



NiuPower

Together We Can

NiuPower is an independent power producer owned jointly by Kumul Petroleum Holdings, Papua New Guinea's national oil company and Santos (ASX:STO). We own a 60MW capacity gas-fired power station in the Central Province of Papua New Guinea, supplying the Port Moresby Grid, operated and maintained by Wartsila.

Partnership

Our Operations and Maintenance (O&M) and Original Equipment Manufacturer (OEM) partner is Finland-based Wartsila.

Extractive Industry Partners of Choice

Together with Wartsila, we offer remote, off-grid or on-grid power generation solutions to the mining and oil and gas industry.

Risk Capital

We provide risk capital for the extractive industry's remote power generation requirements, incorporating a pragmatic pathway to achieving net zero emission targets by combining hybrid solar PV, wind, hydro and battery energy storage system solutions with thermal power generation. Providing risk capital to meet a customer's needs, permits customers to deploy material project construction capital elsewhere and assume the costs on their P&L.

Dual Fuel Thermal Power Generation

The thermal power component features Wartsila's unique dual fuel gas-fired or diesel power generation and diesel standby generation. This power generation foundation provides the customer with long term, guaranteed up-front reliability. If the customer's preference is turbine technology, this can be incorporated together with renewable energy.

Pathway to 'Net Zero' Emissions

In a phased, modular approach, we can add wind capacity, a solar PV array, a battery energy storage system and hydro capacity, slowly retiring thermal generation as agreed with the customer. The customer may opt to start with 100% thermal power generation and over the life of a project, transition to a net zero emissions goal with thermal power generation providing redundancy.

Commitment to a Net Zero Future in our lifetime

We aim to raise the industry benchmark in renewable energy integration and this demonstrates our commitment to power decarbonisation.

Reliability

We have the ability to operate power stations in a manner that maximizes renewable power, with a renewable energy guarantee included in the definitive arrangements.

Flexible, Modularised Approach

This flexible, modularised and hybridised approach would not be possible without Wartsila's proprietary GEMS technology using AI to optimise dispatch to meet a customer's desired cost and carbon emission profile.



2 Years to Deliver
60MW Power Station



Year 1
Dual Fuel



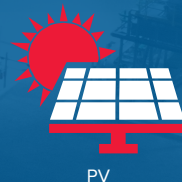
Year 1+ Pathway
to Hybridised
Net Zero Future



WIND



HYDRO



PV



Establishing a domestic LNG supply chain

NiuEnergy is a natural gas aggregator focused on commercialising the distribution and consumption of domestic gas in Papua New Guinea.

- NiuEnergy has a 15 year gas sales agreement with PNG LNG (operated by ExxonMobil).
- We are testing the establishment of a PNG domestic gas market. We propose to undertake this by supplying LNG and CNG from a purpose-built small scale modular LNG Plant at Caution Bay. The LNG will be distributed to coastal provincial centres, mines and distributed power generation, largely based in Lihir, Lae and coastal power generation centres across our country.
- The large users of heavy fuel oil are all potential targets for this LNG market.
- PNG has legislation in place that supports WHO and IMO MARPOL's 2020 targets to ban HSFO (High Sulphur Fuel Oil) imports, reducing sulphur content in these fuels from 3.5% to less than 0.5%. While a number of import exemptions have been granted, the Department of Transport has been tasked with enforcing the legislation and preparing an orderly transition to cleaner fuels.
- This mid and downstream business, largely involving LNG transport, storage and regas, is proposed to be managed by independent entity, NiuEnergy, as a 50/50 joint venture JV with Kumul Petroleum. In this role, NiuEnergy would produce LNG as an energy aggregator for local markets, on an arms-length basis, and sell to the mines, industrial and coastal generation centres.
- NiuEnergy would also be tasked with developing a LNG and/or CNG Pilot in Port Moresby. This trial will source gas from the Port Moresby Power Station.

Proposed Supply Chain Infrastructure



POWER SOLUTION



NiuEnergy is working with Chinese OEMs on small scale liquefaction, storage, transportation and regas solutions for potential customers

Hiri West Energy Hub

