

# STELLA MATTHEWS: HYDROGEN ENGINEER

Stella Matthews is one of those individuals who comes alive when she talks about her day job. Her face literally lights up as she goes into the nitty gritty of what her role as Hydrogen Development Manager at Northern Gas Networks (NGN) involves. So much so that you're left wondering if your own day job has a bigger purpose and fulfils you in the way it does Stella.

"It's that legacy part of it... that knowing that what I'm part of is eventually going to change the world," said Stella, her eyes blazing with passion.

Stella joined NGN in 2017 as a project officer for the H21 Team, which was a research team tasked to investigate the safety elements of reusing the existing gas distribution networks to transport 100% hydrogen.

"It was a lightbulb moment for the industry. The question was: could we reuse (circa) 32,000 kilometres of piping to transport a low carbon gas that's better for the environment," she said.



But the project wasn't just about working alongside engineers and researching and developing the safety aspects of using the pipework, it was also about determining how onboard the public was with using hydrogen in their homes. Before long Stella was captivated not only by the industry itself and the potential impact the project would have on the planet, but also by all the different individuals she got to interact with daily.

Today Stella's role involves reaching out to organisations and research companies in the hydrogen industry that are interested in knowledge sharing and then looking for ways that they can collaborate through funded projects. Her team has also worked with the Department for Business, Energy and Industrial Strategy (BEIS) that has developed hydrogen appliances which they use in two hydrogen homes they've set up to demonstrate those appliances to members of the public, including boilers, cookers, fires, ovens and hobs.

The public want a solution for climate change and/or to reach net zero emissions, however, they also want little to no disruption to what they are currently doing at home, said Stella. Which is why hydrogen appliances are deemed an ideal solution, she added.



Although she's not an engineer herself, Stella works with a fantastic team of engineers and on any given day could be speaking to someone in government, industry, innovation, or research in either the UK or internationally, including Europe, Asia and Australasia.

"No two days are the same, you can't get bored," she said.

The team's work is now gaining a lot of momentum and where nobody wanted to hear from them before, Stella is now inundated with back-to-back calls.

The beauty about hydrogen is that it creates no carbon emissions when burned and you can also store it in bulk which is great for industries that have huge energy requirements.

"Hydrogen is the most abundant element in the universe, but it attaches itself to other elements, so you have to separate it," said Stella.

Stella is aware utilities is often overlooked as an industry to work in.