Supergen Offshore Renewable Energy

Equality, Diversity and Inclusion in Engineering

A Roadmap Towards Positive Change

Led by:

aura

UNIVERSITY OF HULL

With support from:

UK Research and Innovation

Engineering and Physical Sciences Research Council

Forewords

Melanie Onn

Deputy Chief Executive, RenewableUK
and OWIC representative

"We work for an exciting new industry with the opportunity to change the status quo on how we operate as a sector. This report on Equality, Diversity and Inclusion (EDI) sets a benchmark for the offshore wind and wider renewable energy industry. EDI is a fundamental issue for us all – industry and society – and we each have a responsibility to make real changes wherever we are – whether in education, academia or in industry at early or later career stages. We are a new industry and we have a real opportunity to get EDI right from the start so that it becomes integral to the way we think and act. This is a personal mission for me and something that I have been working hard for – in my previous role as the MP for Grimsby – and now in my role at RenewableUK. Let's take on board the recommendations in the Report and make a difference for good."

Prof Deborah Greaves OBE

Director of the Supergen ORE Hub
Head of School of Engineering, Computing and Mathematics (SECaM), University of Plymouth

"The importance of Equality, Diversity and Inclusion cannot be emphasised enough – the future of the renewable energy sector depends upon it. I have been a strong advocate for wider inclusion in renewable energy for most of my career, particularly with regard to encouraging more women into science, technology, engineering and mathematics (STEM) in academia and in industry. I am delighted that EDI sits at the very centre of the Supergen Offshore Renewable Energy (ORE) Hub with a work stream dedicated to ensuring that EDI becomes the foundation to the way we work in renewable energy and making the Hub a 'Beacon for EDI'. As the sector matures rapidly, there is an opportunity to shape its development and embed better EDI practice for the long term. It is in all our best interests to promote diversity; eliminate barriers to participation; and create a culture in which equality of opportunity is a priority for all researchers; employees; candidates for Fellowships; applicants for grants and awards; and others who engage with the Supergen ORE Hub. Let's work together to lead real change. This report, which I am pleased Supergen ORE Hub has funded, provides us with a clear understanding of where we are now and where we need to get to."

