



Sustainable
Power
Now

Powering Sustainable Construction

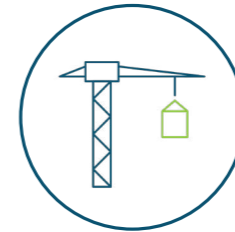
Hydrogen Powered Generators

ZERO EMISSION FUEL

GREEN POWER GENERATION



Build Green with GeoPura HPU



GeoPura HPU

Introduction

The urgency to combat climate change has never been greater, and the construction sector plays a pivotal role in driving carbon emissions.

The way the sector consumes resources is not sustainable. Busy sites often depend heavily on diesel generators to power operations when the electrical grid cannot meet demands.

Diesel generators emit harmful pollutants, including carbon dioxide, nitrogen oxides, and particulate matter. Contributing to air pollution and posing health risks to both the workforce and local communities, even when using HVO or biodiesel replacements.

Sustainable power is needed urgently, and hydrogen is a central piece of that decarbonisation puzzle.

That's where GeoPura's innovative Hydrogen Power Unit (HPU) comes into play. A HPU uses fuel cell technology to supply clean, large-scale power when and where it's needed, and the only by-product is pure water.





HPU Benefits

Go Green with GeoPura Hydrogen Generators

A GeoPura HPU harnesses the power of hydrogen to generate electricity, providing a clean and efficient alternative to traditional diesel generators. GeoPura generators employ a fuel cell system that converts hydrogen gas into electricity, emitting only water as a by-product.

Did you know?

According to the Construction Industry Council, the construction sector is responsible for 11% of global carbon emissions. Reducing reliance on diesel generators can significantly lower these emissions.

Why Change?

Diesel generators have served the industry for a long time, however now we know they are noisy, dirty, and bad for the environment, there has to be a better option. As the world shifts towards a sustainable future, it is crucial for the construction industry to embrace eco-friendly practices.

Those responsible for power on construction sites play a pivotal role in driving this change by adopting green alternatives that align with their project goals and values. By transitioning from diesel generators to GeoPura's HPUs, the industry can significantly reduce its carbon footprint and take an active step towards a greener future.

Sustainable and Efficient

GeoPura hydrogen powered generators deliver 250kVA of standard three-phase, 400V critical

electrical power backed up by an integral 250kWh battery system. A fully redundant, uninterruptible power supply ensures that your operations continue smoothly, no matter the demands.

The HPU is designed for critical applications where downtime incurs high costs. Where a grid connection is available, it can also sync with the power source to manage peak demands and boost availability.

Multiple generators can be combined to produce as much power as needed. The HPU can also deliver heating and hot water and fast EV charging, further improving the sustainability of your site by supporting welfare facilities and onsite transport with zero-emissions power.

A GeoPura HPU and a supply of green hydrogen can be delivered to almost any location, providing easy access to emissions-free electricity—the only by-product is pure water.



Scalable and Flexible

Our HPUs can be easily scaled to meet the energy demands of any construction project, from small-scale renovations to large infrastructure developments. Their modular design allows for hassle-free integration into existing infrastructure and can work alongside the grid to manage peak demands and supplement other sustainability measures on site such as battery packs, solar panels and electric vehicles by enabling zero-emission charging.



Reliability

The HPU provides an uninterrupted power supply to adapt to the changing power requirements of construction projects. With its built-in UPS battery system and grid syncing function, it eliminates the risk of power outages that could disrupt operations and cause costly delays. The HPU provides a consistent and stable power source, enabling seamless execution of construction tasks.



Environmentally Friendly

HPUs produce zero carbon emissions when powered by green hydrogen. By eliminating harmful pollutants, they significantly reduce the carbon footprint of the project, help combat air pollution, and mitigate the industry's impact on climate change.



Cost-Effective

GeoPura HPUs provide a stable and reliable energy source, free from fluctuating diesel prices. With reduced maintenance requirements and no downtime from unplanned failures, the critically backed UPS also eliminates the need for backup generators, offering long-term financial benefits for construction budgets.



Noise-Free Operation

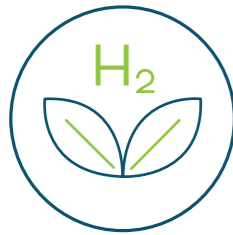
Say goodbye to disruptive noise on site! A HPU operates near silently, allowing for a more pleasant working environment for both the construction crew and nearby communities.



GeoPura HPUs at HS2's Victoria Road Crossover Box, Ealing.



