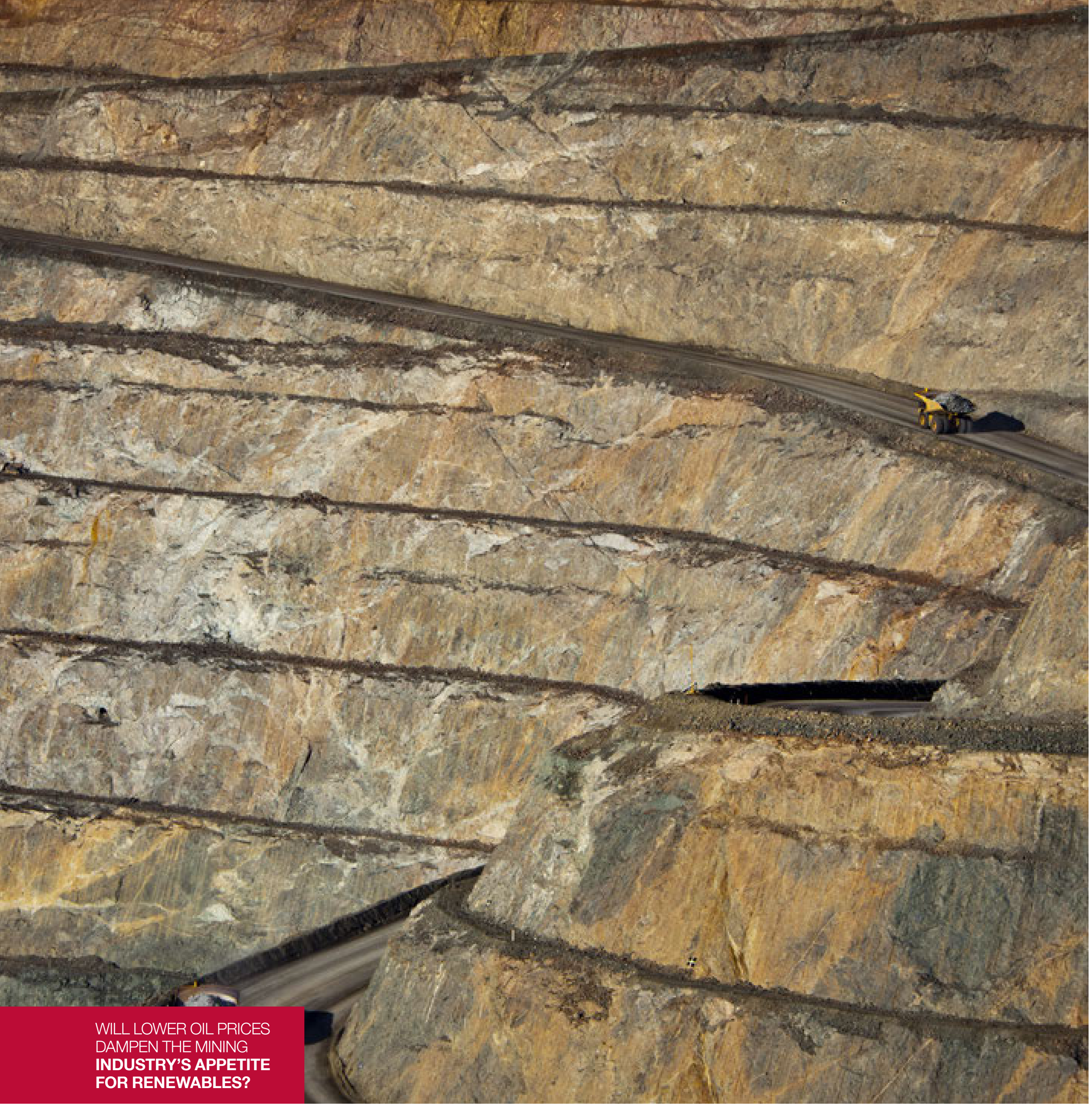
WILL LOWER OIL PRICES DAMPEN THE MINING **INDUSTRY'S APPETITE FOR RENEWABLES?**



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By **Elizabeth Judd**,
Correspondent, **Energy and Mines**

For many mining companies, the rallying cry for investigating solar or wind energy options has been that the price of oil and other conventional fuels is too high -- and will almost certainly rise over time. Now, though, with oil prices having taken a dramatic nosedive, this argument no longer packs quite the same punch that it once did.

Predicting the price of oil over the long term is notoriously hard to do. That said, current overproduction, a slowing in demand because of a prolonged worldwide economic recession, and conservation efforts could mean that lower oil prices are the norm for the immediate future.

According to Richard Young, president and CEO of Teranga Gold, lower oil prices certainly do "work against replacing existing fuel sources with renewable energy at lower prices." He points out that one chief motivator for exploring alternative energy was rising oil and diesel prices.

IAMGOLD recently put a proposed solar project for its Essakane Mine in Burkina Faso on hold. Although

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Chilean mines are actively seeking new energy solutions to reduce and secure energy costs for grid-connected and off-grid operations. With energy accounting for 20-40% of operating costs, reducing electricity expenditure is a now a major operational and strategic goal for Chile's mining leaders and renewables is set to play a significant role in meeting this aim for remote and grid-tied mines.

Following sell-out events in Toronto and Johannesburg, the 4th Renewables and Mining Summit & Exhibition will showcase the latest renewables-mining projects from Chile and address the key challenges for additional projects including innovative finance solutions.