Prof James Gilbert

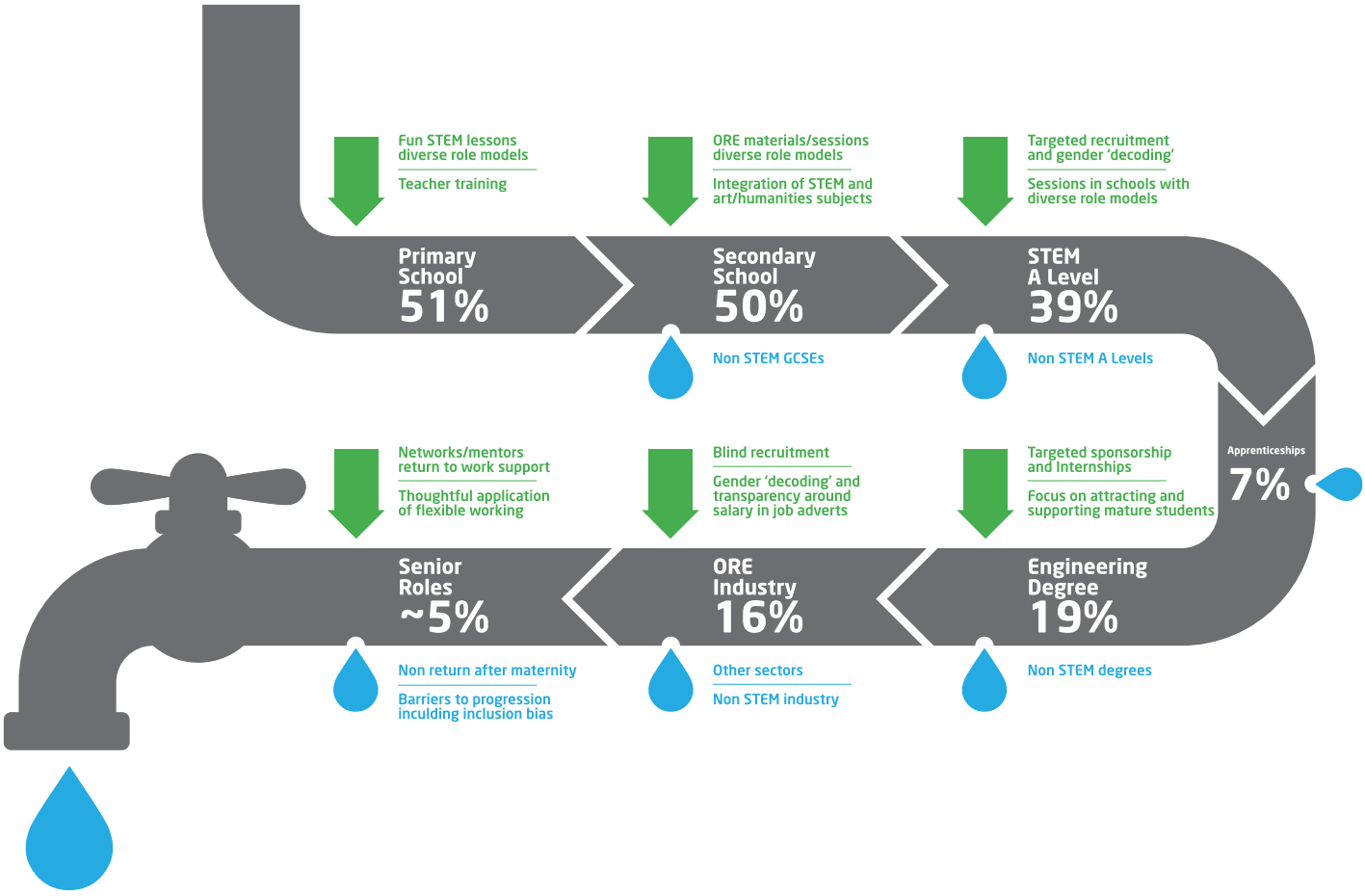
Co-Director, Supergen ORE Hub
Professor of Engineering, University of Hull

"Presenting this scoping report on Equality, Diversity and Inclusion, funded by the Supergen ORE Hub and produced through Aura at the University of Hull, is a real and tangible step forward in an area where there is still much progress to make. As a Co-Director of the Supergen ORE Hub with special responsibility for EDI, I am very pleased that this report provides us with a clearer understanding of the subject and where we stand – both in academia and with industry. There is a moral imperative to improve in all three areas – diversity, equality and inclusion – as well as it making business sense for higher education and industry. I think we have a clear action plan to start working together to achieve progress. We have set ourselves some ambitious targets – as a research consortium and also as a new and innovative industry – we need to start showing that we mean what we say so that we can be proud of our progress in all three areas of EDI - by 2030. Big things start small and I believe, and hope, that we can individually and organisationally begin to make the changes recommended in this report now."

This Report

This report is based on research data collected from industry and academia to assess the current state of EDI in engineering, with a focus on the renewable energy industry. It also includes interviews with inspiring people who are using innovative approaches to make changes in this area from within the industry such as Lorna Bennett, Mechanical Engineer and STEM campaigner, Nike Folyan, Founder of Association for BME engineers, Alicia Green, founder of RenewableUK's 'Switch List' and Baroness Brown, Sector Champion for the Offshore Wind Sector Deal. Based on this research, the report puts forward suggested actions targeting each stage of the 'leaky pipeline', identifies organisations who currently have initiatives in this area and proposes short, medium and long term actions for positive change. The diagram below was created based on these findings and focuses on 'the leaky pipeline' and specific issues around EDI for gender at every education and career stage, along with potential actions to combat these.

Leaky Pipeline –
Proportion of Females at Each Stage of Progression in the Energy/ORE Sector



What is EDI

Equality:
The state of being equal, especially in status, rights, or opportunities.

(Oxford English Dictionary)

Diversity:
A range of many people or things that are very different from each other.

