Heylo

CO2 Efficiency Project

March 2024

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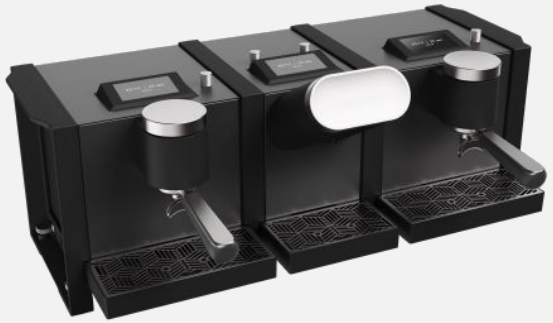
Agenda



1. Methodology
2. FWD Coffee Test
3. Heylo Test
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5. Heylo Test: Drink Metrics
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Methodology

Carbon Footprint Methodology

GREENHOUSE GAS PROTOCOL

The GHG Protocol is the world's most widely used greenhouse gas accounting standard

SCOPE 1

Scope 1 includes all carbon emissions that can be directly managed by the accounting corporation (direct carbon emissions). This includes emissions generated by the combustion of fossil fuels (mobile and stationary), chemical and physical processes, and the use of refrigeration and air conditioning equipment.

SCOPE 2

Scope 2 represents indirect carbon emissions from purchased electricity, steam, district heating and cooling. All emissions that are caused by fossil fuel combustion by external energy providers are listed here. The identification in a separate category avoids double counting when comparing CO2eq emissions from different companies.

SCOPE 3

All remaining carbon emissions that cannot be directly managed by the company belong to Scope 3 (other indirect carbon emissions). This includes all carbon emissions that are related to products and services used or processed by the accounting corporation. Carbon emissions that are associated with the use of sold products and services are also included.

Results

Specialty Coffee Shop Test 7th February 2024

Main Results

Energy consumption for the day

19.87kWh

Emissions for the day

4.11kgCO2e

Scope 3 emissions for the day

0.99kgCO2e

Why are there 2 emission values?

Emissions are divided into 3 Scopes (see Slide 3), electricity emissions are mainly attributed to Scope 2 but emissions related to extraction, refining and transportation of primary fuels before their use in the generation of electricity fall into Scope 3 emissions. In this case, total emissions per day will therefore amount to 5.10 kg CO2e (4.11+0.99).

Results

Specialty Coffee Shop Test 7th February 2024

Secondary Metrics

Average energy consumption per standard drink
97.89Wh

Average emissions per standard drink
20.27gCO2e

Average Scope 3 emissions per standard drink
4.88gCO2e

Peak power consumption
5.28kW

Average energy consumption per hour
827.96Wh

Average emissions per hour
171.45gCO2e

Average Scope 3 emissions per hour
41.29gCO2e

What is a Standard Drink?

A standard drink is defined as a double shot with 214ml of milk based on cafe sales data.

Results

Heylo Test 13th March 2024

Main Results

Energy consumption for the day

6.07kWh

Emissions for the day

1.26kgCO2e

Scope 3 emissions for the day

0.30kgCO2e

69.5% Decrease compared to standard dual boiler machine used at specialty coffee shop in London

Results

Heylo Test 13th March 2024

Secondary Metrics

Average energy consumption per standard drink
29.89Wh

Average emissions per standard drink
6.19gCO2e

Average Scope 3 emissions per standard drink
1.49gCO2e

Peak power consumption
7.00kW

Average energy consumption per hour
252.79Wh

Average emissions per hour
52.35gCO2e

Average Scope 3 emissions per hour
12.61gCO2e

32.5% Increase compared to standard dual boiler machine used at specialty coffee shop in London

69.5% Decrease compared to standard dual boiler machine used at specialty coffee shop in London

Results

Heylo Test 13th March 2024

Module Metrics

Coffee Module 1

Energy consumption for the day

1,645.97Wh

Emissions for the day

340.84gCO2e

Scope 3 emissions for the day

82.08gCO2e

Milk Module

Energy consumption for the day

2,886.20Wh

Emissions for the day

597.66gCO2e

Scope 3 emissions for the day

143.93gCO2e

Coffee Module 2

Energy consumption for the day

1,534.41Wh

Emissions for the day

317.74gCO2e

Scope 3 emissions for the day

76.52gCO2e

Results

Heylo Test 13th March 2024

Drink Metrics

Average energy consumption per double shot
15.67Wh

Average emissions per double shot
3.24gCO2e

Average Scope 3 emissions per double shot
0.78gCO2e

Average energy use per dose of milk
14.22Wh

Average emissions per dose of milk
2.94gCO2e

Average Scope 3 emissions per dose of milk
0.71gCO2e

What is a dose of milk?

