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## Towards Profitable, Zero-Emissions Mining: Q&A with Sunrise Energy Group

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By John McCloy, **Energy and Mines**

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Editor's Note: Neil Canby, Executive Director, Sunrise Energy Group is co-presenting with Patrick Mutz, Managing Director, Image Resources at Energy and Mines Australia Summit, June 27-28, Perth. Visit <http://australia.energyandmines.com/> for details.



**Neil Canby**  
Executive Director  
Sunrise Energy Group

As the Australian mining sector comes under increased pressure to improve its social license to operate, the benefits of integrating renewable energy generation continue to grow, according to Neil Canby, Executive Director of the Sunrise Energy Group.

While the cost savings generated by renewable energy continue to be the primary driver for its adoption, the social and ecological benefits of renewables integration are becoming increasingly attractive to mining companies, as Australia continues its transition to a low-carbon economy.

In this Q&A interview, Canby explains that, as stakeholder and regulatory pressure mount for the mining sector to reduce carbon emissions, those companies taking leadership roles in renewables adoption are benefitting from significant economic and social license advantages.

**Energy and Mines: What is unique about Sunrise's approach to renewable energy projects for mines and other large industrial customers?**

**Neil Canby:** There are three main factors that make Sunrise's approach to renewable energy projects

unique. Firstly, we are distribution focussed; it's what really motivates us and is the driving force behind the solutions that we provide. We are equally well equipped to work with off-grid and grid-connected mines, which allows us to adopt a more horizontal, rather than vertical, approach to our partnerships with mining companies.

Secondly, our approach is hugely collaborative. We are primarily a project developer, and will always be a project developer, so we seek to partner with others to deliver and finance our projects. We believe taking a collaborative approach mitigates risk for our customers and provides the best possible project outcome. It also allows us, as a company, to remain nimble and adapt to the changing face of the renewables industry.

The third factor is our focus on renewables. We are a new industry player and don't have any legacy fossil-fuel based business to concern us. Our focus as a company is entirely on renewable energy. We offer a range of solutions, from hybrid systems that provide part of customer's energy needs, to renewables projects capable of supplying their full energy requirement. Our focus is on providing the best renewable option for our customer and that's

core to our approach.

**E&M: What do you see as the benefits of these partnerships for mining customers?**

**NC:** There are both long and short-term benefits for the adoption of renewable energy generation by the Australian mining industry. The call for lower carbon emissions is very well supported across society, and mining companies are increasingly being called upon to take leadership roles in emissions reductions. In the mining industry in particular, it's about achieving both the environmental outcomes and helping them work with the local communities in which they operate their mines. Providing those communities with economic stimulus, ongoing employment, and ensuring the mine's social license to operate.

There are also economic outcomes for renewables adoption that are financially attractive to mining companies. Typically we can help mines achieve 20 to 25 percent of their power consumption through a renewable solution, with almost no impact on the reliability of their power generation. This both lowers carbon emissions and reduces the mine's reliance on fossil-fuel based generation. The cost

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savings available from renewables lead to improved profitability for mines.

In the case of long-term benefits, we approach the adoption of renewable energy as an evolution, not a revolution. We firmly believe that renewable energy generation has reached a point where a profitable zero-emissions mine is entirely possible. Especially when you consider the advancements in the electrification of mobile fleets and mine vehicles as well as the emergence of both affordable energy storage and the hydrogen economy.

The adoption of renewable energy by the mining industry is both a commercial and ethical investment, and there is a wide range of support available for that transition. What we’re starting to see is a lot of green funds looking to support companies who are taking leadership positions on emissions reduction. Part of our collaborative approach is helping mining companies put in place the ethical outcomes that they’re seeking to achieve, but with the minimum of risk. We build an investment community to finance our projects, and they rely on us to make economically sound decisions and adopt a risk approach that ensures the performance of the mine isn’t impacted.

**E&M: How would you describe the level of interest and engagement right now from mines on renewables integration in Australia?**

**NC:** For me, the current level of interest and engagement is the highest it’s ever been, and I suspect it’s only going to increase. I think many miners have decided that they want to incorporate some form of renewable energy and they are currently working on what I call their “execution strategy”. They know what they want to achieve, and now it’s a matter of thinking through how they want to go



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about it. I think that’s the position a lot of the Australian mining sector is in right now.

Going forward, I think we’ll see increasing investment in renewables and engagement with the market, as mining companies decide who they are now going to work with to achieve their desired outcomes. This is an incredibly active time for the renewables market in Australia.

