

# COP28 and industry's transformational role

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## COMMENT



In his closing address at the COP28 summit in Abu Dhabi during December last year, the executive secretary of the United Nations Framework Convention on Climate Change (UNFCCC), Simon Stiell, said that COP28 needed to send a crystal clear signal: “a global green light signalling all systems go on renewables, climate justice and resilience”. He went on to suggest that COP28 “delivered some serious strides forward: a tripling of renewables; doubling of energy efficiency; operationalising the loss and damage fund; and making an initial down payment on a framework for the global goal on adaptation”.

Many of the initiatives, he acknowledged, are climate-action lifelines, not the finish line. “What I'm focused on is seeing these pledges converted into outcomes in the real economy where the rubber really hits the road on climate action,” he said.

So after 28 annual COP conferences we now have a lifeline! It is hard to feel any relief.

COP28, he continued, also signalled a “hard stop to humanity's core climate problem: fossil fuels. We didn't fully turn the page on the fossil fuel era in Dubai, but this is clearly the beginning of the end,” he assured.

He applauded concerns from Samoa and other island states that this latest consensus does not go far enough to protect their populations and the planet. He then slipped in that the world is currently still on track for a global temperature rise of nearly 3.0°.

“If all countries don't take the most ambitious approach to implementing the text, loopholes leave us vulnerable to fossil-fuel vested interests, which could crush our ability to protect people everywhere against rising climate impacts,” he warns. “Transparency, and people holding their governments to account, will be vital in closing these loopholes,” he added.

What I find heartening, though, is the progress being made by industry in providing some of the real-economy outcomes needed. We report in this issue, for example, on an emissions mitigation study by Weir Minerals that was presented at COP28. By replacing conventional crushing and grinding technology with innovative new solutions, this case study-based report found that energy use was cut by 40%, and CO<sub>2</sub> emissions due to comminution in mining were halved.

And as well as promoting sustainability, Paula Cousins, Chief Strategy and Sustainability Officer at Weir Minerals revealed that the study also resulted in lower operating costs for the mine. “Metals such as copper, nickel and lithium are critical elements of the technologies that will power a low carbon future, and it is widely accepted that a substantial

increase in the production of these metals is needed for the transition to net zero,” Cousins told COP28 delegates.

The cover story in this issue of MCA comes from Innomotics, a newly formed company carved out of Siemens Large Drives. I find the story inspiring in terms of green ambition, sustainability and transformation. Innomotics has been set up to deliver innovative green solutions through digital transformation, most notably in the energy intensive minerals, energy and cement sectors. Citing a recent success, Sven Demmig, the company's global head of mining says that, in Peru, Innomotics has built a complete Greenfield mine using Siemens' software and automation solutions: starting from the design phase, through the mine construction phase and up to operation. Closing the loop, the solution comes with a digital-twin of the entire mine, all based on state-of the art digitalisation capabilities for the mining environment.

The benefits, on top of the environmental ones that accrue due to the use of best-efficiency equipment, are the ability to optimise every aspect of operation so as to deliver better uptime, longer life, lower operating costs and much better productivity.

The system has already saved the customer around US\$70-million over a period of three years – through improved coordination across the value chain – and these savings were “a happy accident” discovered after full implementation. The initial and fully achieved intention was simply to harmonise the IT systems from the company's many mining operations: to reduce licensing costs, server numbers and maintenance and support costs.

And there is more: Our Innovative Engineering piece describes a multifaceted initiative to help meet the net zero-emission on dry-bulk minerals/iron ore exports shipped out of Port Hedland in Western Australia. The solution has three prongs: an electrified low carbon footprint LNG plant in Port Hedland; an LNG re-fuelling concept based on ship-to-ship bunkering of vessels while at anchor; and a dry-bulk ship design with an innovative LNG marine fuel system involving pre-combustion carbon removal and hydrogen production.

These are all vital initiatives targeting some of the world's most challenging emissions problems. They also suggest that investing in cleaner, safer and more environmentally sustainable solutions can also deliver economic benefits.

If, on the other hand, we fail to “take the most ambitious approach” and global warming reaches 3.0° or more by 2050, the consequences could be very costly indeed.



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