

MINE POWER

SUSTAINABLE POWER SOLUTIONS FOR MINING APPLICATIONS



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COVID-19 TAKES ITS TOLL ON MINE PRODUCTION

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THIS MONTHS' FEATURE:

MAJOR MINERS FALLING SHORT OF PARIS CLIMATE GOALS

Though some are making progress, most of the world's ten largest mining companies are not on a path to hit the Paris Climate Agreement target of net zero carbon emissions by 2050, based on new research by the [Transition Pathway Initiative](#).

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8 LEADING EDGE RENEWABLE PROJECTS IN AUSTRALIA

Australian mining is investing increasingly heavily in renewable power for both economic and environmental reasons, according to a recent article in [Mining Technology](#). With the industry under greater pressure than ever to reduce its environmental footprint, MT looks at eight projects leading the way.

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SUPER-HIGH TEMPERATURES ALLOW 247SOLAR TURBINES TO OPERATE WITHOUT BURNING FUEL

247Solar Plants™ operate at 970°C (1800°F), 50% hotter than previous Concentrated Solar Power (CSP) technologies. This allows their turbines — which spin to produce electricity — to be driven using only super-heated air, without the need to burn fuel.

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The coronavirus pandemic has forced governments across the globe to shut down many non-essential businesses, including many mining operations. According to the latest report from GlobalData (via [Kitco News](#)), temporary shutdowns had affected more than 1,600 mines across 32 countries as of April 3. In addition to temporary shutdowns, some working mines were functioning at reduced capacity.

In terms of impact on various commodities, silver was hit the most, with an equivalent of 65.8% of yearly global silver production on hold as of April 27. In comparison, 32% of uranium production, 23.8% of zinc, 19.5% platinum, 14.6% of nickel, 14.4% of diamonds, and 12.7% of copper, 12% of lead, 10% of manganese, and 9% of gold were suspended. [Read more](#)

8 LEADING EDGE RENEWABLE PROJECTS IN AUSTRALIA

Australian mining is investing increasingly heavily in renewable power for both economic and environmental reasons, according to a recent article in [Mining Technology](#).

Australia has lofty targets to reduce its emissions to 26% lower than 2005 levels by 2030, and 5% below 2000 levels by 2020, based on agreements signed in Paris and Copenhagen respectively, but is on track to miss both goals unless it takes drastic action to improve its environmental performance, according to Climate Action Tracker.

With the industry under greater pressure than ever to reduce its environmental footprint, MT looks at eight projects leading the way.

- Granny Smith gold mine – Laverton, Western Australia
- Gold Fields' Granny Smith
- Degruessa copper and gold mine – Doolgunna Station, Western Australia
- Cannington silver and lead mine – McKinlay, Queensland
- Mount Cattlin lithium mine – Ravensthorpe, Western Australia
- Port Gregory garnet mine – Northampton Shire, Western Australia
- Mount Lyell copper mine – Queenstown, Tasmania
- Boonanarring mineral plant – Gingin Shire, Western Australia

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This is made possible by an innovative high-temperature heat exchanger that is the most compact and materials-efficient for its capacity in the world. Based on an exclusive design from supplier Capstone Turbines, the 247Solar Heat Exchanger™ is manufactured using a remarkable nickel-chromium-aluminum-iron alloy – HAYNES® 214® — designed to provide ultra-high temperature performance while allowing for conventional forming and joining.



This is a photo of our turbine and heat exchanger – one of several breakthrough components that make 247Solar Plants an ideal solution for producing round-the-clock clean power without batteries or backup gensets.

MAJOR MINERS FALLING SHORT OF PARIS CLIMATE GOALS

Though some are making progress, most of the world's ten largest mining companies are not on a path to hit the Paris Climate Agreement target of net zero carbon emissions by 2050. This is based on new research by the [Transition Pathway Initiative](#), a global initiative led by asset owners and asset managers that assesses companies' preparedness for the transition to a low-carbon economy.

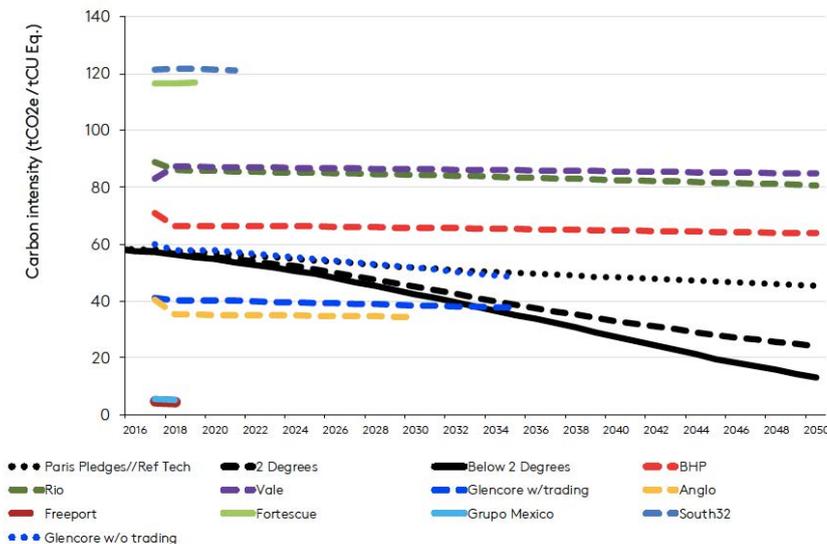
According to a [discussion paper](#) released just this month, only two of the ten largest diversified mining companies by market capitalization, Freeport and Grupo Mexico, are on

track to hit their 2050 goals. Two others, Glencore and Anglo American, are performing well today but not reducing emissions significantly enough to remain aligned with Paris benchmarks after about 2030.

"The sector has made significant progress over the last six months," says Adam Matthews, Co-Chair of the Transition Pathway Initiative. "Several companies ... have announced new, more ambitious emissions targets ... but without further action are due to become unaligned with the goals of the Paris Climate Agreement."

To assess the diversified mining sector's Carbon Performance, TPI calculates the emissions intensity of each firm and compares these against sector benchmarks which reflect international climate targets. The emissions intensity of operations varies widely by natural resource, location, and extraction method. To compare companies with diverse portfolios, TPI uses a "copper equivalent," defined as the weight of copper that has a revenue equal to that of the commodity in question. The results of their study are shown in the adjacent chart. 2019.

Figure ES1. The Carbon Performance of the ten largest diversified mining companies*



"The sector has made significant progress ... but without further action [companies] are due to become unaligned with the goals of the Paris Climate Agreement."

Adam Matthews - Co-Chair of the Transition Pathway Initiative

FOR FURTHER READING

Topics of interest at the intersection of mining and sustainability.

MINING.COM:

[Renewables overtake coal-fired power generation for first time](#)

ENERGY AND MINES:

[How to Manage Risk in Renewable Power Contracts](#)

DOWNLOAD OUR BROCHURE



Click on the image at left to learn more about 247Solar Plants™ and the unique attributes that make them particularly well-suited to mining applications in remote, off-grid locations.



ROST International Trading Limited

247Solar has appointed UK based ROST International Trading to assist in developing their business.

Founded in 2014 by partners Stuart Whitelock and Paul Foster, ROST operates in the Renewable Energy, Energy and Water industries.

[Contact Stuart Whitelock](#)
www.rostinternational.com