



Sample Avoided Emissions Report

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Introduction

EcoTech is a forward-thinking company dedicated to providing innovative environmental technologies. This report explores the carbon dioxide equivalent (CO₂e) impact that can be avoided using EcoTech's laptop compared to a business-as-usual reference scenario. In year 5 of the avoided emissions scenario, CO₂e emissions are reduced by 87,000 tons of CO₂e, or 35.89%, compared to a traditional laptop.

Methodology

- This study determined the relevant manufacturing life cycle stages using guidance from the International Organization for Standardization (ISO), specifically ISO 14040 and ISO 14044.
- Once the goal and scope from cradle-to-grave were finalized, data input forms based on ISO 14040 and ISO 14044 standards were created.

ISO Compliant with
14040 14044 14064 14067



Environmental Footprint
EF V3.0 no LT



Reference Scenario - Business-as-usual Laptop

The section below provides a breakdown of the business-as-usual laptop used for calculating avoided emissions.

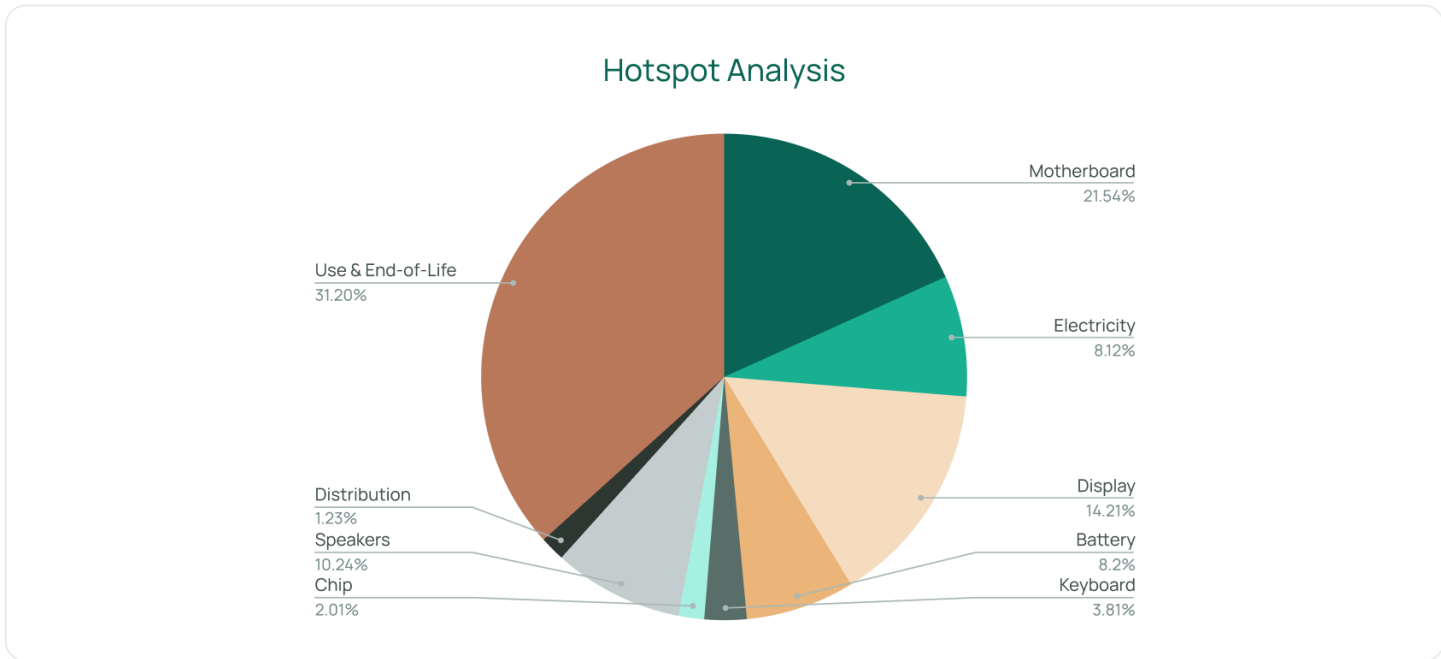


Figure 1. Hotspot Analysis of Business-as-usual Laptop (kg CO₂e)

Table 2 provides an in-depth breakdown of the cradle-to-grave emissions for the reference scenario.

