English version

Our Commitments

In 2021, IONOS joined the "VMware Zero Carbon Committed"[1] cloud partner initiative, requiring data centre operator members to use 100% renewable energy or achieve carbon neutrality on or before 2030.

In addition to carbon emissions, we focus on three other key areas; energy use, circular economy (waste and heat) and water consumption

Energy use

At IONOS our directly operated data centres throughout Europe and North America have operated as carbon neutral (Scope 1 & Scope 2) since 2018. We source 100% renewable electricity for all data centres, as a result in 2022, 99.3% of all energy consumption came from renewable sources. In case of the remaining non-renewable energy sources and the carbon generated we purchase trusted carbon offsets as a last step only.

IONOS recognises that being carbon neutral does not stop at sourcing renewable electricity and since 2018 have a certified Energy Management System (ISO 50001) in place for 100% of our directly operated data centres. Our dedicated Energy Management Team sets annual energy efficiency targets per data centre and from 2018 to 2022 we have reduced absolute energy consumption by 9.6%.

In our existing data centres we have reduced energy consumption through modernisations and retrofitting. In addition, we use energy efficient hardware, low power processors to eliminate heat requiring less energy for cooling. Our own software stack built around Linux allows us to deliver optimal performance at high loads and reduce the overall number of servers at the same time. Similarly, virtualization enables us to replace dedicated servers with more-energy-efficient virtual servers.

We increasingly will use renewable energy generated onsite ourselves to power our data centres through solar energy. We have in our newest data centre in Worcester, UK recently installed solar panels on the roof. In addition, we have solar installations planned at two other data centres locations in 2023.

---

[1] https://cloud.vmware.com/providers/zero-carbon

Data Centre Case Study: Worcester, UK

In October 2022, we launched our most sustainable data centre yet this will form the blueprint for how we build and retrofit our data centres going forward. Some of the sustainability design features integrated include:

- 10% of total energy coming from from on-site solar power
- Biofuel powered back-up generators reducing carbon emissions by 90%
- Carbon neutral (offset) steel used in construction
- Bee & bug hotels on-site improving local insect biodiversity
- Best in class energy efficiency (Power Use Efficiency 1.25 expected)
- 100% renewable electricity and climate neutral (Scope 1 & 2) operation in alignment with all other own data centres

Sustainability Performance Data

	Data Centre KPIs	2019	2020	2021	2022
Energy & Carbon	Weighted Power Use Efficiency (PUE)	1.52	1.48	1.47	1.46
	Renewable electricity total %	100.0	100.0	100.0	100.0
	Renewable electricity directly sourced %	93.6	93.7	100	100
	Renewable energy certificates purchased %	86.4	6.34	0.0	0.0
	Renewable energy %	98.9	98.9	99.4	99.3
	CO_2 equivalents (Scope 1 Tonnes)	0	0	0	0
	CO_2 equivalents (Scope 2 Tonnes)	0	0	0	0
Energy Management	% ISO 50001 coverage	100.0	100.0	100.0	100
Circular Economy (Waste)	IT equipment reused (Tonnes)	49.3	78.7	25.4	30.5
	IT equipment recycled (Tonnes)	120.3	77.9	98.7	28.6
	CO_2 avoided through IT equipment recycling & reuse	419.8	650.3	219.7	258.4

In 2021, the IONOS brand, STRATO undertook a detailed carbon footprint (Scope 1,2 & 3) encompassing offices and data centres with the help of an external carbon consultancy

SouthPole. As a first step, STRATO offset all carbon emissions to achieve carbon neutrality and have now a target to reduce energy consumption by 12% in the next 3 years[2].

Circular Economy: Waste

Our servers have an average lifespan of four to seven years, as we build these ourselves this enables us to reuse components and refurbish servers, this extends their lifespan and reduces resource requirements. Recycling is therefore considered the last step and not the first in resource management. We have a long-term partnership with AfB GMbH (Arbeit für Menschen mit Behinderung) to whom we send our servers and IT equipment to be reused and recycled at the end of their life, this creates a dual environmental as well as social impact. Since 2019, our German locations; data centres and offices with the help of AfB GMbh have been able to reuse and recycle 520 tonnes of IT equipment resulting in 1500 tonnes of carbon dioxide avoided

Circular Economy: Reusing Heat

IONOS is well prepared for the upcoming potential legislations on data centre heat reuse and something we are discussing with local governments. For our new data centre construction in Hattersheim, Germany we have signed a letter of intent to deliver waste heat to the extended district heating network. In addition, we are discussing potential heat reuse with the Worcestershire County Council, UK, furthermore for one location in Karlsruhe, we are looking into the option to reuse waste heat for heating office buildings and will conduct a feasibility study

Water Use
We recognise that water scarcity will pose a problem in many countries where we operate including Germany over the next decade, as a conscious decision to avoid and reduce resource consumption only two of our data centres use evaporative based water cooling systems as a precautionary measure.

Customer Carbon Footprint

A carbon footprint is broken down into three Scopes;

---

[2] https://www.strato.de/blog/strato-ist-ab-sofort-klimaneutral-co2-fussabdruck/

- Scope 1 - our own operations
- Scope 2 - purchased electricity
- Scope 3 - carbon emissions of complete product life cycle i.e. manufacture of a server, disposal at end of life, etc

The carbon footprint of our cloud workloads based upon Scope 1 & Scope 2 emissions is zero (carbon neutral). Therefore customers using products our services will have zero carbon created in their value chains linked to IONOS. This is achieved through primarily sourcing 100% and offsetting as a last step only where we have unavoidable diesel emissions.

A pragmatic lever to reduce Scope 3 (value chain) carbon emissions for IONOS is to work with colocation data centres (suppliers) who also use renewable electricity in 2022, IONOS colocation data centres used in total 81.1% renewable electricity and we are aiming to improve upon this. In reference to many other Scope 3 carbon emissions, the data centre industry is still in a very early stage in being able to measure these accurately and link this to tangible measures and customer use as at the current moment no defined standards exist. However we recognise Scope 3 carbon emissions are a key challenge and will play an increasing importance going forward and this is something we are exploring.