

THOUGHT LEADERSHIP



RENEWABLES ARE NOW A COMPETITIVE ALTERNATIVE FOR MINES IN AFRICA



RENEWABLES ARE NOW A COMPETITIVE ALTERNATIVE FOR MINES IN AFRICA



Enrique Collado
General Manager,
South Africa
SUNEDISON

Enrique Collado, General Manager, South Africa at SunEdison discusses the advantages renewables can offer mining operators in African countries including pricing that has reached grid parity. He also addresses the critical question of financing for these projects which can be complicated by mine lives and country risk.

Q: How would you describe the opportunities for collaboration between African mining operations and renewables to address the power crisis and constraints mines are facing in some countries?

A: Solar and wind energy levelized cost of electricity (LCOE) is already competitive in many countries across Africa. Actually in countries where there is no grid or it is unreliable, renewable energy sources is a compelling alternative given the significant savings that can be achieved when compared to conventional sources of energy like diesel generation.

Q: Recent supply shortfalls in South Africa and Ghana are driving mines to review their energy options. Do you think we will see mines move towards self-generation?

“More transparent, easier and shorter permitting processes, combined with access to more competitive financing, will help us to expand the industry further.”



A: Distributed Generation with renewable energy sources is a trend that will allow companies to benefit from clean and reliable energy at competitive prices, and to solve supply issues. Grid parity is already a reality in countries such as South Africa.

Q: What do you see as some of the hurdles to project implementation that often come up for mining clients?

A: Typically one of the main issues is that the project viability is subject to the life of the mine. For mines with project lives' below 10 years, it is difficult to make the economics work in most countries. Also permitting in countries like South Africa is still a lengthy process which can take from 6 to 12 months.

Access to financing may also be a hurdle as well in some countries in Africa and this is where SunEdison has a competitive advantage: our financing capabilities and strong balance sheet is putting us in a better position to raise the required financing for these capital intensive projects.

Q: How can the international renewables industry position itself to address these issues and open up the market for utility-scale and microgrid projects for mines?

The renewable energy industry needs to continue educating the financial industry and the energy regulators. Both are key players and their support will be critical in the development of utility-scale renewable energy projects for the mining sector. More transparent, easier and shorter permitting processes, combined with access to more competitive financing, will help us to expand the industry further.

Q: Do you hear different concerns from major mining houses vs. junior/early stage mines around energy and integrating renewables?

A: They both share similar concerns: they are worried about the reliability of the energy supply and the unpredictable energy price increases. Both also share the view that renewable energy is an attractive alternative in the current environment. However, access to capital is typically more challenging for junior mines. SunEdison is ready to provide solutions to both junior mines and major mining houses.

Q: Based on SunEdison's experience with mining clients implementing large-scale solar projects for CAP and Antofagasta, what are some of the lessons learned? What drives these projects to succeed?

A: A professional approach to client relationships is key: understanding clients' needs, their business and the particular cycle it is in, and their use of and perspective on energy. Furthermore, a lot of effort goes into reassuring clients on the effectiveness of the solution, and the fact that with these type of projects and clients, the project sponsor quality is key to the successful execution and long term viability of the project.

Q: How do you see the model for energy solutions for mines changing in terms of the technologies used?

A: Hybrid solutions involving solar/wind and thermal generation are the most competitive and compelling way to provide baseload power to mines that are not grid-connected. In the not too distant future, storage will substitute the thermal generation side competitively. Grid connected mines can instead rely on the grid to complement solar and wind's variability. Fortunately, SunEdison now engages on all types of renewable energy solutions and can therefore use the one or the combination that is best for the client.

Q: Do you have some ideas for ways around the financing issue where the life of mine is say 10 years and



RENEWABLES & MINING SUMMIT AND EXHIBITION

JOHANNESBURG
JULY 1-2 2015

Can the power crisis in African mining be solved with renewable energy?

Join **300+** mining and energy experts addressing the energy crisis on July 1-2 at the 2nd annual Renewables and Mining Summit – Africa, including:



Visit www.energyandmines.com/africa for full details

Organized by
ENERGYANDMINES



“Grid parity for renewables is already a reality in countries such as South Africa.”

the project payback is 20 – what would be essential to de-risk that deal?

A: In grid connected mines, the involvement of the TSO (transmission system operator) is key to ensure you can have alternative venues to your energy in case of shorter-than-asset-lifetime PPAs.

Q: The issue of intermittency sometimes comes up when discussing a mining executive’s concerns around integrating solar or wind – how would you re-

spond to this concern?

A: Hybrid solutions can provide an effective 24/7 approach to mining companies– the technology is already proven. The key is having the right sponsor that can integrate the different aspects and technologies of the solution and, equally if not more importantly, be able to back the energy delivery obligations with an important balance sheet to give peace of mind to the client.

Q: What about O&M for these projects – how is that working for your projects in Chile and what do you think the preferred model will be in Africa?

A: O&M conducted by SunEdison is ensuring that our plants in Chile are delivering the expected energy and results. These plants, together with the 1MW we operate in UAE, have provided us an excellent expertise in desert environment where sand and distance from sources of water are key aspects.

Q: What are you looking forward to at the Renewables and Mining Summit and Exhibition on July 1-2 in Johannesburg?

A: Brainstorming around novel solutions with our technical partners and colleagues from the industry is always high on our agenda. Furthermore, we look forward to engaging with our clients and potential clients around their needs and solutions we can offer.