**E&M: Where do you see the biggest opportunities for mining customers to integrate renewables?**

**NC:** Grid-connected mines offer an excellent opportunity for the integration of renewables. Everyone understands the concept of putting solar panels on your roof at home. What those panels do, how it works and how it saves you money. What we do with grid-connected mines is essentially the same, but on a much larger scale, and the economic savings to be had for grid-connected mines are substantial.

In addition to the financial benefits, grid-connected mines are in an excellent position to reap the social benefits of renewables integration. This is because, typically, grid-connected mines operate within communities. There are often towns and associated infrastructure in close proximity to the mine. For us, this represents the most significant opportunity to provide both social and economic benefits through the adoption of renewables, and the results are quite compelling.

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That being said, the business case for off-grid mines with good solar resource available to them is incredibly financially compelling. The challenge for renewables on off-grid mine sites is financing those projects based on mine life. The benefit of being grid connected is if the mine only has a short mine life, the financier can then sell merchant energy back to the network. In the case of off-grid mines, you need to pack up the solar farm at the end of the mine’s life and move it somewhere else or risk it becoming a stranded asset.

**E&M: Sunrise is leading the development of Image Resources solar farm to its Boonanarring mine and processing plant. What were the main drivers for this project?**

**NC:** Image Resource’s leadership team were very motivated by the social and environmental outcomes a solar farm could deliver right next to the mine. The economic outcomes, while welcome and reasonably sized, were not the primary driver for them. Their focus was on their range of stakeholders and what they could provide for those stakeholders, the Government, the local community and their employees.

**E&M: What effect is the timestamp on Renewable Energy Certificates (RECs) having on the market for renewable projects for mines?**

**NC:** In many ways, it’s confusing the mining community. We spend a lot of time with our clients trying to build some clarity on what the RECs are, how they work and what is likely to happen to them over time. If you segregate the market, REC’s still have a lot of value for grid-connected mines. Effectively what a grid-connected mine can do is take the RECs that come out of a solar farm and provide them to their retailers to cover their REC liability. What this does

is give them some certainty around their REC costs for the next 12 years, rather than leaving it to the retailer or the market to determine what that price may be over that period.

For off-grid mines, I think the opportunity to monetize RECs has passed. At the moment the REC market is predominantly about retailers buying a bundled energy and REC product to manage their energy and REC costs collectively over the next 12 years. The market for independent or standalone RECs is very small, and we don’t see a market for long-term contracts in that space.

That being said, I still think many off-grid projects stand up on an energy-only business case and obviously if federal legislation changes and the targets increase, that will be a bonus for everyone.

**E&M: How do you see the market changing over the next 24 months?**

**NC:** If you break the renewables market down, I think we will see a slowdown in the large, independently grid-connected solar and wind projects as there are just too many projects currently in that space. Everyone wants to come out with an even lower price for energy than the previous price, and it feels like a race to the bottom at the moment.

I firmly believe that commercial and industrial solutions will be the primary focus for the next 24 months as that customer base looks to take control over their energy costs more directly. I suspect there will be a higher expectation placed on large businesses, from both shareholders and society in general, to be seen to be contributing to the renewable energy targets that have been put in place.

What we will also see over the next 24 months is the

rise of storage, and I think more so in the big battery space than in the small battery space. The economics for storage as a “price arbitrage only” solution are not there today, and I don’t think they’ll be there for some time. Where storage does provide value is in services like spinning reserve, ancillary services or even UPS style capabilities. There is genuine value in those solutions today, and that value can be applied to both grid-connected and off-grid deployments.

**E&M: What advice would you offer a mining executive currently considering renewable energy options?**

**NC:** Be bold! Token projects are of no value to anyone. The days of installing a 1 Megawatt solar farm are gone, and you need to be bolder than that to achieve the outcomes you’re aiming for. I would also say it’s essential that you understand that integrating renewables is a journey, you don’t have to get to the end game in one leap. It’s important to focus on the first step on that journey, and for us, that means installing reliable renewable generation capability first and letting everything grow from that.

I would also say you don’t need to take unnecessary risks. Mining companies don’t need to design, build, own and operate a renewable project in-house. Let the market take the risk out of these projects. There’s plenty of good repeatable solutions out there, and there is the necessary experience and capability in the resource base to execute projects successfully. There are also specialist financiers, especially in the mid-cap market space, where the capital return expectations of specialist financiers would be substantially lower than that of the equity shareholders in some of the mid-cap miners. ■

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