



05 SEP, 2023

Right place, right time for new wave of industry

Australian Financial Review, Australia

Page 1 of 1

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The planned doubling of silica sand mining in Cape York Peninsula over the next three years, and a re-opened Tungsten mine at Mt Carbine, north of Cairns, are key drivers in FNQ's prospective rejuvenation. Neil McIntyre, CEO of silica mining company Diatreme, says prospects are "extraordinary" and "North Queensland is due for a boom over the next two-three years".

Diatreme's silica sands project at Cape Flattery, about 220 kilometres north of Cairns, plans to double the area's silica sand mining output. This is on top of Mitsubishi's existing Silica Sands mining and shipping operation in the same area.

Pre-mining, Diatreme's projected output of 3-5 million tons a year is already locked into a China that dominates the manufacturing of solar photovoltaic (solar PV) panels and components.

Silica is the key element for making solar panels. Silica sand is melted into an ingot, the ingots are sliced into wafers, wafers are made into solar cells, the cells are laminated



Neil McIntyre, CEO of Diatreme.

into glass, and the glass is framed into a solar panel.

According to the International Energy Agency, China's global share of all stages of solar panels production exceeds 80 per cent.

In geopolitical terms, this concentration contains risks for countries like Australia, with US-China tensions and solar contributing a growing share of the renewable energy mix.

Environmental issues are constraining supply because much of the sand mined in Asia is sourced from freshwater river banks.

"Dwindling output and environmental concerns are putting pressure on global supply, just as demand increases from Asia's fast-growing solar power industry and other

glassmakers," says Diatreme's Neil McIntyre.

"It's a perfect storm for emerging producers such as Diatreme. We are extremely well-placed to benefit."

An extraction rate of five million tons of silica a year from the Cape Flattery region "is capable of being sustained for 25 years," he says.

China looms large in Diatreme's projected revenue stream, with contracts mediated by board director member William Cheng Wang.

Diatreme has signed an MOU with Flat, a Chinese solar panel manufacturer, and is discussing plans with half a dozen other prospective Chinese purchasers.

Tungsten mining has also resumed at Mt Carbine, 120 kilometres north-west of Cairns, where tungsten was originally discovered in the late 19th century.

EQ Resources Limited has a joint venture with metals recycling group Cronimet and upgraded Mt Carbine's processing plant. Installation of new, sensor-based, sorting technology "has seen a 20+ times upgrade of

feedstock grade", the company says.

Tungsten is commonly used in heavy metal alloys, such as high-speed steel, and in so-called "superalloys" to form wear-resistant coatings.

Meanwhile, the projected downstream processing of silica in Townsville could lead to the local production of glass panels, batteries and even solar panels.

Cape Flattery's high-grade silica could be exposed to heat, acid washing and grinding processes in a new Townsville facility, with the processed product used in microchips and computer screens.

"Silica is the real opportunity," McIntyre says. Purifying, or turning silica into silicon metal, and using the product in chips, microprocessors and solar panels, "has a real role".

Ralph Evans, a former Austrade CEO, onetime head of the Australian Institute of Company Directors, a management consultant and chemical engineer, says: "Townsville is becoming a major centre for the new wave of industry." **AFR**