Table 1. CO₂e Breakdown of Business-as-usual Laptop

Activity	Climate Change Impact (kg CO ₂ e)	Percentage of Total Emissions
Motherboard	6.52	21.54%
Electricity	2.46	8.12%
Display	4.30	14.21%
Battery	2.48	8.2%
Keyboard	1.15	3.81%
Chip	0.61	2.01%
Speakers	3.09	10.24%

Distribution	0.21	1.23%
Use & End-of-Life	9.44	31.20%
Total (kg CO ₂ e)	30.26	100%

Justification for Reference Scenarios

As per the World Business Council for Sustainable Development (WBCSD) Guidance on Avoided Emissions, if the solution replaces a pre-existing demand, improves upon old technologies, and is not imposed by regulation, the reference scenarios should be dictated by continued use of the same solution before improvement. To follow this logic, Business-as-usual Laptop is used for the reference scenario.

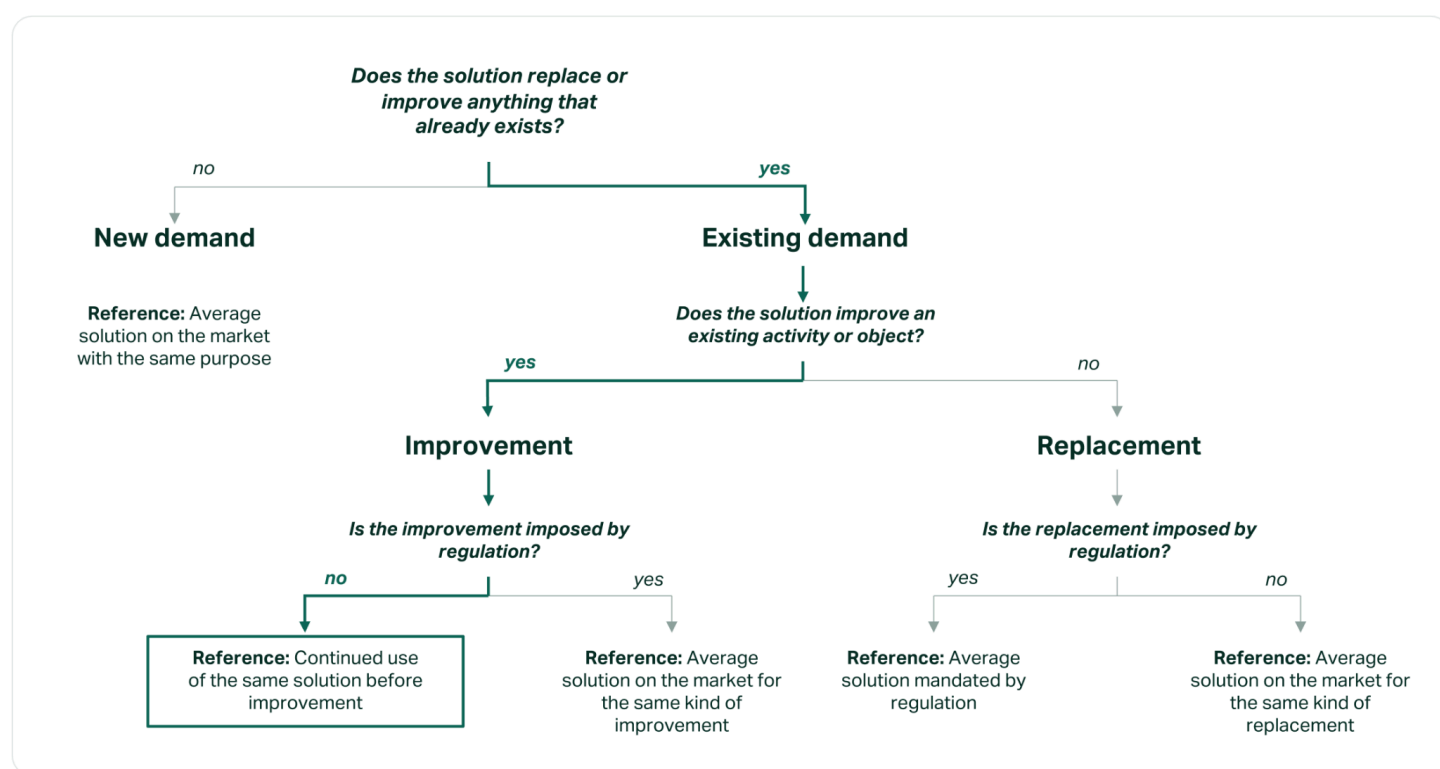


Figure 2. WBCSD Guidance on Avoided Emissions

Solution - EcoTech's Laptop

The cradle-to-grave carbon impact of EcoTech's Laptop is 20.46 kg CO₂e per kg. The impact from the use phase and end-of-life is substantial, at 33.57%. Table 3 below shows the CO₂e breakdown of EcoTech's Laptop.

