Introducing the Carbon Intensity API

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Hi, I'm Rick 👋

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Sustainability is a big deal right?

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3.7%

“The carbon footprint of our gadgets, the internet and the systems supporting them accounts for 3.7% of global greenhouse emissions, similar to the airline industry. These emissions are predicted to double by 2025.”

BBC Future, https://www.bbc.com/future/article/20200305-why-your-internet-habits-are-not-as-clean-as-you-think

How can we, as technologists, help solve this problem?

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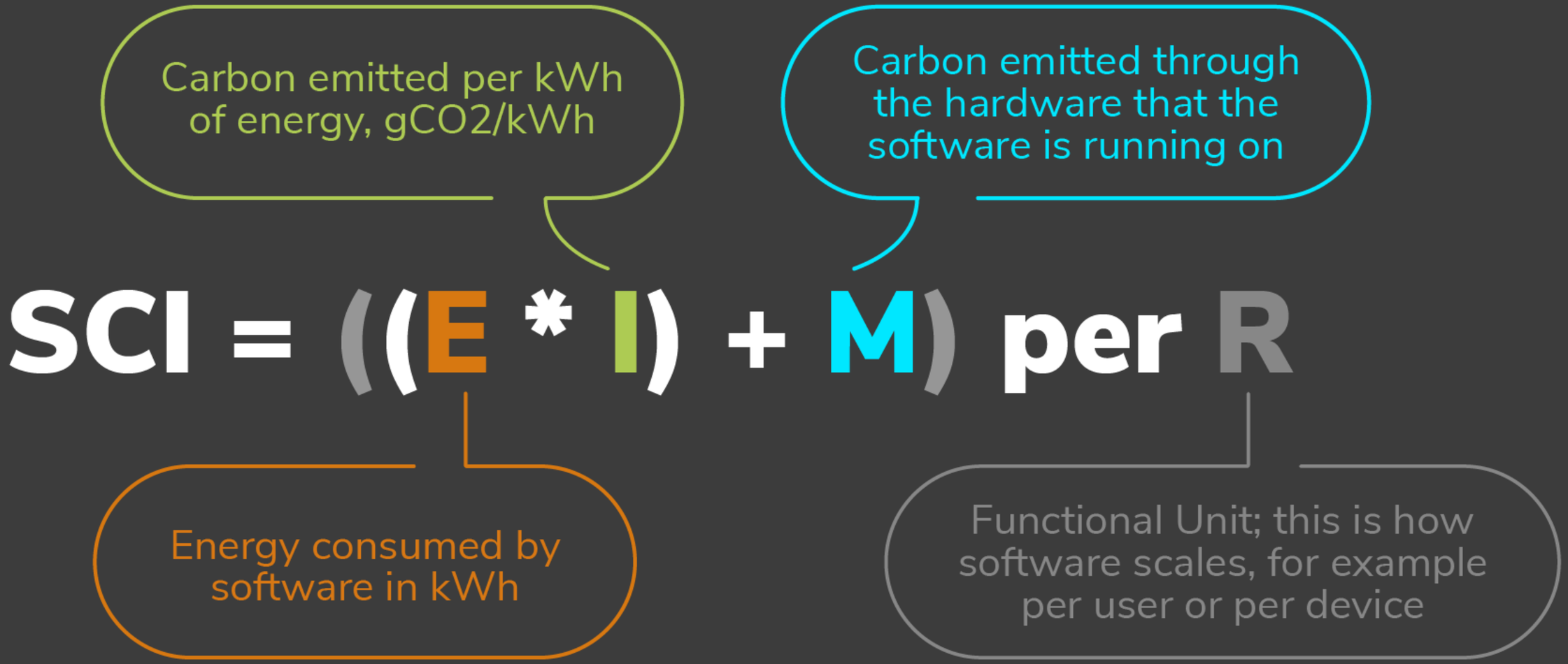
“You can't improve what you don't measure.”

Peter Drucker



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Cloud for Sustainability API (Preview) overview

Article • 01/09/2023 • 5 minutes to read • 2 contributors

Feedback

Important

Some or all of this functionality is available as part of a preview release. The content and the functionality are subject to change.

Microsoft Cloud for Sustainability provides APIs to access emissions data related to your Azure usage.

Accurate carbon accounting requires good information from partners, vendors, and suppliers. The Cloud for Sustainability APIs give you transparency on the carbon emissions generated by your usage of Azure. Microsoft's carbon accounting extends across all three scopes of emissions with a methodology validated by Stanford University in 2018. It uses consistent and accurate carbon accounting to quantify the effect of Microsoft cloud services on customers' environmental footprint.

Details of the API are listed in the Microsoft Cloud for Sustainability API reference. They include additional information about operations, parameters, and responses.

