A Synthesis of Carbon Accounting Tools with Applicability to the Trucking Industry

Background:

As shippers seek to quantify the level of carbon emissions associated with their supply chains, carbon accounting has become an emerging issue for trucking companies

Research Objectives:

- Identify current carbon emission models with application to the trucking industry
- Identify areas needing further guidance

Research Tasks:

- Literature review of existing research
- Identification and assessment of carbon emission models and formulas
- Interviews with environmental assessment and reporting organizations

Research Findings:

- EPA's SmartWay Partnership easily surpasses other reporting organizations in terms of trucking industry participation
- Although most reporting tools are similar, there are subtle differences which can impact the reported level of emissions

SCOPE 1: DIRECT EMISSIONS

Transportation Related:
Mobile Fuel Combustion
(Trucks, Ancillary Equipment)
Refrigerant Usage
(Air Conditioners, Refrigeration Systems)

Facility Related:
Mobile Fuel Combustion
(Forklifts, Yard Tractors)
Stationary Fuel Combustion
(Furnaces, Boilers, etc.)
Refrigerant Usage
(Air Conditioners, Refrigeration Systems)

SCOPE 2: INDIRECT EMISSIONS

Facility Related:
Electricity Usage
(Offices, Warehouse, etc.)

SCOPE 3: OPTIONAL INDIRECT EMISSIONS

Upstream & Downstream Activities:
(Employee Activities, Related Emissions from the Purchase or Sale of Goods, etc.)

Potential sources of greenhouse gas emissions from a trucking operation

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