



## Commentary: Rare Earth Dependence

By H. Sterling Burnett

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*Both President Obama and environmentalists have long called for more development of clean energy. But in his commentary, Sterling Burnett sees a potential downside. Burnett is a senior fellow with the National Center for Policy Analysis. The Dallas-based organization develops and promotes private, free-market alternatives to government regulation.*

Increasing the United States' reliance on a "clean" energy, as touted by President Obama, is a risky policy that leaves Americans dependent on China for supplies of critical energy resources.

Key components of every green energy technology, be they wind turbines, solar cells, energy efficient lighting, high-tech batteries, and other goods, are made from of a small class of minerals known as the rare earth elements, and other rare minerals. Despite their name, these elements are abundant, but, for the near future, they are found in economically exploitable concentrations only in the People's Republic of China. With 97 percent of the global market, China has a de facto monopoly on the trade in these rare elements.

China has already shown itself willing to use its virtual monopoly on rare earths to extract favorable political outcomes from foreign nations.

In September 2010 a Chinese trawler collided with a Japanese coast guard vessel in a disputed portion of the East China Sea. The captain of the fishing boat was arrested by the Japanese. When Japan refused to release the Captain, China retaliated by first limiting and eventually halting exports of rare earth elements to Japan. Japan eventually relented and sent the captain home.

The production of solar cells relies on the rare element tellurium. However, the only tellurium mine on Earth is in China. As a result, China is increasingly dominating the market for solar manufacturing. In 2003, China produced only one percent of the world's solar panels but by 2009 its share rose to 43 percent. By contrast, since 2003, U.S. production of solar panels fell from 14 percent to just four percent of the world's total.

And because the rare earths neodymium and lanthanum are essential to the newest generation of batteries that power new hybrid and electric vehicles, U.S. auto companies are, in part, placing their hope in revitalizing the domestic auto industry on China's continued good will.

Wind turbines also require rare earth elements to make the magnets they use. General Electric, one of the leading companies developing wind energy technologies purchases its entire supply of rare earth needed for its magnets from China.

China is increasingly choosing to sell finished green products to the world, rather than exporting its rare earths in raw form. It has eliminated export tax rebates for rare earth elements while increasing the export taxes to as much as 25 percent. Further, China decreased its export quota by 40 percent between 2009 and 2010.

The push to adopt rare earth-powered energy technologies involves swapping one form of dependence for a much more restrictive one. The old saying, out of the frying pan into the fire comes to mind.

If the U.S. government stopped interfering in domestic energy production and ended all energy mandates and subsidies, China's dominance of rare earths would become a non-issue. Absent government support, green energy technologies would largely fade from the scene until entrepreneurs figure out a way make them cost competitive and more reliable. Nor would environmentalists have reason for complaint, since fossil fuels would no longer receive subsidies either. This would be a win-win for both fiscal hawks and green doves.

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