QUEENSLAND resources COUNCIL

QMEA RESOURCES SKILLS ACADEMY

MEET JOE

MECHANICAL ENGINEER (Engine Development)
MES, BRISBANE, QLD.
STUDIED BACHELOR OF ENGINEERING – EXTENDED MAJOR MECHANICAL ENGINEERING, THE UNIVERSITY OF QUEENSLAND

Tell us what you are working on?
The MES team develops decarbonisation technology for large diesel equipment in the resources industry.

What's the simplest way to explain what this technology is?
MES offers conversion kits for mining equipment that enable customers to use "dual fuel" technology. This involves replacing up to 80% of the diesel required to run the engine with natural gas which crucially can be sourced locally and with less supply chain emissions than diesel.

How is this technology making real change within the decarbonisation and sustainability context?
A current project on converting a Caterpillar 793F ultra class haul truck, is projected to reduce yearly CO2 emissions associated with diesel usage and supply chain by around 25%. Per truck, this is the equivalent of removing over 450 Australian cars from the roads.

How is this having a positive impact on a sustainable future?
The great advantage of this technology is that it can be utilised by the resources industry immediately! There is a great need for immediate action to reverse the direction of climate change and I'm happy to be contributing to a solution.

What study was involved to secure your role?
I studied mechanical engineering at university where I found control systems particularly interesting. This is now a big part of what I do everyday now in my role.

What is your role and how has your role prepared you to do this work?
I am an Engine Development Engineer at MES, and my role has provided me with the opportunity to work on cutting-edge technologies and innovative solutions in the energy sector.

By working alongside experienced engineers, I have gained valuable insights and skills that have enabled me to effectively contribute to the development of sustainable energy solutions.

My role has also given me the chance to take on considerable responsibility in challenging projects, allowing me to develop as an engineer.

Where do you think this work and your role will take you in the future?
I hope to continue to explore potential technologies which can even further reduce emissions in the resources sector. I believe there will be many exciting opportunities for me to make a meaningful impact on climate change.

Where do you see yourself in 5 years to 10 years?
I hope to see myself continuing to grow and advance in my career, taking on more challenging projects and responsibilities while working on technologies at the forefront of the drive for a sustainable future.

What message would you have to share with young people wanting to undertake a career in the energy sector?
My message to young people interested in a career in the energy sector would be to pursue their passion for sustainability and the environment by seeking out career opportunities where you can make a real difference to the industry and in your role actively engaging in efforts to reduce greenhouse gas emissions.