

June 29, 2010

The Honorable Steven Chu
Secretary of Energy
United States Department of Energy
Forrestal Building
1000 Independence Avenue, SW, Room 7A-257
Washington, DC 20585-1000

Dear Secretary Chu:

New technologies will be an important component of any effort to move the United States to a cleaner energy future. However, the U.S. currently lacks the capacity to manufacture the rare earth oxides, metals, alloys and permanent magnets upon which many clean energy, defense, communication, and computer technologies rely. The undersigned businesses and organizations urge the Department to act expeditiously on applications for loan guarantee assistance, made under the Section 1703 Loan Guarantee Program, for the purpose of re-establishing on U.S. soil a rare earth oxide, metal, alloy and permanent magnet manufacturing supply chain.

It is in the United States' interest to encourage the rapid re-establishment of a domestic rare earth materials and permanent magnet manufacturing supply chain as soon as possible. As the U.S. General Accounting Office recently reported, many U.S. defense and weapons systems are now totally dependent upon foreign-sourced rare earth materials. The U.S. Geological Survey (USGS) has reported that high-technology and environmental applications of the rare earth elements (REEs) have grown dramatically in diversity and importance over the past four decades. As many of these applications are highly specific, in that substitutes for the REEs are inferior or unknown, the REEs have acquired a level of technological significance much greater than expected from their relative obscurity.

The United States' current 97 percent dependence upon REE imports from China is becoming increasingly problematic owing to down-trending exports of REEs from that nation as it ramps up domestic activities that are rapidly increasing internal REE demand. Recent reports of finds of significant potential mineral resources in Afghanistan are in no way a guarantee that there will be a viable alternative for meeting anticipated growing United States domestic demand for REE any time in the foreseeable future. In fact, independent analysts forecast that rest-of-world REE demand will likely exceed Chinese exports by 2011.

This situation places the United States in a difficult position. Looking forward, environmental applications of REE have increased markedly, and, according to the USGS, this trend will undoubtedly continue. Several REE are, for example, essential constituents of petroleum fluid cracking catalysts, automotive pollution-control catalytic converters, hybrid-electric vehicle components, permanent magnets, and wind turbine components. Use of REE magnets reduces the weight of automobiles, increasing fuel efficiency. Widespread adoption of new energy-efficient fluorescent lamps using REEs for institutional lighting applications could potentially achieve significant reductions in U.S. carbon dioxide (CO₂) emissions equivalent to removing one-third of the automobiles currently on the road. Large-scale application of

magnetic-refrigeration technology, which also requires REEs, could significantly reduce energy consumption and CO₂ emissions.

Simply put, the rare earth elements are essential for a diverse and expanding array of high-technology applications, which constitute an important part of the industrial economy of the United States. As USGS notes, long-term shortage or unavailability of REEs would force significant changes in many technological aspects of American society. In short, the accomplishment of many clean energy objectives encouraged by the Administration may not be realized if critical supply chain issues are not addressed in a constructive manner that assures the availability of domestic REE sources, known and potential. Moreover, creation of domestic REE supply chain capability also means that jobs will be created in the United States.

Re-establishing a domestic REE manufacturing and supply chain is especially critical given that the U.S. is now so heavily dependent upon questionably available foreign supplies of rare earths. As noted, such a production capability also will leverage new manufacturing jobs on U.S. soil in a variety of rare-earth dependent technologies, including renewable energy, hybrid and electric vehicles, batteries, power generation, energy efficient lighting, water treatment, agriculture, communications, health care systems and many others.

Thank you for the leadership that you and the Department are showing on the rare earth supply issue. The undersigned organizations encourage you to do all that you can to restore the U.S. to a position of effective independence in the production of these critical materials.

Sincerely,

American Chemistry Council
American Lighting Association
Colorado Mining Association
IPC – Association Connecting Electronics
Industries
Montana Mining Association
National Association of Manufacturers
National Mining Association
Northwest Mining Association
Ohio Technology Chemistry Council
The Aluminum Association
The Association of Electrical & Medical Imaging
Equipment Manufacturers
Western Business Roundtable
U.S. Chamber of Commerce

CC: Jonathan Silver; David Franz; DOE Materials Strategy Team