

Juno’s Environmental Impact

Evidence and Calculation Appendix

Last updated September 25, 2026.

What Carbon Credits Did Juno Buy?

For August 2026, SharedGenes bought 16 Verified Emission Reductions from a Gold Standard project, and retired them in its own name.

Each credit represents one metric ton of carbon dioxide that the project kept out of the atmosphere, checked under Gold Standard's rules. Retiring a credit means the registry records it as used by a named buyer, so nobody can sell it or claim it again.

Credits retired	16 Verified Emission Reductions (VERs), one metric ton of CO2 each
Retired for	SharedGenes, Inc. (Juno)
Retirement date	September 13, 2026
Period covered	August 2026
Project	GivePower Kenya Solar Water Farms, Gold Standard project 10987
Project developer	CO2balance UK Ltd
Cost	\$400 (\$25 per credit)
Invoice date	September 14, 2026
Order number	GSM33187

You can check the [retirement certificate](#) and the [project's registry entry](#) on Gold Standard's website.

What Does the Kenya Solar Water Project Do?

The project uses solar power to desalinate seawater in Mombasa County, Kenya, and supplies safe drinking water to nearby households. Without it, many of those households would boil their water to make it safe, burning firewood or charcoal. The credits count the emissions from fuel that no longer gets burned. GivePower runs the project on the ground.

That makes these avoided-emissions credits. They don't remove carbon dioxide that is already in the air. The registry lists the project's method as Gold Standard TPDDTEC v3.1, which covers projects that replace household fuel burning with cleaner alternatives.

We chose it for practical reasons. The credits were already issued and verified, so we could retire them straight away rather than pay for reductions promised in the future. At \$25 a credit, the price also let us buy twice our estimate instead of just matching it. And because the project's benefit is safe drinking water, the money goes toward people's health, which is the work Juno exists to support.

We haven't tried to work out how much water our \$400 paid for or how many people it reached, because there's no sound way to credit one buyer with a share of the project's results. The project publishes its own reports on those.

How We Calculated Juno's Carbon Footprint

We added up what we paid in August 2026 for the services Juno runs on: OpenAI and Anthropic for AI models, a few dollars through OpenRouter, Supabase for our database and servers, Mem0 for memory, and LiveKit for voice calls. That came to \$51,672.

We multiplied that total by 0.093 kg of CO2e per dollar, the US Environmental Protection Agency's average supply-chain emission factor for data processing and hosting services. CO2e, or carbon dioxide equivalent, counts every greenhouse gas by how much warming it causes compared with carbon dioxide. Spending is a crude stand-in for energy use, so we added 50%, rounded up to a whole ton, and doubled the result.

Step	Result
August spending on AI and cloud services	\$51,672
Multiplied by 0.093 kg CO2e per dollar	4.8 metric tons CO2e
Plus a 50% margin for what the method misses	7.2 metric tons CO2e
Rounded up to a whole ton	8 metric tons CO2e
Doubled	16 credits

Some of our choices push the number up. Our OpenAI, Anthropic, and Supabase figures include development and testing along with your use of Juno. We counted all use on a second OpenAI account that isn't assigned to Juno. For Supabase we used full list prices, including items we got free or at a discount. The EPA factor is in 2022 dollars, and we applied it to 2026 prices without adjusting for inflation, which makes the result slightly higher. We also rounded up.

Other gaps work the other way, or just limit what the estimate can show:

- We left out Amazon Web Services (AWS) because we hadn't collected its August billing when we made the estimate. Its cost wasn't zero.
- For Mem0 we counted only the monthly base charge. We don't know whether there were extra usage charges in August.
- Supabase bills don't line up with calendar months, so we spread each bill evenly across its days to estimate August's share.
- The EPA factor is an average for the whole industry. It says nothing about the particular data centers that served Juno or how they're powered.
- The 50% margin is our own choice. It isn't a recognized standard, and it doesn't prove that everything we missed is covered.

The estimate covers AI and cloud services only. It leaves out our team's computers, offices, and travel, and the phones and networks you use to reach Juno.

So 16 credits is twice our rounded estimate, but because of these gaps it isn't proof that we covered twice Juno's real emissions.

When we buy more credits, change the method, or fill in the missing figures, we'll update this page and the date at the top.