

Global Economic Research

FEBRUARY 10, 2022

Greenflation: Unwelcome Growth

The transition to clean energy will bring higher costs.

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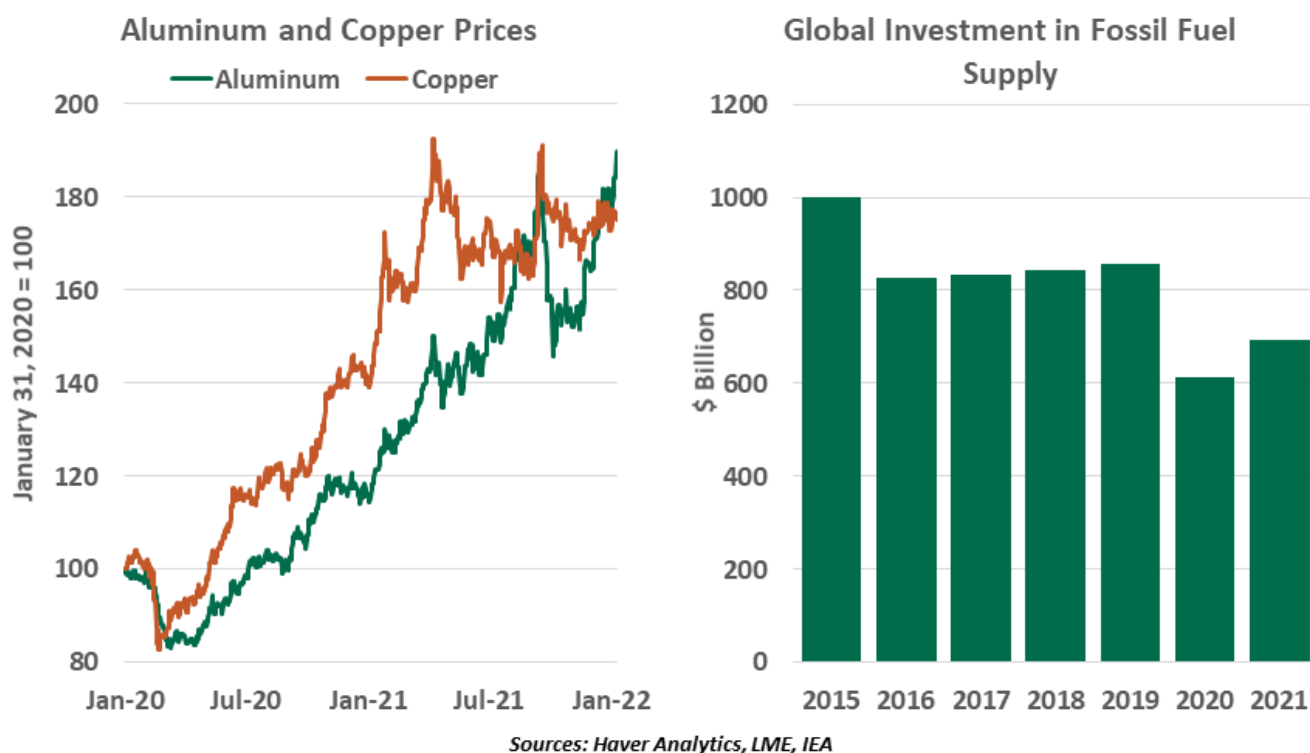
Transitions between major energy sources are not new for the global economy. The first attempt began in earnest in the 1700s as the world moved from biomass to fossil fuels. Two centuries later, oil and gas became the primary global energy source. However, unlike past transitions, the current changeover to green energy is unparalleled, urgent and inflationary.

The **threats and consequences** related to climate change are greater than ever. Building a less carbon-intensive economy has led to increased government spending, and increased demand for green metals such as copper and aluminum due to their usage in wind and solar panels. At the same time, all major sources of energy are **in short supply**. The outcome has been *greenflation*: higher energy, minerals, and metal prices.

Output and capacity of renewable energies remain inadequate. Tighter regulation (or expectations of regulations to come) is leading to lower investments in fossil fuels and raw material supplies across all economies. Global investment in oilfields and mines has dropped sharply in recent years. China has cut production of steel and iron ore to move towards carbon neutrality. Significant public and private investments will be needed to meet growing demand for renewables.

Ensuring adequate supplies of the materials needed to generate greener energy will be a difficult balancing act. Solar and wind power plants use up to six times more copper than conventional power generation. Electric vehicles use over six times more minerals than their conventional counterparts. That said, both make up for the higher up-front impact through lower emissions over their full lifecycle.

Greenflation could make the transition to clean energy expensive.



Worryingly, most green commodities such as copper, aluminum, and lithium (the most important inputs for clean energy) aren't really that green. Lithium is a key component for manufacturing rechargeable batteries, but its extraction causes air contamination. Similarly, aluminum, a vital metal for solar and green projects, is one of the dirtiest metals to extract and refine. Efforts to make acquiring these elements greener will serve to make them more expensive, as well.

Supply gaps, coupled with rising carbon prices, imply the world could be in for a prolonged period of elevated energy costs, posing a risk to consumers, businesses and central banks' price stability objectives. If supply constraints do not ease, there is a risk that the cost of green energy will simply make the transition unaffordable for many societies. Climate goals would be out of reach.

The world must find a way to balance the need to cut emissions with the environmental impact of the materials needed for "green" energy. Otherwise, the effort could weaken the very goal it seeks to attain.

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