The Secretary of Energy
Washington, D.C. 20585

February 1, 2013

The Honorable Barbara Mikulski
Chairwoman
Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Madam Chairwoman:

Thank you for your letter regarding the impacts of potential across-the-board spending cuts, otherwise known as "sequestration," facing government agencies on March 1, 2013. I share your concern for the government's, and specifically for the Department of Energy's (DOE or the Department), ability in the face of such cuts to make the investments needed to grow our economy through basic scientific research and advances in clean energy technology, secure our Nation through the stewardship of our nuclear stockpile, and meet our obligations to clean up the environmental legacy of the Cold War.

Sequestration would affect thousands of jobs among Federal, contractor, and grant awardee personnel, affecting these people individually and reducing the Department's ability to serve the American people. The cuts would come five months into the fiscal year (FY), forcing the Department to absorb the spending reduction in a seven-month period. While the Department has assiduously followed the direction of Congress and operated at prescribed levels during the current Continuing Resolution, such reductions would be difficult to absorb while continuing to sustain the same level of progress on our mission.

The effects of sequestration are particularly damaging because, by law, they apply equally to each program, project, and activity within an account, thereby severely constraining our ability to prioritize and make tradeoffs among activities under reduced funding scenarios. Being able to focus and prioritize funds and effort in a reduced funding environment is critical to maintaining the human and physical capital needed to accomplish our mission; the way sequestration must be implemented withholds this essential discretion from my staff and me.

Per your request, I am providing a description of the impacts that sequestration would have on the Department of Energy's operations, infrastructure, and critical initiatives.

Basic Scientific Research

DOE's Office of Science is the largest supporter of the physical sciences in the United States and the operator of 10 world-class national laboratories. Funding cuts to DOE's basic science mission would be severe. First, operations at numerous facilities would be curtailed, potentially impacting more than 25,000 researchers and operations personnel

who rely on these facilities to make advances both in basic science and in developing advanced commercial technologies. Second, sequestration would cause schedule delays and increased costs for new construction of user facilities throughout the Office of Science that are poised to contribute significantly to many areas of our understanding of nature. Finally, research grants would need to be reduced both in number and size affecting researchers at our national laboratories and at universities around the country; the pipeline of support for graduate student and post-graduate research fellowships would be constricted in a way that hurts our long-term economic and technological competitiveness.

Clean Energy Technology

The Department of Energy works across energy sectors to reduce the cost and speed the adoption of clean energy technologies. These efforts range from cost-competitive high-efficiency solar installations to carbon capture and storage to next generation biofuels and high-efficiency vehicle technologies. Under sequestration, funding reductions would decelerate the Nation's transition into a clean energy economy, and could weaken efforts to become more energy independent and energy secure, while spurring overall economic growth. For example, a reduction in funding would slow down the significant advances made in making solar energy cost-competitive with conventional forms of electricity generation, as well as cut funding for solar industry job training that is targeted at military veterans and provided to 261 community colleges. It would also hinder U.S. innovation as global markets for solar energy continue to grow rapidly and become more competitive. In addition, a cut to the Department's Vehicle Technologies Program would delay the program's efforts to leapfrog the current technologies in critical areas of advanced vehicles, batteries, and lightweight materials, slowing American development of cleaner and more efficient vehicles as affordable as today's vehicles. Reducing the cost of manufacturing these clean energy technologies is a key goal of the Administration's efforts and sequestration would negatively impact our Advanced Manufacturing program by delaying initiation of 2-3 industrial research and development project co-investments for at least a year or requiring shutting down a Manufacturing Demonstration Facility for 6-8 months.

Further, the Department of Energy provides assistance to low-income families by making their homes more energy efficient through funding provided to States, territories, and tribes. Funding reductions under sequestration will reduce by more than a thousand the number of homes that would be weatherized in FY 2013 and could result in the unemployment of 1,200 skilled weatherization professionals. Reductions of the magnitude associated with sequestration likely would also threaten the ongoing viability of some State programs delivering these home efficiency upgrades, closing the associated training centers, with a concurrent loss of professional retrofit certification capability.

In just four years Advanced Research Projects Agency – Energy (ARPA-E) projects have achieved significant technical breakthroughs, including doubling the energy density of lithium batteries, dramatically shrinking the size and increasing the capacity of high-power transistors, and engineering microbes that can turn hydrogen and carbon dioxide into transportation fuel. Reduced funding in the clean energy area would scale back the

Department's ability to spur such accomplishments, slowing progress toward a transformed, 21st Century energy sector.

The Department works to improve the security and reliability of the Nation's electrical grid by working with utilities and transmission and distribution companies to reduce risk of impacts from natural disasters, cyber attacks, and other human-generated events. Reduced funding would scale back these efforts, including research to detect and mitigate cyber attacks and monitoring of space weather events through deployment of technology and facilitating information sharing within the electricity sector on best practices for protection and/or mitigation when such solar flares occur.

National Security

DOE plays a critical national security role in developing and maintaining the Nation's nuclear deterrent, securing nuclear materials around the world, supporting the Navy's nuclear propulsion systems for its fleet, and conducting intelligence and counterintelligence activities. Cuts under sequestration would total $900 million and result in degradation of critical capabilities in this area. In the area of our nuclear weapons stockpile, critical efforts to refurbish and extend the life of several weapons systems would be delayed, leading to increased costs and impacts to deployment and readiness in the future. Our security posture at sites and facilities would be eroded due to project deferrals and workforce reassignments. Further, these cuts would degrade the internal oversight function of DOE nuclear facilities and reduce the depth and frequency of audits and evaluations needed to ensure ongoing robust security operations.

Among the impacts to the Nation's nuclear nonproliferation capability, reduced funding would cause delays and increased costs to efforts to secure and convert surplus nuclear materials around the world. Finally, work utilizing special nuclear materials would be impacted, affecting nonproliferation and emergency response training, and spent fuel stabilization activities.

In the Naval Reactors program, sequestration would risk Naval Reactors' responsiveness to operational fleet support issues, and it would delay the design and development effort of the OHIO-Class Replacement nuclear reactor. It also would delay the refueling of a training reactor New York that trains Navy personnel in reactor operations, thereby reducing the number of qualified sailors trained to operate reactor plants on submarines and aircraft carriers. In addition, cuts would delay by one year an essential facility in Idaho for handling spent fuel from Navy vessels.

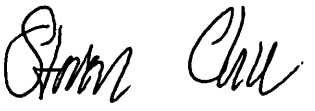
Environmental Cleanup

The Department of Energy runs one of the largest environmental cleanup and remediation programs in the world in addressing the legacy of Cold War nuclear weapons production at sites around the country. Sequestration would curtail this progress, delaying work on our highest risks at sites in Washington state, Tennessee, South Carolina, and Idaho. In addition, the Department is in legally binding agreements with state and Federal regulators to make progress in addressing environmental contamination, and funding reductions would put numerous enforceable environmental compliance milestones at risk,

calling into question the Federal government's commitment to protect human health and the environment.

As these examples demonstrate, sequestration would impact both the economic and national security of this country, and I appreciate your leadership in avoiding such cuts. I look forward to working with you and other members of Congress on behalf of the Administration in this area to avoid these impacts in a responsible and well-considered manner.

Sincerely,



Steven Chu

cc: The Honorable Richard Shelby
Ranking Member, Committee on Appropriations

The Honorable Dianne Feinstein
Chairman, Energy and Water Development Appropriations Subcommittee

The Honorable Lamar Alexander
Ranking Member, Energy and Water Development Appropriations Subcommittee