How Mining’s Global Giants are Tackling Today’s Energy Challenges: BHP

By Kate Dougherty, Energy and Mines

Critical insight from BHP’s Climate Change Practice Lead Graham Winkelman
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Rising energy prices and looming carbon targets are incentivizing companies of all sizes to adjust how they acquire and use power. For mining magnates with well-entrenched, global reach, that may mean rethinking nearly every aspect of their operations.

Mining, metals, and petroleum company BHP is one of these giants. In its view, long-term sustainable development in the global resource sector will require two parallel developments: the continued growth of emerging economies, and a significant reduction in global greenhouse gas emissions. “For us, it’s about taking actions to reduce emissions internally and by adapting to the physical impacts of climate change... and working with others...to enhance that global response, which we know can’t be achieved or delivered by a single company,” Climate Change Practice Lead Graham Winkelman says.

The firm is currently developing a low-emissions technology strategy internally, and supports market mechanisms that provide financial incentives to make the change to lower-emissions outcomes, Winkelman reports. “If you ask me how [global carbon policy developments are] influencing our strategy, I’d say it’s a mix of both implementing the technology solutions that will deliver low-emissions outcomes to ourselves and our industry, as well as participating in that policy debate that puts the right policies in place that drive that change, or that steer that change, over the required amount of time.”

Key Climate Policy Developments for Miners

While Winkelman cites the Paris Agreement as a major climate policy development that will affect the mining sector, his company is most interested in how nationally-determined contributions will impact domestic and regional-level policy discussions. The strengthening of domestic policies in Australia, Canada, and Chile may impact BHP’s future emissions, as well as the emissions of the economies in which it operates.

The launch of China’s national emissions trading scheme (ETS) later this year is one example. That effort will be the world’s largest ETS, covering roughly 10,000 companies. “Certainly from our perspective there’s a tightening of efficiency through government standards, there’s reverse auctions and renewable energy targets that are driving renewable energy uptake, and we’re seeing carbon pricing schemes emerging, though not in the internationally coordinated fashion in which you would like these things to develop over time,” Winkelman relates. “So we’re not seeing that yet, but we’re seeing countries like China implementing these types of policies going forward.”

Shareholders Steering Carbon Strategies

Investors and other stakeholders are showing more interest in participating in corporate climate policy discussions, including those at BHP. While businesses have been having these deliberations for years, that new interest allows the discussion around what good policy looks like to be made more publicly, Winkelman says.

Consistent with this, “climate change is fully integrated with our corporate strategy and planning framework,” Winkelman states. The company has a robust strategic planning process that tests the resilience of its portfolio and investment decisions against a range of potential future scenarios. “The conclusion we reached is that the diversity of our portfolio uniquely positions us to manage and respond to changes that may be coming towards us over future decades,” Winkelman says. “It also allows us to capture opportunities to grow shareholder value as we progress through that transition.”

Minimizing Potential Financial Impacts of Carbon Policy and Pricing on Mines

Technology-neutral policies and a price signal that will steer investment in the right direction are the keys to meeting climate targets at lowest cost to businesses, Winkelman believes. “Our priority is to not only find lowest-cost abatement within our businesses, but also to advocate for policies that deliver that lowest-cost outcome. Because we know that the transition must occur, it will occur, and it’s already occurring—it’s already taking place,” he says. “We have an interest in advocating for that pathway to be done at lowest cost. And I think if we get that right, then we’ll achieve the goals of lowest cost and meeting the environmental outcomes” at the same time.

“Climate change is fully integrated with our corporate strategy and planning framework.”

Graham Winkelman
Climate Change Practice Lead
BHP

Translating Carbon Reduction Targets into Operational Energy Choices

BHP is working to stay ahead of the carbon curve. The firm has set a target for keeping its 2017 greenhouse gas (GHG) emissions below 2006 levels. Last year’s emissions were 13% below that baseline.

“That performance is driven in part by emissions reduction projects, and also improved productivity as we work towards lower-emissions pathways for producing the products that we provide to the market,” Winkelman reports. “To reflect the importance that our organization places on emissions reduction, we also measure the performance of our leaders and their ability to deliver those greenhouse gas outcomes over time, in line with our global target.”
BHP has three main categories of GHG emissions: fugitive methane emissions, transport emissions, and emissions associated with the generation or purchase of electricity. The company finds opportunities to reduce emissions within each of those buckets as technology develops over time.

The company is looking at reducing methane emissions by improving operating practices, including flaring. When it comes to transport at mining sites, improved operating practices have again led to GHG emissions reductions. Over time, we may see improved technology play a significant role. “We might see broader electrification of mines, potentially the reduced use of diesel-based transport over time towards broader electrification, conveyor belts, and these types of things to move material around, and that combined with lower-emissions electricity...may be a way to reduce emissions at some mining facilities,” Winkelman predicts.

BHP generates power on-site, and also purchases electricity externally. “We consider renewable options, and we will increasingly consider those going forward as the cost continues to decrease,” Winkelman reports. The company is investigating how it can use renewables in conjunction with its existing, largely fossil fuel-based electricity generation fleet, as well as the purchasing arrangements it’s maintaining to ensure energy security.

Lower-Emissions Outcomes Require a “Shared Journey”

No single company can deliver a lower-carbon future on its own. “For me, it’s really around finding those like-minded individuals, it’s discovering new technologies, it’s sharing that vision, I guess, of a lower-emissions outcome that will be ultimately a shared journey,” Winkelman states. He says the Energy and Mines Australia Summit this June 29-30 at the Pan Pacific Perth is an opportunity to do just that.

“It’s about joining with others, it’s about working cooperatively and collaboratively across that technology provider and technology user interface. Because we know that those solutions are out there, we know that those solutions are improving over time, and the cost is significantly decreasing, and we’re very keen to ensure that we are at the forefront of understanding that change.” •

BHP Greenhouse Gas Emissions (1)

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Editor’s Note: BHP’s Graham Winkleman will be presenting at the upcoming Energy and Mines Australia Summit, June 29-30, Pan Pacific, Perth. The Summit focuses on the role of renewables and storage technologies in driving down energy costs and securing energy supplies for remote and grid-tied Australian mines. Visit the event website for further details or contact Adrienne Baker, Director, Energy and Mines at adrienne.baker@energyandmines.com


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(2) In order to compare the total GHG emissions to prior financial years, GHG emissions (estimated) from South32 assets between the date of demerger and 30 June 2015 have been added to FY2015 GHG emissions as shown above.

(3) Scope 2 refers to indirect GHG emissions from the generation of purchased electric power that is consumed by operated assets (calculated using the market-based method).

(4) Scope 1 refers to direct GHG emissions from operated assets.

(5) The FY2006 baseline is adjusted as necessary for material acquisitions and divestments based on GHG emissions at the time of the applicable transaction.
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