Product Carbon Footprint

PowerEdge T560

Report produced September 2023

At Dell Technologies, we believe in a future where technology drives progress to address some of the biggest environmental challenges we face today. We're working to reduce our impact on the planet throughout our business and products. Reducing the carbon footprint of our products is critical to enabling our customers to achieve their own sustainability goals. Therefore, it is important to understand the application and limitation of this carbon data:

- A **carbon footprint** is the total amount of greenhouse gases released into the atmosphere by a given activity. The larger the footprint the larger the impact on the environment.
- A **product carbon footprint** is a measure of greenhouse gas emissions across the life cycle of a product from the extraction of raw materials, manufacturing, and distribution through to its use and end of life.

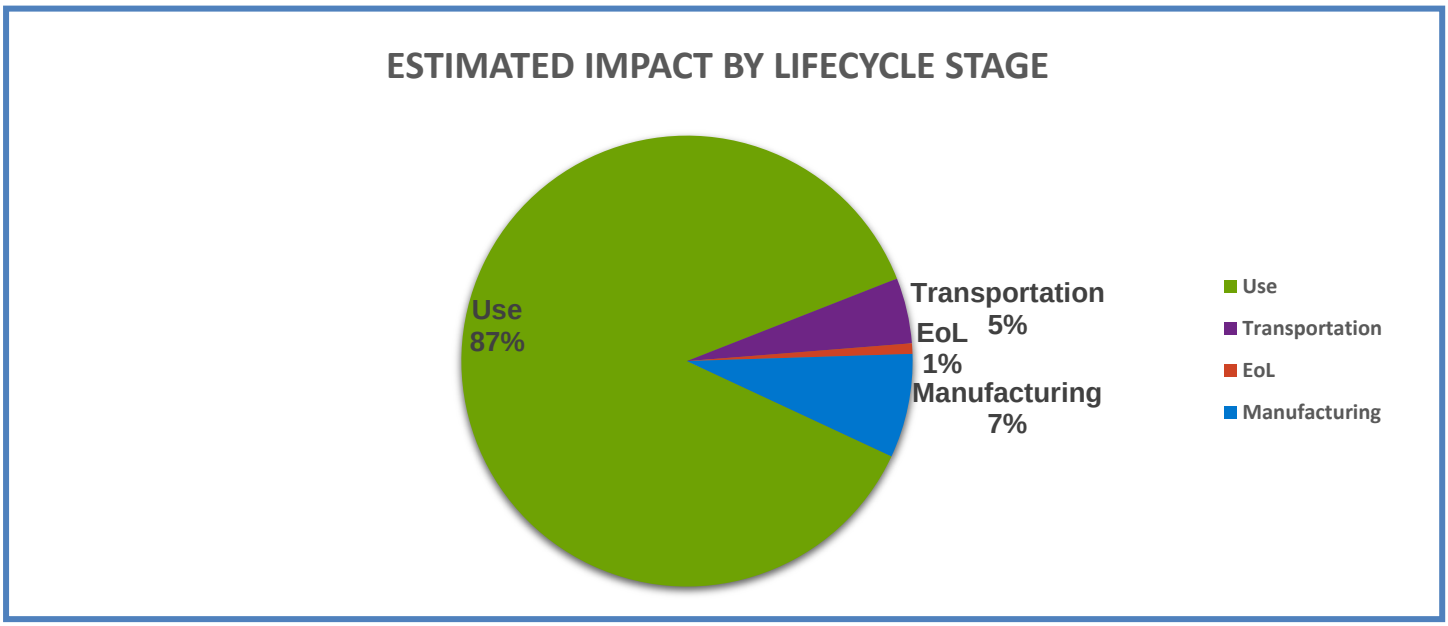
To calculate PCFs Dell uses PAIA (*Product Attribute to Impact Algorithm)*, a streamlined Life-Cycle Assessment tool developed by MIT's Materials System Laboratory. PAIA takes into consideration important attributes of the product which can be correlated to activities like manufacturing, transportation, etc., to calculate the product's carbon footprint.

Mean
5,989
+/- 3,189
$kgCO_2e$

Calculating an exact product carbon footprint is very challenging due to the complexity and variability in the data. The same product will have a different carbon footprint depending on myriad variables, including the geographical location of where the device is used, the configuration of the hardware, how long it is used and how it is retired. For this product, the estimated carbon footprint is 3,109 kg of CO2e at the 5th percentile and 12,583 kg of CO2e at the 95th percentile.