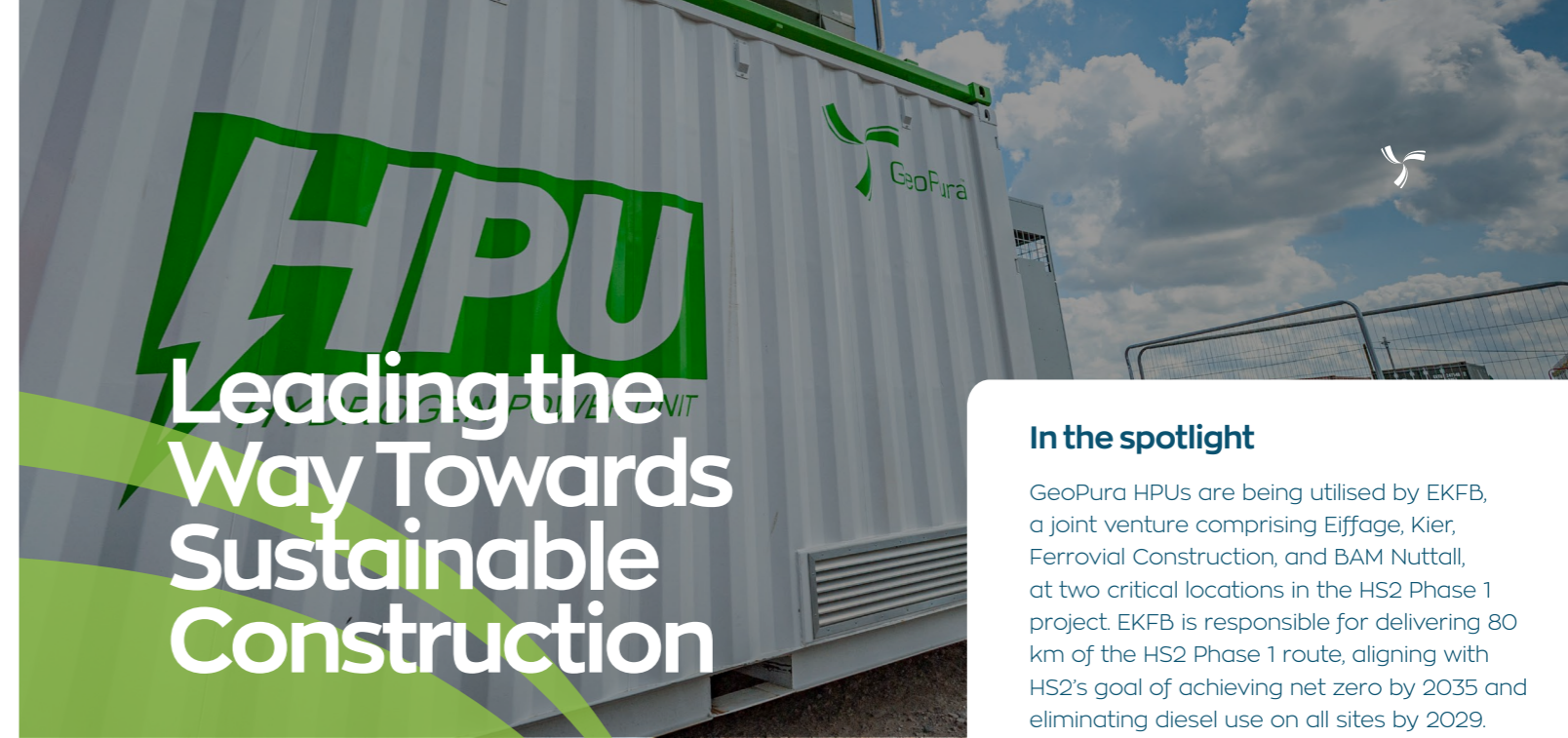
How it works



Lead the Charge with GeoPura's HPU



- 1 Hydrogen Production**
 Utilising renewable energy to generate green hydrogen via electrolysis.
- 2 Storage**
 Store renewable energy as a hydrogen-based fuel.
- 3 Transport**
 Transport hydrogen fuel to where it is needed.
- 4 Generate Electricity**
 HPUs use hydrogen fuel to generate zero emission electricity.
- 5 Power Up**
 Utilise electricity to power heavy machinery, site offices, and recharge battery equipment or EVs.



Leading the Way Towards Sustainable Construction

In the spotlight

GeoPura HPUs are being utilised by EKFB, a joint venture comprising Eiffage, Kier, Ferrovial Construction, and BAM Nuttall, at two critical locations in the HS2 Phase 1 project. EKFB is responsible for delivering 80 km of the HS2 Phase 1 route, aligning with HS2's goal of achieving net zero by 2035 and eliminating diesel use on all sites by 2029.

At GeoPura, we are committed to providing construction industry professionals with the most advanced and sustainable power solutions. Here's why GeoPura stands out from the crowd:

Expertise and Experience

With years of experience in renewable energy solutions powering various industries, we understand the unique requirements of the construction sector. Our team of professionals will guide you through the transition to sustainable power, ensuring a seamless and efficient process.

Performance

GeoPura's HPUs are built with cutting-edge technology, guaranteeing reliable and consistent power supply throughout your construction project. We prioritise performance, ensuring that your operations run smoothly without any interruptions, as power demands flex throughout the project.

Green Hydrogen Infrastructure

Providing clean energy as a service, we take care of the hydrogen supply and the fuel management, meaning no operational requirements from you.

By utilising this clean energy source, we enable your construction site to go beyond carbon neutrality and actively contribute to a greener planet.

We understand that every project has unique power requirements. Whether you need power for heavy machinery, site offices, welfare facilities, or temporary structures in urban or remote locations, GeoPura can design a system that meets your needs seamlessly.

Introducing: Our New Mobile Zero Emission Power Solution

Our new trailer-mounted HPU is designed for quick deployment and seamless operation. With inbuilt fuel storage and a compact footprint, the plug-and-play solution is the perfect option for short-term projects, remote sites, and for covering multiple locations.



Ready to make the switch to sustainable power for your construction project? Reach out to our team at GeoPura.

Together, let's build a sustainable future while reducing our environmental impact.

At GeoPura, we are proudly manufacturing our HPU's at scale in the UK in partnership with industry leader Siemens Energy, and investing in green hydrogen production to fuel these units.

Find out more at [GeoPura.com](https://www.geopura.com)

SIEMENS
ENERGY



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