(Oxford English Dictionary)

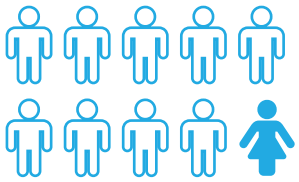
Inclusion:
The action or state of including or of being included within a group or structure.

(Oxford English Dictionary)

Current State of EDI in Engineering

There are clear issues with EDI in the engineering sector. Diversity research shows that 90.7% of engineers are male and only 7.8% are BAME. Equality statistics show that the mean gender pay gap (difference in average hourly earnings for men and women) in engineering is 10.8%. Although this is less than the mean pay gap in the UK (16.2%) it still highlights an issue for equality in this sector that is exacerbated by a lack of gender diversity in senior positions, as 92% of those in the upper pay quartile are men. Research on inclusivity suggests that female and BAME employees are significantly less likely to feel included in their workplaces.

EDI issues are systemic, and improvement will require a committed and cohesive approach. There is a 'leaky pipeline' for under-represented groups in engineering with talent often lost at key stages in education and career development.



90.7%

of engineers are male

Only 7.8%

of professional engineers are BAME

10.8%

mean gender pay gap (difference in average hourly earnings for men and women) in engineering

EDI in Renewables

The Renewable Energy sector is in a unique position as a new, sustainability focussed industry to take proactive steps to improve EDI through good design. Targets have been set to improve EDI in the Offshore Wind Sector Deal which stated that the offshore wind industry's workforce should consist of at least 1/3 or 33% women, ideally aiming for 40% by 2030. This is ambitious considering that their 2018 percentage was only 16%. Targets for BAME employees were released in March 2020, with a drive towards increasing representation of this group from 5% to 12% by 2030.

Offshore Wind industry's workforce should consist of at least

30%

women, ideally aiming for

40%

by 2030

BAME employee targets were released in March 2020 with a drive towards increasing representation from this group

5% to 12%

by 2030

Summary

The report highlighted a number of complex issues around EDI and there are no 'silver bullets' to overcoming them. Long term, holistic and collaborative action is required to deal with these issues appropriately. In particular, many organisations have excellent initiatives in this area, but many work in silos without large scale collaboration. To achieve greater EDI in the industry, collaborative effort is required from schools, universities, industry organisations, companies and policymakers.

An Action Plan for Change

There is clearly a moral, social and financial impetus to improve EDI in STEM, and particularly engineering.

Short term initiatives

- Have open EDI discussions
- Have inclusive job adverts
- Champion EDI at events and conferences

Medium term initiatives

- Encourage formation of networks
- Work with EDI groups to help meet EDI
- Reverse mentoring
- Coordinated outreach to primary schools
- Ensure EDI reflected in all communications material

Long term initiatives

- Understand impact of organisation culture on EDI
- Determine if work time is affecting EDI
- Look at division of labour to see if affecting EDI
- Take out unconscious bias from workforce
- Consider effect on EDI in your organisation from society / education

Organisations Behind the Report

Supergen Offshore Renewable Energy

The Supergen ORE Hub is an Engineering and Physical Sciences Research Council funded research consortium. It provides research leadership to connect academia, industry, policy and public stakeholders in order to maximise social value in offshore wind, wave and tidal energy.

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Aura is a collaborative initiative for the offshore wind industry and low carbon energy sectors. It is a key delivery partner in the government's Offshore Wind Sector Deal and works to drive innovation in research and development in the Humber region, nationally and internationally in relation to the talent pipeline and wider industry engagement and enterprise.

UNIVERSITY OF HULL

The University of Hull is committed to promoting equality of opportunity for all, giving every individual the chance to achieve their potential, free from prejudice and discrimination. Through its Aura initiative, the University has been pleased to join with the Supergen ORE Hub to further knowledge and promote real action to make progress in bringing EDI into all aspects of STEM subjects and academia . This scoping report was researched and written Stefi McMaster, a PhD student in Psychology and part of the Centre for Human Factors at the University of Hull.

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