Prepared Testimony of
Kevin J. Cosgriff
President and CEO
National Electrical Manufacturers Association (NEMA)

Hearing on S. 883, American Mineral Security Act
Senate Committee on Energy and Natural Resources
May 12, 2015

Chairman Murkowski and Ranking Member Cantwell,

Thank you for the opportunity to provide the following remarks on behalf of the National Electrical Manufacturers Association (NEMA) on the legislation being considered today by the Committee on Energy and Natural Resources: The American Mineral Security Act (S. 883).

NEMA represents nearly 400 electrical equipment and medical imaging technology manufacturers. Our combined industries account for more than 400,000 American jobs and more than 7,000 facilities across the U.S. Domestic production exceeds $117 billion per year. Our industry is at the forefront on electrical safety, reliability, resilience, efficiency, and energy security.

In general, NEMA supports policies that provide greater assurance to U.S. electroindustry companies of stable, continuous and affordable supplies of inputs for domestic manufacturing. We also support legislation, regulations and resulting processes (e.g., permitting) that are at the minimum essential, transparent, easily understood and quickly accomplished. Specifically, NEMA welcomes and supports the American Mineral Security Act as a multifaceted strategy to modernize U.S. federal policy on mineral resources, information, research and know-how.

Challenging supply conditions and volatile prices of basic mineral inputs can be a significant threat to U.S. electroindustry companies, including in sectors such as lighting, electric motors, energy storage, superconducting materials, and medical imaging, as well as closely related industries including wind and solar electricity generation and hybrid/electric vehicles. The complete scale of challenges remains unclear since these materials are used in various stages of numerous product supply chains. However, while in many cases only small amounts of a specific mineral or mineral derivative may be present in a piece of manufactured equipment, its presence can be critical to performance of that equipment.

When our organization surveyed our member companies several years ago about the importance of minerals to their products, the results, as you might expect, were profound. In addition to the well - known usage in the electroindustry of elements such as copper, tin, and lithium, we found that many of the so-called rare earth elements are being used by our companies in products they now

manufacture or are developing for the market. As I mentioned, some examples are products such as fluorescent and solid-state lighting, highly efficient permanent-magnet electric motors, and Magnetic Resonance Imaging (MRI) units manufactured by our member companies. Unfortunately, the dominant supply of these raw or processed rare earths today lies outside the U.S. in one country: China.

U.S. dependence on China for rare earths is well documented by the U.S. Geological Survey, but our industries' usage of minerals goes well beyond rare earths. At the end of the day, the issue we are discussing today is about whether and what U.S. electroindustry companies will be able to manufacture and where they will be able to manufacture it.

Dr. Steven Duclos of GE testified to a Subcommittee hearing in 2011 on an earlier version of the legislation being considered today. He said, this issue

> *is critical to the future well-being of U.S. manufacturing for large and small businesses alike. Without development of new supplies and focused research in materials and manufacturing…supply challenges could undermine efforts to meet the Nation's future needs in energy, health care and transportation.*

This is just as true, if not more so, as we meet today four years later. So I hasten to add that we find the approach taken in S. 883 is necessary to improve the prospects that U.S. electroindustry companies and their workers will have access to the minerals and related information they need to be globally competitive into the future.

First, we welcome the legislation's approach to updating U.S. policy to the present day by including long-range analytical and forecasting capabilities for critical mineral resource supply, demand, and other factors and by encouraging Federal agencies to facilitate the availability, development, and environmentally responsible production of domestic resources to meet national critical material or mineral needs. The new policy also helpfully provides direction and motivation to government regulators to coordinate their work and minimize delays in the administration of laws, regulations, permits and authorizations necessary for mining and mineral manufacturing facilities.

Current policy is further enhanced with provisions on strengthening educational and research capabilities and workforce training, bolstering international cooperation on technology and information, promoting efficient production , use and recycling of critical minerals, and establishing contingencies for access to critical minerals for which viable sources do not exist in the U.S.

Second, the legislation requires the Interior Department, with help from the public, to establish and regularly use a methodology to determine which minerals are most critical to U.S. economic and governmental activities. The two major factors in these assessments are to be the potential for

mineral supply restrictions and the importance of the mineral to industrial applications, including many of direct interest to NEMA: energy technology-, defense-, consumer electronics-, and health care. Each mineral designated as critical will be assessed as to its domestic resource base and current accessibility and availability. This information is an important factor for manufacturers as they plan for future innovation, product design and development, and manufacturing.

To state the obvious, it is important to note that just as enterprises do not engage in extraction or processing of mineral resources if they believe there is no market demand, a firm will not design and plan to manufacture a product without some reasonable assurance that the inputs necessary will be available to ensure predictable production at a reasonable cost.

Our lighting manufacturers have first-hand experience with another type of predictability: federal minimum energy efficiency standards and the limited availability of manufacturing inputs needed for products to meet those standards. To briefly summarize, in 2012 U.S. manufacturers of certain fluorescent tube lamps had to successfully petition the U.S. Department of Energy (DOE) for a two-year delay in new minimum lumens-per-watt levels due to the lack of adequate domestic supply of heavy-rare-earth-oxide-fortified phosphors needed to produce light so efficaciously.

Third, S. 883 would require appropriate agencies to improve the quality and timeliness of their decisions regarding permitting and review processes for mining of critical minerals on federal lands. Moreover, the Small Business Administration would be required to review and assess regulations pertaining to critical minerals industries. Finally, domestic critical mineral mining and manufacturing projects would be included within the scope of Executive Order 13604, which promotes timely, transparent, consistent and predictable federal permitting and review processes for infrastructure projects.

Fourth, the American Mineral Security Act would authorize and direct work already underway through DOE on research and development in three important areas: reclamation and recycling of critical minerals in end-of-life electrical and electronic equipment; more efficient use of critical minerals; and possible alternative materials that would lessen the need for critical minerals. Fortunately, the DOE activities are already focused on a couple of issues identified by the lighting and electric motor industries I mentioned earlier, but further work will be needed in other areas as well.

Fifth, the legislation highlights the importance of information and forecasting regarding critical minerals availability. In summary, the bill requires USGS to annually update the public, including manufacturing companies, via a comprehensive review and a comprehensive forecast of critical mineral production, consumption, and recycling patterns. These assessments would include not only a calculation of critical mineral requirements to meet U.S. national security, energy, economic, industrial and technological needs, but also of the degree to which the U.S. is reliant on

foreign sources of critical minerals to meet those needs and of the implications of any supply disruptions.

Finally, S. 883 takes several steps to promote development of the future U.S. critical minerals workforce. Our companies cannot be competitive if they cannot employ skilled and trained individuals to handle the multi-faceted process of transforming raw materials into products that help define and improve our way of life.

At the end of the day, for us this legislation is about the government enabling U.S. manufacturing to compete fairly into the future because it will have access to the information, mineral, and other resources needed to do business.

In closing, we find that the American Mineral Security Act takes a broad but measured and reasonable approach to updating and reinvigorating U.S. federal law and policy related to minerals that are most important for NEMA manufacturers.

Thank you again for the opportunity to provide these brief remarks in support of S. 883, the American Mineral Security Act. We look forward to working with you to achieve passage by the Committee and the full Senate as soon as possible.