



THE BARRIERS TO FURTHER INTEGRATION OF RENEWABLES IN MINING

AN INTERVIEW WITH **SCOTT FRASER**, DIRECTOR
OF POWER PROJECTS, **BARRICK GOLD**

BY **ELIZABETH JUDD**, EXECUTIVE CORRESPONDENT, **ENERGY AND MINES**



Scott Fraser
Director of Power Projects
BARRICK GOLD

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Scott Fraser, Director of Power Projects at Barrick Gold, describes the various industry pressures, ranging from greater competition for capital because of lower metal prices to the expense of electrical energy storage, that delay the widespread acceptance of renewable energy within the mining sector.

Q. What has changed in the last year in terms of Barrick’s interest in renewables and exploration of renewable energy options?

A. The mining industry, in general, is facing lower metal prices, which means renewable energy projects have to compete with other sustaining capital investments. That becomes one of the biggest challenges for completing renewable energy projects given the strong demands for capital at this point in time.

Q. More broadly, within the last year, what has changed in terms of the energy needs and strategy for your mining operations?

A. Where we have our own special-purpose transmission lines for receiving power from the national grid, we are seeing a lot of interest from renewable energy developers in connecting to those lines and transmitting their renewable energy to the national markets.

Right now, we have interest from multiple solar, and wind developers. But with the increased demand for renewable energy due to government regulations and the recent cost reduction in renewable energy technologies, those special-purpose lines have now become opportunities for renewable energy developers.

Q. Where have you seen the greatest interest in buying energy from mine-related projects?

A. Chile is a very good example. We’re in discussions with several renewable developers at this point in time. We’re seeing demand from developers for both wind and solar projects in Chile, and they’re very actively looking to connect to our transmission systems, which would allow them to market their renewable energy.

Q. What types of information would you find useful when assessing the potential role of renewables for a particular mine site?

A. As we develop an inventory of renewable energy alternatives for either an existing or new mine sites, we are investigating both the renewable energy potential, as well as the opportunities to develop third-party partnerships for the major capital investments required for these renewable energy projects.

RENEWABLES & MINING SUMMIT AND EXHIBITION

Toronto, October 15-16 2014



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October 15th-16th, Toronto

Marriott Downtown Eaton Centre Hotel

Building on the success of the first two sell-out Summits, the 3rd Renewables and Mining Summit and Exhibition will create the essential nexus of mining energy decision-makers, renewables developers, integrators, service providers and financial experts needed to create successful mining – renewables project opportunities.

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Q. How do you see the energy needs of mines changing over the next five years?

A. In general, with declining grades of ore and more sophisticated refining processes, the energy used per unit production is expected to increase further. There's not as much metal per ton of ore, so we have to process more ore to get the same production.

The penetration of renewable energy into operations is constrained by the variable nature of solar or wind resources. The possibilities for electrical energy storage are increasing, but it is still prohibitively expensive. It remains more economical to use diesel generation versus installing electricity storage devices, such as batteries.

Q. What is the current structure at Barrick Gold for making energy decisions for your operations? Who is involved in the process for analyzing the various options and securing approvals?

A. The energy decisions associated with new developments are integrated into the Life of Mine Planning process. That's a very rigorous, long-term planning process. The existing sites continually update their sustaining capital plans and frequently find it is quite difficult to match the remaining Life of Mine with the payback period required for most renewable energy projects. A specific mine may have a remaining life of seven years, and a renewable energy project might require a payback of twelve years.

Q. Who at your company makes the ultimate decisions on energy projects?

A. For the existing mines, decisions are made by the corporate energy senior manager, who has corporate oversight over the energy planning process. In addition, each mine site has an energy champion. The senior energy manager and the site champion jointly will identify and justify which renewable energy projects will then be compared to other sustaining capital investments.

Q. Is there a type of information that you wish energy providers could give that would help you determine whether renewable energy would be feasible for a given mine site?

A. I'm interested in knowing about the interest that third-party renewable energy partners might have in working in different jurisdictions. For example, some countries are very attractive for renewable energy developers to invest in. Others, which maybe have a less secure investment climate, may not be of interest to the renewable energy developers.

Q. What are you most looking forward to at the Renewables and Mining Summit in Toronto on October 15-16?

A. I'm looking forward to reconnecting with my peers, both in the renewable energy and the mining industries.

Scott Fraser will be speaking at the Renewables and Mining Summit and Exhibition, Toronto, October 15-16. Details at www.energyandmines.com/toronto.