AGENDA

Wind and solar won't help building sites to ditch diesel. But this will

05 SEP 2022

Contributor

Toby Gill is chief executive of IPG, a company that is developing a renewable alternative to the diesel generator

The current energy crisis unfolding in Europe and the increasing frequency of global climate events demonstrate the importance of reducing our reliance on fossil fuels. Expanding wind and solar generation is the most significant step we can make towards this, as well as reaching our climate goals. So it is regrettable that both Conservative leadership candidates have made comments about scaling back the deployment of new solar and onshore wind projects.

That said, wind and solar does not represent the entire solution for cleaning up our energy system. Fuel-based power will continue to play a pivotal role in the energy mix, from balancing the grid when the wind isn't blowing and the sun isn't shining, to providing power to businesses and projects with limited grid connectivity. The construction industry is a case in point.

Lay of the land

As crucial as it is to our wider net-zero efforts, increasing the capacity of wind and solar generation will not directly help construction companies to reduce their climate impact.

Construction firms are increasingly seeking ways to install a temporary builders' supply earlier in a project's lifecycle and therefore benefit sooner from the greener energy on the grid. However, for sites with no access to the electricity grid or those with peak power requirements too large to be served by their grid connection alone, companies have no choice but to continue to turn to diesel generators, despite best intentions to reduce the industry's carbon footprint.

Across the construction sector, hydrogen and biofuel power solutions are being trialled to displace their diesel counterpart. The challenge that energy managers and sustainability leaders face when looking to scale up these solutions across their business, however, is the operational risk that switching to greener fuel sources presents.

> "Flexible solutions such as fuel-agnostic generators offer a direct replacement for the diesel generator that can enable companies to start reducing their carbon footprint"

Today, there isn't sufficient green hydrogen or biofuel supply to displace the diesel used across a company's entire project portfolio. So, at best, current technologies present a partial solution. But, at worst, they create greater potential for fuel-supply disruption and therefore risk to project timelines.

For project managers, switching from diesel to green hydrogen, for example, is to go from a solution with an almost-guaranteed fuel supply and energy security – a typical 1,000-litre diesel bowser can buy weeks of operation from one delivery – to one with less-reliable availability. Equivalent-sized hydrogen storage could require deliveries as frequent as every two to three days. This means, in complete contrast to diesel, not only is there more regular dependency on a limited supply chain, but also limited onsite storage capability, which increases the risk of power outages.

And today, we're talking about powering canteens, cabins, drying rooms and a small amount of battery-powered machinery – but what about in the years ahead, when all plant machinery and employee vehicles need charging as well?

Future of onsite power

Uncertainty around the supply of green fuels means construction companies, understandably, are unwilling to risk the switch at scale to alternative generators designed to run on just one green fuel.

Flexible solutions such as fuel-agnostic generators offer a direct replacement for the diesel generator that can enable companies to start reducing their carbon footprint, without putting their projects at risk. This means project managers can use any available green fuel, be it hydrogen, biodiesel or biogas, for example, to sustainably power their sites, with the operational certainty that conventional fuels such as diesel can be used as a backup if needed.

Longer term, the more businesses that use alternative generators, the more this will benefit wider climate goals. Not only will they help to reduce emissions and improve air quality in situ, they will also help to create the demand suppliers need to start producing more hydrogen and biofuels for onsite generators. Over time, this will make it even easier for more businesses to reliably turn away from diesel.

Companies across all sectors, including the construction industry, require green power solutions that are tailored to the individual needs and challenges of their business. So, while wind and solar has a significant role to play in tackling climate change, and I'm looking forward to seeing increased investment to help expand this capacity, it is also important to celebrate the alternative solutions that will arrive on the market over the coming years to move all industries closer towards net zero.

Related articles

YOUR TOP 3 SUGGESTED READS TODAY

1. Leeds approves McLaren Living's £85m resi scheme
2. Film studio developer secures construction funding
3. Groundworks specialist collapses with loss of 52 jobs

SPONSORED CONTENT »

- More than half of construction firms are plagued by inefficient workflows
- Making information sharing easier for construction workers
- How can the construction industry become more sustainable?
- Whitepaper: Building confidence in a sustainable construction industry
- Webinar: weaving the 'golden thread' into your project

INSPIRING WOMEN »

INSPIRING WOMEN IN Construction & Engineering
Read the stories | Register for events

MOST POPULAR MOST RECENT

- ISG scoops large data-centre job
- Construction industry reacts as Liz Truss becomes PM
- Firms agree to withdraw HS2 bid amid watchdog concerns
- Balfour staff secure holiday pay rise
- Britishvolt gigafactory work delayed until mid-2025

CiC Careers in Construction
JOB OF THE WEEK
Director of Building Safety & Compliance

LATEST JOBS

Director of Building Safety & Compliance
Stonewater

Section Engineer
Jones Bros

Senior Civil Engineer
Jones Bros