Table 2. CO₂e Breakdown of EcoTech's Laptop

Activity	Climate Change Impact (kg CO ₂ e)	Percentage of Total Emissions
Resource Extraction & Raw Material Sourcing	5.14	25.10%
Production	3.09	15.13%
Distribution	5.36	26.20%
Use and End-of-Life	6.87	33.57%
Total (kg CO ₂ e)	20.46	100%

Key Findings

The primary objective of this assessment was to estimate the CO₂e emissions avoided from EcoTech's Laptop. The section below contains the cradle-to-grave carbon impact of EcoTech's Laptop, offering insights into the breakdown, per life cycle stage.

Avoided Emissions Assessment

Using EcoTech's laptop, compared to a business-as-usual laptop, results in an emission reduction of 198,108 kg CO₂e. Table 3 below summarizes the year-over-year savings that could be achieved using EcoTech's laptop.

Table 3. Avoided Emissions Scenario

Business-as-usual Emissions (kg CO ₂ e per unit of x)		EcoTech Emissions (kg CO ₂ e per unit of x)	
30.26		20.46	
Year	Business-as-usual (kg CO ₂ e)	EcoTech (kg CO ₂ e)	Emissions Avoided (kg CO ₂ e)
2024	150,000	129,000	21,000
2025	235,317	192,960	42,357
2026	252,705	212,272	40,433
2027	270,093	233,090	37,003
2028	304,869	247,554	57,315
Total Emissions Avoided (kg CO ₂ e)			198,108

● Business-as-usual ● EcoTech

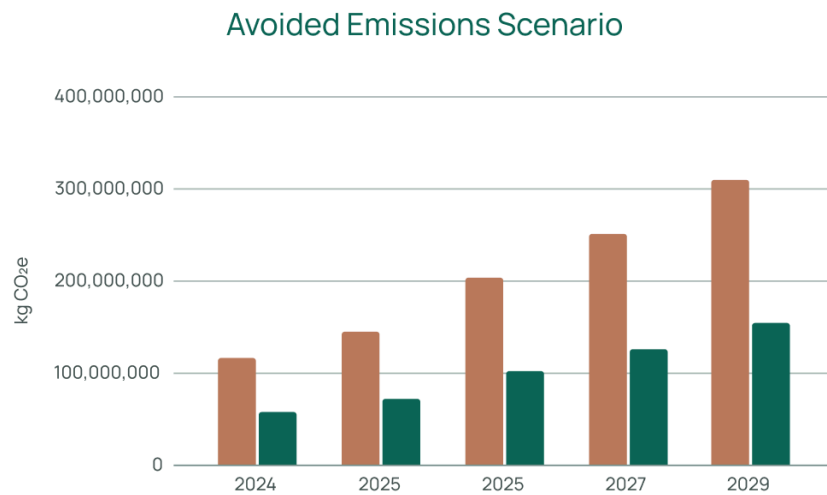


Figure 3. Avoided Emissions Scenario

Conclusion

This avoided emissions statement provides a comprehensive breakdown of the CO₂e emission reductions, which can be achieved through EcoTech's Laptop. Avoided emissions have been calculated for a 5 year period. In year 5 of the avoided emissions scenario, CO₂e emissions are reduced by 87,000 tons of CO₂e, or 35.89%. By leveraging EcoTech's solution, companies can play a critical role in reducing their carbon footprint and promoting environmental stewardship.



Thank you, EcoTech!

Please contact us if you have any questions.

Emission Quantifications for “EcoTech Sample Report”

Prepared For: EcoTech

Prepared By: Your Arbor Inc. (“Arbor”)

Description

The carbon emissions for this sample report were calculated using the Arbor Platform, a GRI-certified software. All calculations and outputs performed through the Arbor Platform follow GRI standards and guidelines set by the [Greenhouse Gas Protocol \(GHG\) Protocol](#) and the International Organization for Standardization (ISO), specifically [ISO 14040](#), and [ISO 14044](#).

All primary data inputs used were collected and confirmed by EcoTech. Based on both these primary data inputs and Arbor’s proprietary secondary data, Arbor calculated the carbon impact in carbon dioxide equivalents (CO₂e) for the following asset:

- EcoTech Sample Report

GHG Emissions

100.03 kg CO₂e



Emission Quantification Statement for License 123

Results were generated from data collected between 10/10/2023 and 10/10/2024.



Emissions Quantification Statement

License ID: 123

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