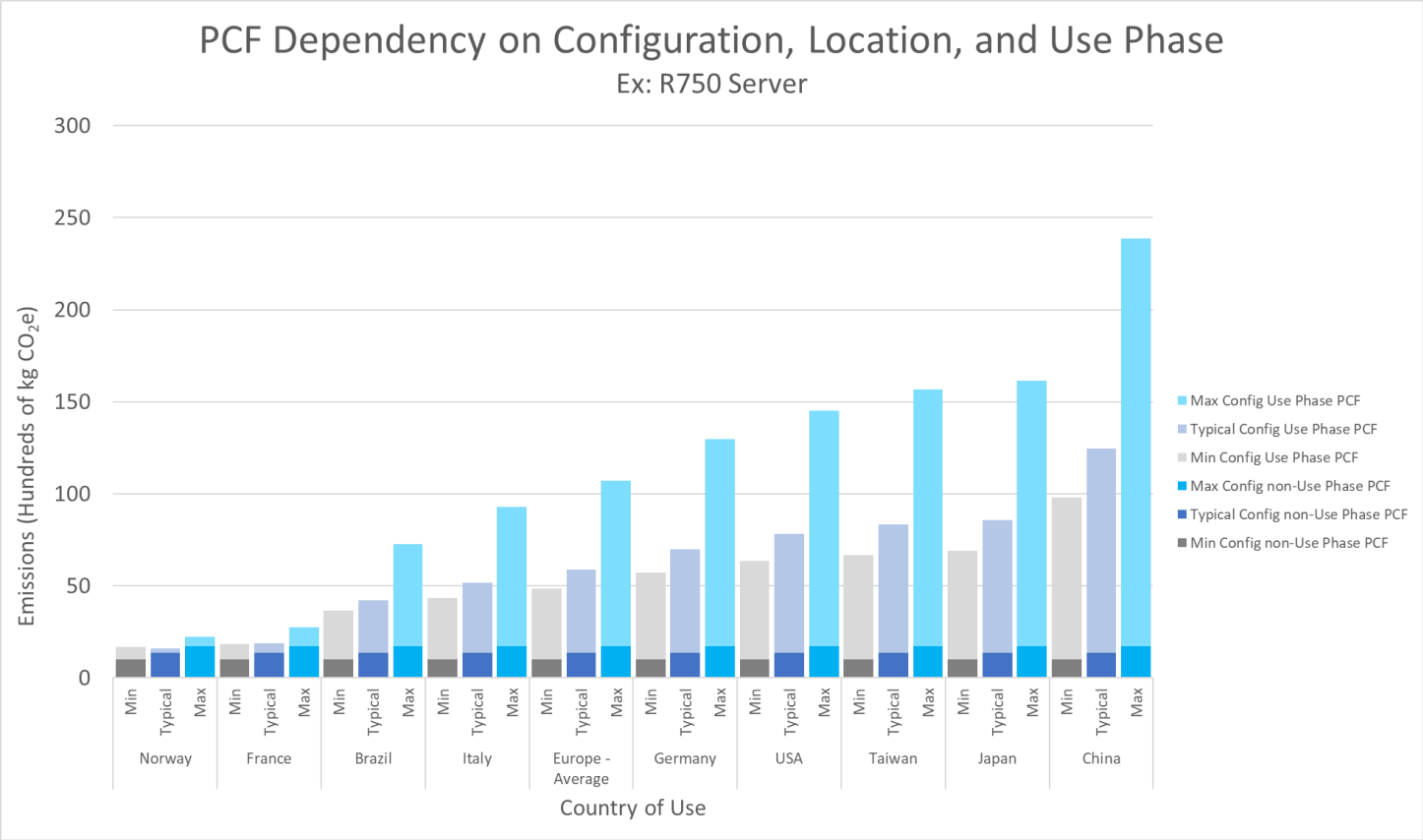
Assumptions for calculating PCF

Product Weight	43.2 kg	**Server Type**	Tower	**Assembly Location**	Asia
Product Lifetime	4 years	**Use Location**	Europe	**Energy Demand (Yearly TEC)** [1]	2584 kWh
HDD/SSD Quantity	2	**DRAM Capacity**	32GB	**CPU Quantity**	2
Fan Count	3	**PSU Count**	2	**Core Count per CPU**	10



Illustrative chart to depict product carbon footprint by geographic location

As depicted in the graph below, the emissions for the manufacturing, transport and end-of-life phases are minor and remain static no matter where the configuration is being used. However, a variety of factors including the geographic location's energy mix and the specific hardware configuration can have a significant impact on the use phase of the product carbon footprint. This makes it difficult to assign a singular value across multiple configurations of a single Dell Technology product that could be used globally.



Dell Technologies strives to provide innovative solutions that protect our planet and people as well as provide enhanced performance so users can consolidate infrastructure to reduce space requirements and power consumption without affecting performance. For more information on our initiatives please visit Dell.com/Sustainability

Disclaimer: This PCF was calculated using the PAIA model, version 1.3.2, copyright by the ICT Benchmarking collaboration, which includes the Massachusetts Institute of Technology's Materials Systems Laboratory and partners. Results shown here are subject to change as the tool is updated. The Use component of the PCF assumes a PUE of 1.0. If your Data Center PUE differs from 1.0, the Use component may be ratiometrically scaled up from a PUE of 1.0.

1 Typical ENERGY STAR power computation used to derive this value. "TEC is the Total Energy Consumption