

Carbon Emissions Tracker

How-to guide: what the workbook does, how to use it and what every number means.

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Carbon Emissions Tracker

Turn monthly energy bills, fuel deliveries and refrigerant top-ups into Scope 1 and 2 CO₂e, intensity per unit of output, and progress against your reduction target.

For: EHS and sustainability managers, plant managers and engineers answering customer carbon questionnaires or setting reduction targets.

Version 1.0.0 · updated 15 October 2026

Quick start

1. On Setup, type the reporting year, your output unit, baseline, reduction and intensity targets, then replace the example sources with your own factors and where they came from.
2. On Energy Log, add one row per source per month from your bills and delivery records (the 1st of the month, the quantity in the source's unit).
3. On Production, add the output for each month.
4. On Projects, list each reduction project with the energy or fuel it saves per year.
5. Open the Dashboard to see the year's total against target, Scope 1 and 2, intensity and the gap the open projects would close.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Reporting year, output unit, baseline and targets, and the emission sources with their factors.
Energy Log	One row per source per month: the quantity from the bill or record, its factor, and the emissions.
Production	Output per month, for emissions intensity.
Projects	Reduction projects priced in t CO ₂ e per year from the energy or fuel they save.
Dashboard	The reporting year's Scope 1 and 2 emissions against target, by month and by source, and the projects that close the gap.
Method	How every number is calculated, with assumptions, limits and sources.
Verify	Self-check: the workbook's formulas recomputed on fixed inputs against an independent reference.

What each number means

Quantity	How it is calculated	Units
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Quantity	How it is calculated	Units
Emissions (row)	Quantity x factor (kg CO2e per activity unit, looked up from the source on Setup).	kg CO2e
Scope 1, Scope 2, total	SUMIFS of row emissions by scope for months from 1 January to 31 December of the reporting year, / 1000.	t CO2e
Target for the year	Baseline emissions x (1 - reduction target).	t CO2e
Intensity	Total emissions in kg / output in the same months (Production). Monthly: the month's emissions / the month's output.	kg CO2e/unit
Change vs baseline	(Total - baseline) / baseline. Negative is a reduction.	%
Project saving	Saved per year x the source's factor / 1000.	t CO2e/yr
Open projects	Sum of project savings whose status is not Complete (completed projects are already in the logged quantities).	t CO2e/yr
Gap after open projects	Total - open projects - target. Positive: still above the target after the open projects; negative: they would beat it.	t CO2e
By month, by source	The same SUMIFS per month (1st of the month to the next) and per source; share = a source's emissions / the year's total.	t CO2e, %

Assumptions, limitations, sources and the self-check (the Verify sheet, which recomputes the workbook's formulas on fixed test inputs) are in the workbook. The last page shows the Dashboard with the example data for Eastvale Plastics, a fictional business.

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Engineering estimates for planning and improvement work. Verify the results against your own process, data and standards before you rely on them.

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The reporting year's Scope 1 and 2 emissions against target, by month and by source, and the projects that close the gap.

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Reporting year

2025

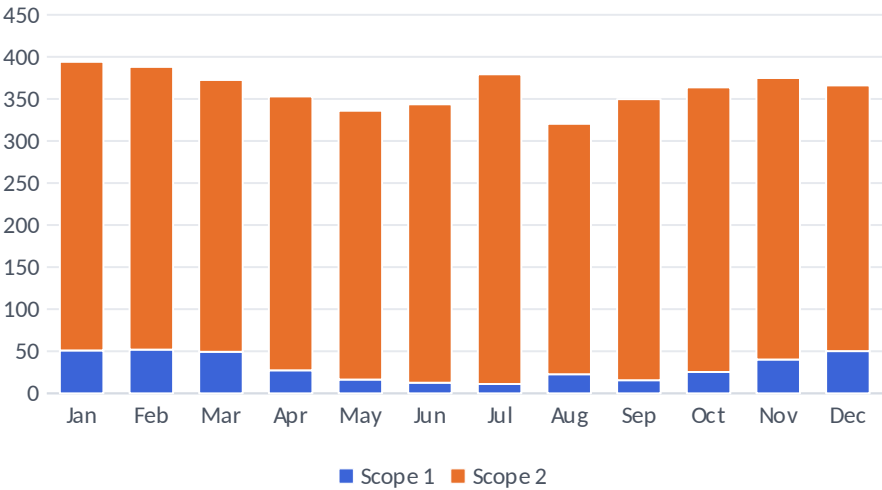
Target for the year

3,782.5 t CO2e

Emissions in t CO2e for the calendar year on Setup; intensity in kg CO2e per t product. 12 of 12 months have Energy Log rows.

TOTAL EMISSIONS (T CO2E)	SCOPE 1 (T CO2E)	SCOPE 2 (T CO2E)	INTENSITY (KG CO2E/T PRODUCT)
4,341.2	373.9	3,967.3	722
Target 3,782.5	Fuels and refrigerant on site	Purchased electricity	Target 640
Above target			Above target

Emissions by month and scope (t CO2e)



Emissions by source (t CO2e)

