THE BUSINESS CASE OF CALCULATING LOGISTICS EMISSIONS

VRTO
Summary

Calculating and reporting leads to a decrease in greenhouse gas (GHG) emitted per container despite an increase in total containers handled.

VRTO makes an excellent case for business to calculate and report their logistics emissions. After investing in new electrically-powered terminal equipment, the greenhouse gas (GHG) emitted per container has decreased despite the increase in total containers handled. VRTO was able to backtrack these business decisions by measuring their greenhouse gas (GHG) emissions. Measuring and reporting their emissions, allows VRTO to set a baseline for greenhouse gas (GHG) emissions for the coming years and base future decisions on actual greenhouse gas (GHG) emissions data.

The shift from fossil fuels (Scope 1) to electricity (Scope 2) is represented in Figure 2. Total GHG emissions have still increased in spite of the improved efficiency per container handled because, as we saw in Figure 1, the total number containers handled increased significantly. However, the increase in emissions is much less than the increase in number of containers handled. This emphasizes the challenge of decreasing total emissions to meet future targets while freight traffic volumes increase. Nonetheless, the data shows that progress can and already has been made in this regard through electrification. The challenge becomes the extent to which electrification can be expanded and what other measures can be deployed.

Measuring GHG emissions allows VRTO members to track their efficiency over time and to ‘check’ the improvement decisions they made. VRTO members will continue to look for further opportunities to improve their efficiency while responding to market demands.

Results

During the period from 2008 until 2014, the total containers handled grew by 43%. Increasing world trade puts pressure on container terminal to handle more cargo while remaining efficient. Figure 1 shows that the VRTO members have handled more containers, but the greenhouse gas (GHG) emissions per container have dropped by 17.85%. VRTO’s members moved from using fossil fuels to power their operations to using of electric powered operations, which explains the decrease of emissions per container.

The GLEC Framework for Logistics Emissions Methodologies allows companies to consistently calculate their GHG footprint across the global supply chain. Business with credible data can take better decisions to improve efficiency and reduce emissions and costs.

1. Backtrack and measure if the business decisions made in the past were successful
   - By comparing emissions it was concluded that newly installed electric-based terminal equipment was more efficient than fossil fuel terminal equipment
   - Through measuring VRTO was able to investigate if their switch from fossil fuels to electricity was a success

2. Set a greenhouse gas (GHG) emissions baseline for the coming years
   Using the data VRTO can set a more accurate and realistic target for the future.

3. Base future decision making on actual greenhouse gas (GHG) emissions data
   Using the actual greenhouse gas (GHG) emissions data VRTO can make better informed business decisions on emissions- and cost reductions.

About

VRTO
The Rotterdam Terminal Operators’ Association (VRTO) objective is to represent the interest of their members. The VRTO seeks to achieve this by providing the members with council and support, cooperating with other associations of entrepreneurs, making known its views to organizations or individuals on issues affecting the interests of the port of Rotterdam and her members and representation in committees dealing with those topics. The members are (legal) persons in the port of Rotterdam within the stevedoring companies. They undertake to comply with all decisions of the VRTO.

Smart Freight Centre and the Global Logistics Emissions Council
Smart Freight Centre (SFC) is a global non-profit organization leading the way to a more efficient and environmentally sustainable global freight sector. SFC works with key initiatives and stakeholders to empower companies to calculate and reduce emissions.

SFC established the Global Logistics Emissions Council (GLEC), a voluntary partnership of companies, industry associations and programs, and backed by leading experts and other stakeholders. Together, we developed the GLEC Framework for Logistics Emissions Methodologies that allows companies to consistently calculate their GHG footprint across the global supply chain.

Business with credible data can take better decisions to improve efficiency and reduce emissions and costs.