

Women in energy

'We need more female role models'

With women accounting for only 14% of the energy sector, experts believe the industry will be under threat if diversity doesn't improve

Georgina Fuller

The energy sector has been in the spotlight recently, with young, pioneering women such as Greta Thunberg campaigning to get climate change on the agenda – and receiving a plethora of misogynistic abuse for doing so.

So what is it like to work in the energy industry, where only 5% of executive board seats in UK-based companies are held by women, and 61% have no women at all on their board?

Sarah Merrick, founder and CEO of Ripple Energy, says that the energy sector is going through a seismic period of change. "By 2050, more than 80% of the UK's electricity could come from wind and solar," she says. This is good news for women and the environment, as the more progressive "clean" energy companies are, in Merrick's experience, considerably more egalitarian than the fossil and nuclear energy sector. "Having worked in renewables for more than 20 years, I would say there's a stark difference in gender equity between clean energy and fossil fuel companies," Merrick says.

The more conservative fossil and nuclear energy sectors have an "old boys' club" culture, which has led to businesses being overwhelmingly dominated by men, according to Merrick. "This area of the energy industry is lagging behind on the gender divide. However, the renewable sector is still relatively new, which means that culture has not had the time to fully develop, and women's voices are not as overlooked."

Kerrine Bryan, an electrical engineer at WSP, says our everyday life depends on the energy industry. "Everything from preparing and maintaining food, to keeping

warm, travel, maintaining reliable healthcare systems, as well as national safety and security – these are just a few things energy provides," she says. "Yet, as the global demand for energy increases and the push for cleaner energy and new technology expands, the sector is struggling to keep pace because of the skills shortages in engineering."

Encouraging more women into the sector (the Global Energy Talent Index report 2019 found that women account for only 14% of workers) is one way of closing the skills gap, but gender barriers need to be overcome too, says Bryan. "Put simply, I believe the sector will be unable to keep up with the demands of the world if the diversity skills deficit continues."

This change needs to start at the grassroots, according to Bryan. "It begins with schools linking subjects that are being taught with real jobs in society. This could be enhanced by getting more BAME role models and STEM ambassadors into schools to talk about their work, which would help debunk any misconceptions children might have that they can't do such a job because they don't fit the mould, especially BAME pupils and young girls."

Louise Kingham, CEO of the Energy Institute and board member for POWERful Women (PFW) – a professional initiative that pledges to ensure 40% of middle management and 30% of executive board positions in energy will be filled with women by 2030 – says the rate of progress has been "glacial".

"We need more visible female role models and we need louder, clearer leadership and targets," Kingham says. "We also need a range of internal policies and programmes – for example, on flexible working and changes to recruitment practice – to remove unconscious bias and become consciously inclusive."

Emma Bridge, chief executive of Community Energy England (CEE), a membership body representing more than 200 local community energy generation schemes, points out that it's not just boardrooms where women are unrepresented. "In government, we have a woman, Claire Perry MP, holding the position of minister of state for energy, yet, far too often when I attend events, am invited to speak on panels, or at a high-level policy meeting, unfortunately I'm the only woman," she says.

This means a range of opinions and ideas are not being heard; it also means a lack of role models. "More women, particularly young women, need to be made aware of the amazing opportunities available in the fields of engineering and energy generation."

▼ Award-winning electrical engineer Ozak Esu's interest in electricity started as a child

PHOTOGRAPH: AMIT LENNON



Experience

'My experience as a black woman in the industry has been positive'

Electrical engineer Ozak Esu speaks of the importance of getting BAME women into STEM careers

Interview by Mark Smith

Understanding the reason behind Dr Ozak Esu's fascination with electricity is simple – as a child, she often didn't have any.

Now an award-winning electrical engineer, she grew up in Nigeria, where the ability to do something as simple as switch on the lights was dependent on her parents' income.

"We went from lighting candles with matchsticks, to kerosene lanterns, then rechargeable lamps. Eventually, my parents earned enough for us to own our private diesel generator."

As a child, she recalls being conscious about protecting the environment and of the challenges neighbouring African states faced following the fallout of exploration for crude oil, with issues such as air

and water pollution playing on her mind from an early age.

"I witnessed the pollution caused by households and businesses who owned a private generator," she says.

"There was also the fluctuating costs and scarcity of fuel, marked by long queues at petrol stations. I always had this belief that this wasn't the case in other countries and that I could do something to fix it."

Arriving in the UK in 2008 at the age of 17 to study electronic and electrical engineering at Loughborough University, she later graduated with a first-class degree and won a £54,000 PhD studentship at the university, which she describes as "her proudest achievement".

With the energy sector reluctant to sponsor UK working visas at the time, she got a foot on the career ladder

'I have been fortunate in my early career to work with cultured, well-informed engineers'

Ozak Esu
CSHB

with the construction industry, eventually being able to bring her PhD expertise to bear on the subject of "smart cities". She is now the technical lead at the BRE Centre for Smart Homes and Buildings (CSHB).

Having won a string of awards for her work – including the Young Woman Engineer of the Year – she continues to champion the cause of getting BAME women into STEM careers. In addition to serving on the Athena Swan feasibility committee at Loughborough University, she has been a panellist for the Association for BME Engineers.

But she says that her age, rather than her gender or race, has been more of an issue for the 28-year-old.

"I can only speak about my personal experiences as a woman and black person working within the industry, and it has been positive. I have been fortunate in my early career to work with and be mentored and supported by cultured, well-informed engineers and managers."

She adds: "Ageism has been a more prevalent occurrence – the assumption that I am less competent because I am young. I simply shrug off these incidents by reflecting on my achievements and personal journey, from where I began to where I am now in my career."

Her advice for any women from a BAME background is simple: "Go for it!"

"STEM subjects provide so many career disciplines to choose from, so I recommend attending careers fairs, seeking work experience opportunities and engaging with people within the industry to get a feel for what's involved."

'More women need to be made aware of the opportunities available in the field of engineering'

Emma Bridge
CEE