Join Nelson Pizarro Contador, CEO of Codelco, and Fernando Reitich, President and CEO of CAP plus representatives from mines including:

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“[Lower oil prices] work against replacing existing fuel sources with renewable energy at lower prices,”

- **Richard Young**, President and CEO of **Teranga Gold**

there were a number of factors behind this decision, oil prices were part of the mix.

“When you are looking at $50 a barrel oil for the next two years,” says Steve Letwin, President and CEO at IAMGOLD, “it will push the business case [for renewables for mines].” He continues: “Everything has to be driven by economics. So part and parcel with the drive to renewables was [the fact that] oil prices were $100 a barrel. That made our costs [in Burkina Faso] come in at around $0.32 per kilowatt hour. If that drops to $0.20, the economics change.”

Although some mining companies may pull the plug on alternative-energy projects, it’s believed that most will go ahead with these initiatives. A recent study conducted by THEnergy, a Munich-based energy consultancy, finds that while lower oil prices might slow the momentum of mining companies’ switching to renewables, already planned projects will still go ahead.

A Short-Term Phenomenon?

Energy costs can represent a sizable chunk of the operating expenses for any mine. Alfredo Lamego Duarte, global senior category manager, electrical energy and EC&I at Anglo American, says that in Brazil, diesel accounts for roughly 20% of operating costs for mining companies. He explains that exact percentages vary by ore, however, with energy costs for a nickel mine coming in at 20-25% and for an iron mine at less than 2%.

Meanwhile, the price of oil isn’t the sole factor in what a mine pays for energy. Young notes that custom duties, petroleum charges, refining costs, and the expense of transportation to a given site can alter the energy price equation considerably.

John Gingerich, chairman and president of Advanced Explorations, believes that the impact of lower oil prices will be felt in the short term but it is not a game changer over the long term. “Life-of-mine issues are such that if you’re going to production right now, and you’re considering energy, [oil prices] could affect the first couple years of production.” He continues: “But no one believes that oil is going to be $40 or $50 per barrel in the long term. Most of the analysts believe that the fundamentals still say $75 down the road.”

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Given that a typical mining company takes three-to-five years to get a project up and running, the short-term price of oil is not terribly relevant, contends Gingerich. He points out that if oil does return to $75 per barrel within the next few years, “the cost benefits of renewables will still be there. Big copper mines run

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Fernando Cubillos, a partner at the Santiago-based energy advisory firm Antuko, is also skeptical about the notion that falling oil prices are having a major effect on the appetite of mining companies for renewables. Far more consequential, he says, is the slump in commodity prices that has caused mines to be less competitive and more wary when considering capital investments.

Young agrees, noting that cost-cutting has been a major priority at gold-mining companies in recent years, with lower head counts and improved productivity the inevitable results of a decline in gold prices. “With the recent reduction in the price of oil as well as currency, that helps to assist us with cost reductions as well as improve our margins even though the commodity price-- in our case, of gold-- has been relatively flat over the past two years,” he says.

No Two Mines Are Alike

In addition to life-of-mine issues, the effects of oil prices differ dramatically for on- and off-grid mines. Cubillos points out that renewables continue to be an appealing solution for off-grid mines that historically shipped diesel long distances in order to run generators. “If we go to the off-grid case, renewables are still highly competitive,” he maintains.

Duarte emphasizes that the impact of oil prices varies by what ore is being mined and where a mine is located. In Brazil, for instance, he notes that the government controls the price of oil through Petrobras. For this reason, he says, “what happens to the international markets with oil doesn’t affect the mine companies so much in Brazil.”

Finally, Duarte points out that politics can affect the appeal of renewables for mining companies because some countries offer incentives for using solar or wind power. When renewables don’t necessarily prevail on price, government can prove critical. Here, he cites the Chilean government’s requirement that part of the load at mines must come from renewable sources.

Finally, renewable energy companies may need to highlight environmental considerations in a lower-priced oil environment. “Mining is a big emitter of CO_2,” says Cubillos. “Renewables are becoming an even more necessary source of energy to lower emissions.”

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Gingerich sounds a similar theme, noting that renewable companies might emphasize the "social stewardship" aspects of their energy generation. "Unless the numbers are hugely to the advantage of one source or another-- and oil at $75 per barrel doesn't have much of an advantage-- the benefits that renewables bring from an environmental-footprint point of view are a driving factor," he says. Environmental concerns, he believes, "will keep the mining industry moving forward in the renewable sector."

A Brighter Future?

If the fate of renewable-energy providers and mining companies are inextricably linked, then the short-term boost that mining companies are enjoying from lower oil prices might prove to be very good news for all concerned.

For instance, for copper-mining giant Codelco, the opportunity to renegotiate energy contracts in the face of lower oil prices will reportedly help the company reduce costs by $1 billion in 2015-- austerity measures that Codelco has deemed necessary for the company's survival.

What's more, Cubillos is convinced that in many ways lower oil prices are a boon not only for the mining companies but for renewable energy providers, as well. In the end, mining companies can only invest in renewables if they survive a tough commodity-pricing environment and are economically robust enough to invest outside their core businesses. That the price of wind and solar energy is falling, too, makes these new sources of energy very attractive.

"It's a good trend for everybody that both oil prices and development costs for renewables are going down," he concludes. "That makes energy prices in the end much lower and improves the competitiveness for the industries that rely on energy for the majority of their costs."

Renewables and Mining Summit and Exhibition,
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Details at **www.energyandmines.com/chile**