CO2e Calculation Methodology

Data Provider

GVI Logistics uses a reputable third-party application to calculate estimated distance travelled and greenhouse gas emissions provided as a CO2 equivalent (CO2e) measurement. This licensed application is compliant with the Global Logistics Emissions Council Framework[1] and the methodology is accredited by the Smart Freight Centre[2].

Calculation Factors

- Routing Legs
  - Origin/Destination
  - Vessel/Voyage
  - Vessel IMO
  - Flight #
  - Transport Mode
- Weight
- Container counts
- Container sizes and types, the impacts of refrigerated containers are considered
- ETD/ETA

Distance Calculation Method

- Air travel distances are calculated using the Great Circle method.
- Ocean travel distances are calculated from routes based on vessel tracking systems.
- Rail travel distances are calculated using network distances based on OpenRail Map[3].

Measurement Units

- CO2e figure provided is a Well-To-Wheel (WTW) measurement and provided in kilograms.
- Distances are provided in kilometres and measured from port to port, considering each leg of a route.

Limitations

- CO2e figures are always estimated due to the many variables involved.
- Packaging and special handling requirements are not considered, e.g. shipments requiring dry ice.
- Calculations allow for port transport by air, ocean & rail; road transport is not currently considered.
- CO2e figures provided do not allow for any CO2e off-setting that carriers may make.
- This information is supplied under our terms of trade, Terms of Trade | GVI Logistics

For any questions please contact greenteam@gvi.co.nz.

[1] Global Logistics Emissions Council - https://www.smartfreightcentre.org/en/our-programs/global-logistics-emissions-council/
[2] Smart Freight Centre - https://www.smartfreightcentre.org/en/
[3] OpenRail Map - https://www.openrailwaymap.org/