

## Industrial metals

# US, Canada and Australia join forces to tackle metal shortage risk

Concern grows over increase in consumption to support shift to electric vehicles



A shift in the global energy system away from fossil fuels is expected to result in steep increases in demand for some metals and other materials

Ed Crooks in New York YESTERDAY

The US and allied countries have launched an international effort to encourage responsible development of materials needed for new energy technologies, including lithium, copper and cobalt, as they attempt to ensure future supplies of critical resources.

The move comes in response to growing concern about the huge increases in consumption of some of those materials, which will be needed to support a shift away from fossil fuels towards [electric](#)

[vehicles](#) and battery energy storage.

The US state department and its counterparts in Canada and Australia have said they will work to help countries discover and understand their mineral resources. They also will advise on management and governance frameworks that will attract international investment and support good environmental and social policies.

Frank Fannon, the US assistant secretary of state for energy resources, said “clean” energy technologies were being presented by some as a great hope for some poor countries, but that the damage done by development without sound resource governance “could be really damaging”.

A shift in the global energy system away from fossil fuels — driven by cost reductions that are making new technologies increasingly competitive, and by government policies to fight global warming and local pollution — is expected to result in steep increases in demand for some metals and other materials.

Demand for copper, for example, could rise by 275 to 350 per cent by 2050, according to academics at Yale University. The World Bank estimated in 2017 that action to limit the rise in global temperatures to 2C from pre-industrial levels could mean a seven-fold increase in demand for [cobalt](#) and an 11-fold increase in demand for lithium by 2050.

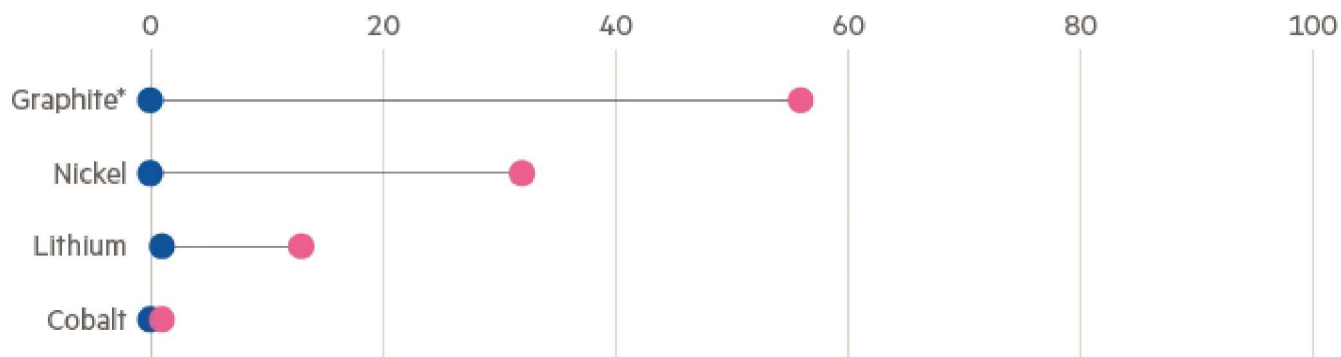
In the past few years, Chinese companies have been moving to secure supplies of these materials, buying up mines in countries from Australia to South America.

Simon Moores of Benchmark Mineral Intelligence, a research firm, said the importance of technologies including electric vehicles and battery storage meant that “whoever controls these supply chains controls industrial power in the 21st century”.

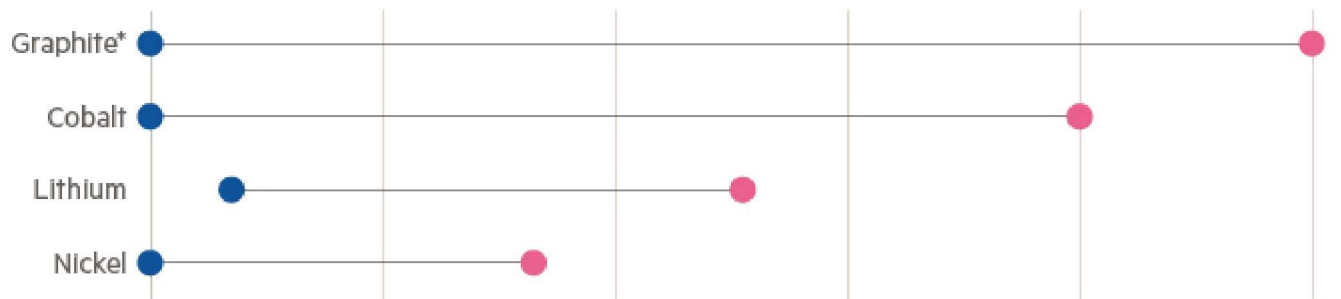
## Electric vehicles: China vs the US

Share of global supply of selected stages of the lithium ion battery supply chain, 2018 ● US ● China

### Mining



### Chemical processing/refining



### Lithium ion cell manufacturing



\*Based on natural flake, spherical and anode material. Can also be synthetically manufactured

Source: Benchmark Mineral Intelligence

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Concern about mineral supplies has been growing in the US administration and in Congress, and has been heightened by China's warnings of plans to curb exports of rare earths. China accounts for

more than 80 per cent of world rare earths production.

The US commerce department last week published a report looking at 35 critical minerals, which found that imports accounted for more than 50 per cent of domestic demand for 29 of them, and 100 per cent for 14 of those. Wilbur Ross, commerce secretary, promised “unprecedented action to ensure that the United States will not be cut off from these vital materials”.

The US state department’s initiative is separate from that effort, but also aims to support supplies of critical materials coming on to world markets on commercial terms.

Mr Fannon said the objective was not about having “an adversarial relationship” with China. “We want to create more opportunities for responsible kinds of investment,” he said. “If this effort works, we will be able to have fair, open, free and transparent trade.”

As an example of the kind of work the US plans to do, it last week signed a memorandum of understanding with Greenland, which covers co-operation including a new geological survey “to boost mineral exploration investment in South Greenland”.

Mr Moores said the US was clearly lagging behind China in building up supply chains for these critical materials. “There is no doubt that if the US acts now and invests wisely in partnerships, it can catch up,” he said. “But really it does need to act now.”

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