

Roth: Metals that make you go 'um'

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Scandium, yttrium, lanthanum, cerium and praseodymium are just five of the 17 “ums” that make up the 17 rare earth metals. These 17 rare earth metals are the essential ingredients to the development of hybrid cars, wind turbines, cellphones, laptop computers, coal fired power plants, and nuclear power plants.

“Um,” so what?

These rare earth metals are not actually that rare. Truth is, you are probably using some of them right now. Your cellphone contains the metal neodymium for its internal memory and your laptop computer uses gadolinium. These metals are described as rare because they very rarely exist in their pure form and actually mix with many different minerals. This makes their extraction costly and sometime risky. Plus, the refinement and processing of these rare earth metals leave very toxic byproducts that can be contaminated with radioactive uranium and thorium. Yet, interestingly enough, various countries around the world have reserves of these metals. For example, the United States had 13 million metric tons in 2010, with China boasting 50 million metric tons. But since 2009, the United States has stopped producing rare earths and exported remaining leftover stockpiles. The only countries in the world that are producing these rare earths now are Brazil, Russia, India and China. China is the global leader in the production of rare earth metals, which has led to some interesting international challenges as demand has increased. China began to place trade limits on its rare earths in 1999 and its exports have been decreasing ever since. China has also used

its leverage to squeeze out global supply when it entered into a politic dispute with Japan in 2010, and the exports have dramatically declined since then. However, China cites environmental reasons for its restrictions and not economic leverage. But, the U.S. Trade Representative Ron Kirk confirmed recently that the United States and Obama administration will challenge China on its restrictions of trade of these rare metals. Partnering with Japan and the European Union, the United States is going after China over the trade of these metals, according to the World Trade Organization. As a consideration, the price of neodymium, the metal in your cellphone, rose to \$129 per pound in 2011, up \$19 from a year earlier. Recently, the U.S. Department of Energy released a report that said that it would prefer not to begin production of these rare earth metals because of the enormous environmental mess they make. Also, according to the report, a diversified global supply chain is essential. "Um," this is another example of how we as consumers are often unaware of the effects of our demand and the real cost of getting you that cellphone that is buzzing in your pocket now. You should probably get that. *Jim Roth, a former Oklahoma corporation commissioner, is an attorney with Phillips Murrah P.C. in Oklahoma City, where his practice focuses on clean, green energy for Oklahoma.*