A dose of milk is calculated from cafe sales data, it represents 214ml of milk.

Results

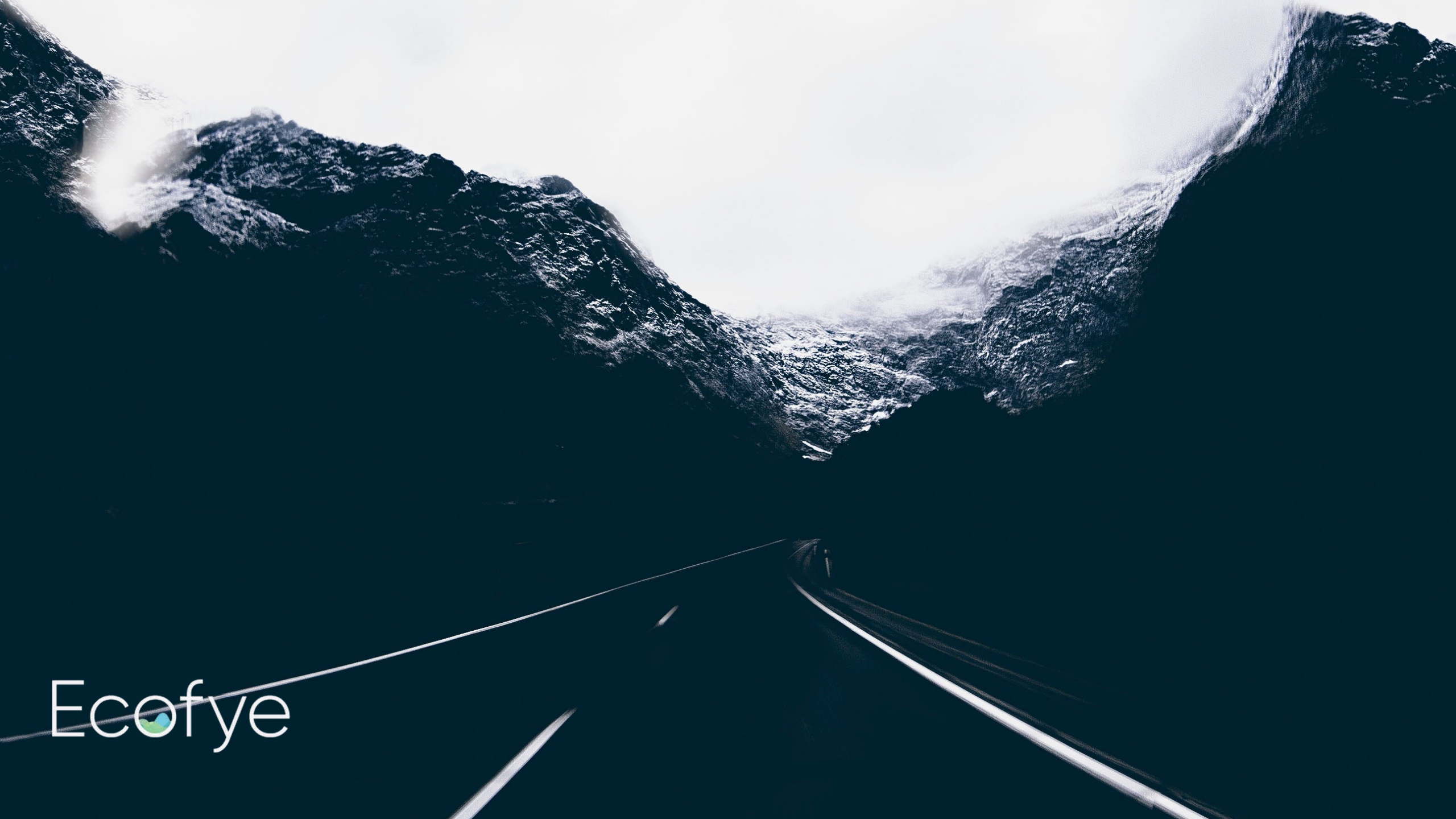
Yearly Analysis

Comparison with Equivalent Metrics

	Energy use per year	Emissions per year	Scope 3 emissions per year
 Dual boiler machine	7,252.92kWh	1,501.89kgCO2e	361.70kgCO2e
 Heylo	2,214.46kWh	458.56kgCO2e	110.43kgCO2e
Yearly Savings	5038.46kWh	1043.34kgCO2e	251.27kgCO2e

Equivalencies

1,234.42	0.95 Football fields deforested	4,295.10 Kilometres driven by gasoline car	0.23 Football fields deforested	1,034.39 Kilometres driven by gasoline car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