- Transportation route:
  - Transported to **a single destination**;
  - Encompass **multiple routes**, as long as the origin and destination of each route are the same

Project boundary, baseline scenario and additionality

- **Project boundary:**
  - Physical and geographical location of the project vehicles;
  - In the specific case of electric vehicles: all power plants/units connected to the electric system that supplies electricity to the project vehicles.

- **Baseline scenario:**
  - Freight transported by road with vehicles that do not incorporate the measures that are part of the project activity, i.e. heavier vehicles that are carrying less freight per km travelled;

- **Additionality:**
  - Application of the “TOOL21: Demonstration of additionality of small-scale project activities”.

Emission Reductions

- Based on:
  - **Amount of freight transported**;
    - Monitored yearly based on operational data;
  - The difference between the **distance that was travelled by the vehicle to deliver a tonne of freight (in km/t)** in the baseline and the project;
    - Distance travelled / Freight transported
      - Project: determined yearly;
      - Baseline: determined based on any of the three options: (a) historical data, (b) control group or (c) baseline campaign;
  - The **CO_2 emission factor per km**
    - Determined separately for each vehicle category;

Emission Reductions (cont)

- Additional provisions:
  - Correction applied when the **length of the routes are different** between the baseline and the project;
  - Determination of the specific distance that was travelled by the vehicle to deliver a tonne of freight in the **baseline**:
    - Baseline and project vehicles fleets shall:
      - Belong to the **same category**;
      - Transport the **same type of freight**;
    - Multiple types of freight: the annual average ratio of the different freight types to the total freight **shall be the same** between the baseline and the project;
    - Percentage of useful loading capacity of the project **shall be the same or lower** than the baseline;

Monitored parameters

Parameters	Measurement procedures
Quantity of freight type transported (tons) ($FT_{f,i,x,r,y}$)	• Operational data;
Total trip distance travelled to transport the freight by the historical/control group vehicles (km) ($D_{f,i,x,r,BL}$)	• Historical group or baseline campaign: remains fixed; • Control group: GPS, odometer, contract-defined route distance (trips per route are monitored)
Total annual freight transported by the historical/control group (tons) ($FT_{f,i,x,r,BL}$)	• Historical group or baseline campaign: remains fixed; • Control group: operational data
Total trip distance travelled to transport the freight (km) ($D_{f,i,x,r,y}$)	• GPS, odometer, contract-defined route distance (trips per route are monitored)

Monitored parameters

Parameters	Measurement procedures
Length of route (km) ($D_{r,y}$)	• GPS, odometer reading, contract-defined route distance; • Cross-checked against maps.
Length of route in the baseline (km) ($D_{r,BL}$)	• GPS, odometer reading, contract-defined route distance; • Determined once.
Specific fuel consumption (L/km or g/km) ($SFC_{i,x,y}$)	• Monitored fuel consumption and distance travelled; • Checked against national transport sector data and/or manufacturer information for consistency
Specific electricity consumption (kWh/km) ($SEC_{i,y}$)	• Monitored electricity consumed and distance travelled; • Checked against national transport sector data and/or manufacturer information for consistency

Monitored parameters

Parameters	Measurement procedures
CO_2 emission factor of electricity consumed (tCO_2/kWh) **($EF_{elect,y}$)**	• As per the "TOOL05 : Methodological tool: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation"
Net calorific value of the fuel (TJ/Gg) ($NCV_{x,y}$) **CO_2 emission factor of the fuel (tCO_2/TJ) ($EF_{CO2,x,y}$)** **Density the fuel type (ton/L or ton/m3) ($\rho_{x,y}$)**	• As per the provisions from the "TOOL03 : Tool to calculate project or leakage CO2 emissions from fossil fuel combustion".

Impacts

The new methodology, if approved, is expected to allow for development of new CDM projects in the transport sector.

Recommendation to the Board

The MP recommends that the Board to approve the methodology.

Thank You