

Our road to Net Zero: HVO fuel

The data centre industry uses diesel generators for backup power resiliency. Whilst rarely needed, these generators need to be tested regularly. The normal testing regime for an industrial grade (1965kW) generator is 2 hours per month (a total of 24 hours of test runs across a year).

This consumes

12,000 litres

of diesel (EN590) per generator, per year

That's the same emissions as driving a car

25,400km

...and produces over

43.2 tonnes

of carbon dioxide (CO₂) per generator.

Computer Weekly estimates London will be a **'Gigawatt'** data centre hub (1,000MW) by 2023.

London's 1000MW would need approximately 450 backup generators, consuming:

5.4m litres

of diesel per year.

...and pumps out

19,400 tonnes of CO₂

...the equivalent carbon footprint of 2000 people, per year.

Annually, that's enough diesel to fill more than

2 Olympic sized swimming pools

It's why, in July 2021, Kao Data found a cleaner **alternative fuel**, becoming the first data centre developer/operator in Europe to transition all its backup power generation from diesel (EN590) to 100% **HVO fuel**.



Manufactured from waste food stocks, raw plant oils, used cooking oils or animal fats, HVO fuel (EN15940) is a second-generation, recycled and treated natural vegetable oil, refined to burn cleaner and more efficiently than fossil fuels.

Compared to diesel, using HVO fuel eliminates up to **90%** of net CO₂ for every **1,000 litres** of fuel consumed:

Diesel

3.6 tonnes

195 kg

HVO fuel

Using HVO fuel eliminates up to **90%** of net CO₂



HVO fuel is also Fatty Acid Methyl Ester (FAME) free, which prevents microbiological or diesel **bug attacks** - a type of sludge commonly found in first generation bio-diesel fuel which can block fuel lines. HVO fuel is cleaner, more reliable and can be stored for up to 10 years compared to 1 year for traditional diesel.

Independent testing at Kao Data's Harlow campus also showed HVO fuel offers...

13% reductions in particulate matter

6% reductions in nitrogen oxide emissions



Kao Data have proved that HVO fuel can be transitioned into industrial grade generators and used now. The process is easy, fast, no modifications are required, and the impact is immediate. Save up to 90% of your generator's CO₂ emissions and switch to HVO fuel now.

[Download the HVO Whitepaper](#)