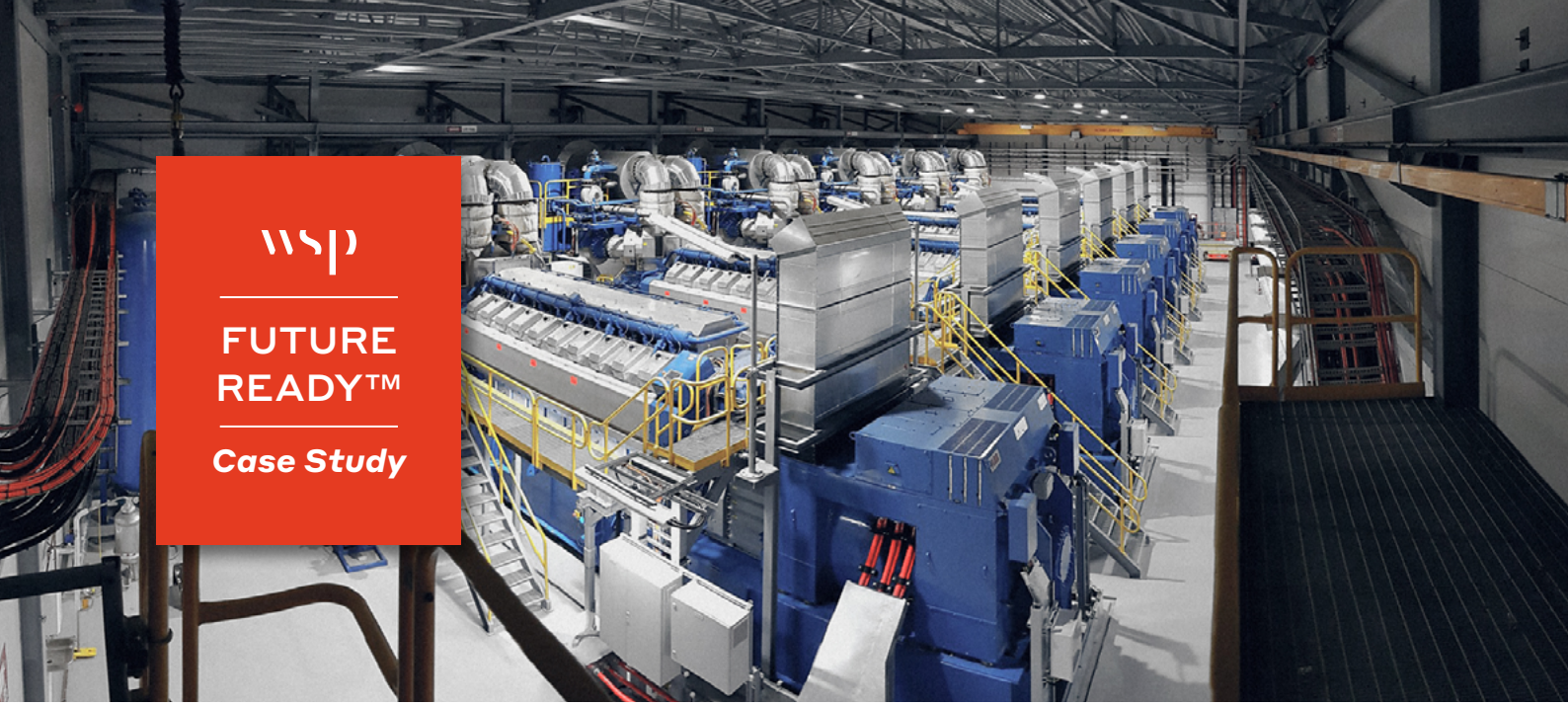

FUTURE READY™

Case Study

PORT MORESBY POWER STATION

Project Overview

WSP has played a key role in the development of the first dedicated grid connected, gas-fired 58MW power plant in Papua New Guinea (PNG) which will provide reliable and affordable power to the community. More importantly, it will help PNG reduce CO_2 emissions by around 25% per annum through scaling back the use of older diesel and heavy fuel oil-based generation.

As part of our role as owner's engineers, we have provided comprehensive services across the project ranging from conception of project development guidelines to review of contractors' designs and documents for compliance with EPC arrangements and responses to technical queries.

We have also undertaken factory inspections and provided document control, system integration and management while assisting with site phase construction and commissioning.

What Future Trends Did We Consider?

Resources	Circular Economy	Water Scarcity
	Renewables Reign	Declining Biodiversity

How Did We Consider These Trends?

Resources

- **Circular Economy** - As part of PNG's commitment to mitigating climate risks, the plant is significantly helping to reduce CO2 emissions, thereby paving the way for low carbon electricity.
- **Water Scarcity** – By transitioning to natural gas-powered electricity, we are helping reduce water use as cooling systems in natural gas power plants require much less water, leading to substantial savings for both the client and community.
- **Renewables Reign** – Fuelled by PNG-produced natural gas, this power station plays a key part in efforts to reduce CO2 emissions. Capable of supplying around 75 per cent of the average load of the Port Moresby electricity grid, the power station will improve power service reliability fuelled by a cleaner energy source.
- **Declining Biodiversity** – Natural gas-fired power generation requires the least amount of land needed, demands less space for construction, and in comparison to other power plants with larger infrastructure requirements, the environmental footprint of the project is minimal.

How Was the Approach Better?

Our experience with gas fired power plants enabled the project team to resolve complex issues, and to progress execution with greater speed and confidence. Reliability of the new power station will be a significant improvement on the existing thermal plant.

From concept to compliance, we provided comprehensive services including the critical review of contractors' designs and documents for compliance with EPC arrangements and responses to technical queries. We also completed factory inspections and provided document control, system integration and management while assisting with site phase construction and commissioning.

The Port Moresby Power Station is supported by an operations and maintenance agreement which will provide training for local operators and transfer of technologies and systems previously unused in the area.

The Outcomes

The power station will assist in reducing CO_2 emissions in PNG by around 25% at a national level, and 37% within the Port Moresby region. This is a significant achievement resulting in both environmental and economic benefits for the region.

In alignment with the government's ambitious Electricity Industry Policy, the plant will play a role in delivering more reliable power into the grid for PNG, supporting the country's efforts to secure energy for future generations.

For More Information

Peter Skindberg
Section Executive - Power and Energy

+61 7 3854 6714
Peter.Skindberg@wsp.com

Find Us

WSP Australia Pty Limited
Level 27, 680 George Street
Sydney, NSW 2000

wsp.com