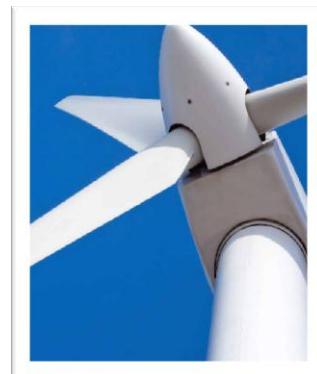


# Minerals Make Innovation

Minerals are integral components of the next-generation technologies that make American companies world leaders in innovation.

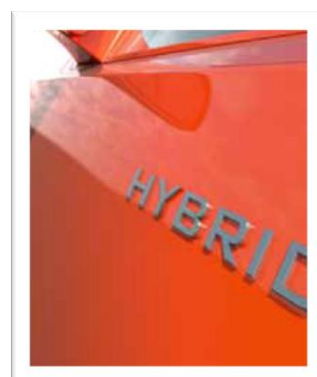
## Minerals in Advanced Technology

- A single wind turbine can contain 335 tons of steel, 4.7 tons of copper, 3 tons of aluminum and 700-plus pounds of rare earth minerals, as well as zinc, molybdenum and concrete<sup>i</sup>.
- Solar energy technology relies on a range of minerals including silver, copper, gallium, tellurium and rare earth minerals.
- CAT scans contain a variety of minerals, including tungsten, copper, lead, silver, chlorine, aluminum and gold.
- Platinum is used in advanced electronics, fuel cells and in pollution control devices for cars.



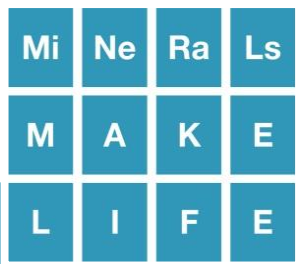
## Growing Demand for Minerals

- As the world's population grows and developing countries embrace new technologies, products relying on greater combinations of minerals will come to market, further increasing demand for minerals.
- Global sales of hybrid cars are expected to increase from 2.2 percent of sales in 2010 to 7.3 percent in 2020<sup>ii</sup>, and auto executives estimate the demand for lithium—key to high-performance batteries—could outpace supply in as little as 10 years<sup>iii</sup>.
- Over the next five years, worldwide demand for copper will match global GDP growth at roughly 4 percent and demand for aluminum will grow twice as fast as the global GDP<sup>iv</sup>.



## Minerals for the Future

**Policies that bolster domestic minerals mining can help establish a stable supply chain of the materials that are fundamental to American innovation.**



**Sources:**

<sup>i</sup> Vestas Wind Systems

<sup>ii</sup> J.D. Power and Associates, "Drive Green 2020: More Hope than Reality"

<sup>iii</sup> *TIME*, "For Lithium Car Batteries, Bolivia Is in the Driver's Seat"

<sup>iv</sup> McKinsey & Company Basic Materials Institute, Commodity Perspectives