- Get started with Cloud for Sustainability APIs
- Sample queries
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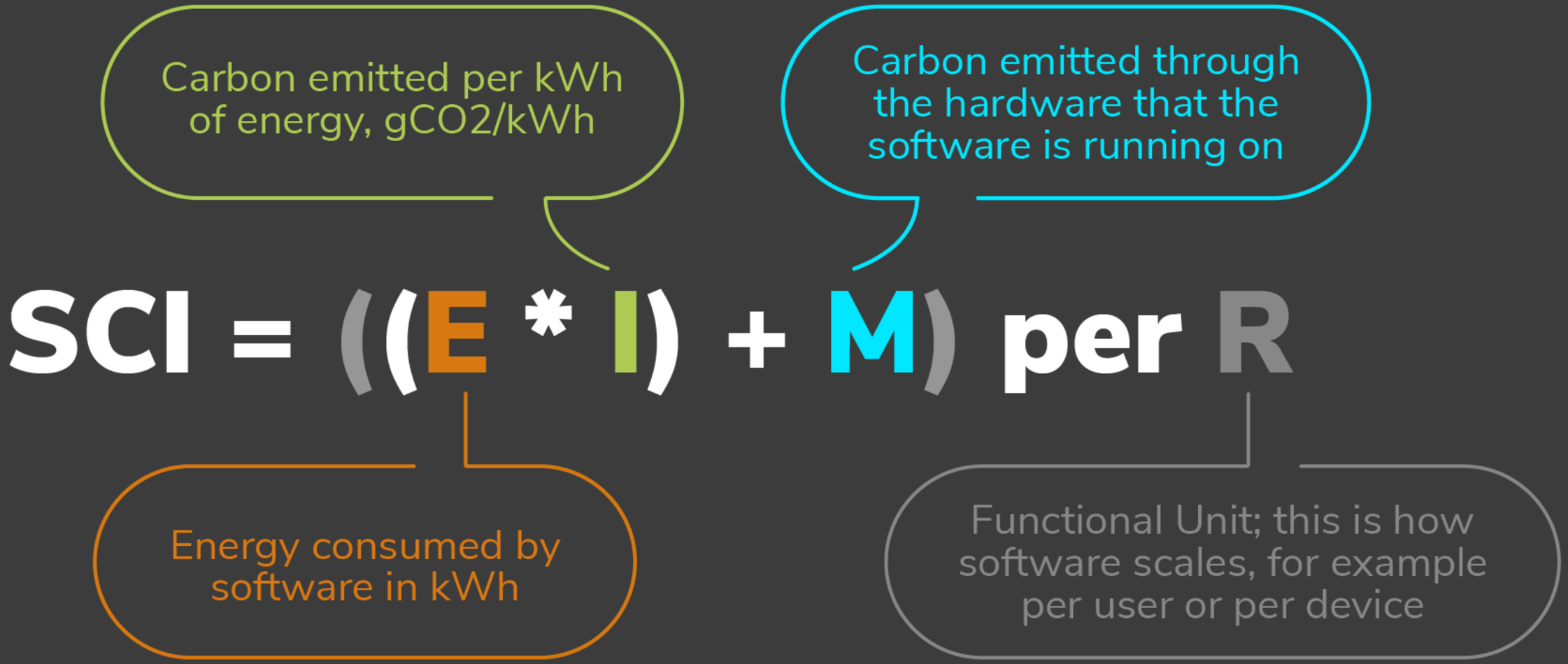
In this article

Get started with Cloud for Sustainability APIs
Sample queries
Assign permissions
Manage instances

Show more



What is the Carbon Intensity API?

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Carbon Intensity API

National Grid ESO, in partnership with Environmental Defense Fund Europe, University of Oxford Department of Computer Science and WWF, have developed the world's first Carbon Intensity forecast with a regional breakdown.

The Carbon Intensity API uses state-of-the-art Machine Learning and sophisticated power system modelling to forecast the carbon intensity and generation mix 96+ hours ahead for each region in Great Britain.

Our OpenAPI allows consumers and smart devices to schedule and minimise CO_2 emissions at a local level.

Current Carbon Intensity

48

gCO_2/kWh

2-Day Carbon Intensity Forecast

+ Today	69	87	48
+ Sun	108	190	64
+ Mon	150	173	121

Values are the average, max, and min Carbon Intensity in gCO_2/kWh for each day

Possible use cases

- Automatically turning on dark mode
- Disabling high quality images to save bandwidth
- Turn off autoplaying video

lowimpact.organicbasics.com

Shop Women Shop Men **organicbasics** Regular store Manifesto EUR 0

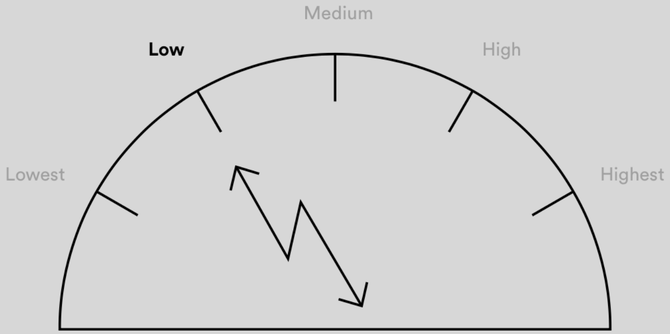
tap to learn more

Shop women
Shop men

The internet is dirty. Data transfer requires electricity, which creates carbon emissions — and this leads to climate change. The Low Impact website reduces data transfer by up to 70% in comparison to our regular website.

Close

Our server's carbon intensity is currently **low**. This site will continuously adapt to reflect the amount of renewable energy it's running on.



Carbon intensity: 110g CO2/kWh

Lowest	Full resolution photos available
Low	**No animations available**
Medium	Low quality photos available
High	Only illustrations available
Highest	Our site closes down

What, why, how?

↓

The Low Impact Manifesto

- 1. Does not load any images before they are actively requested by the user.
- 2. Minimises the power consumption on the users device.
- 3. Adapts to reflect the amount of renewable energy it’s currently running on.
- 4. Informs the user of the impact of their browsing behavior.
- 5. Does not make use of videos.
- 6. Stores data locally on the user’s device to minimise data transfer.
- 7. Compresses all data to the greatest extent possible.
- 8. Loads only the most crucial programming scripts, frameworks and cookies.
- 9. Limits the amount of light emitted by the screen.
- 10. Optimises and limits the use of custom fonts.

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