AMERICAN NUCLEAR SOCIETY

555 North Kensington Avenue
La Grange Park, Illinois
60526-5592 USA

Tel: 708/ 352-6611
E-Mail: NUCLEUS@ans.org
http://www.ans.org
Fax: 708/ 352-0499

April 10, 2012

The Honorable Daniel Inouye
Chairman
Senate Appropriations Committee
122 Dirksen Senate Office Building
Washington, D.C. 20510

The Honorable Thad Cochran
Vice Chairman
Senate Appropriations Committee
122 Dirksen Senate Office Building
Washington, D.C. 20510

The Honorable Dianne Feinstein
Chairman
Committee on Appropriations
Subcommittee on Energy and
Water Development
142 Dirksen Senate Office Building
Washington, D.C. 20510

The Honorable Lamar Alexander
Ranking Member
Committee on Appropriations
Subcommittee on Energy and
Water Development
188 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Chairman Inouye, Vice Chairman Cochran, Chairman Feinstein and Ranking Member Alexander:

The Fusion Energy Division of the American Nuclear Society has a Statement on the proposed Department of Energy budget and its adverse effect upon the future of fusion energy research and development:

Research in nuclear fusion represents one of very few options for a long-term effort to provide a major source of energy to replace climate-changing fossil fuels and ensure America's energy security. Fusion is one of the fundamental energy sources of the universe. Providing energy from fusion is a major scientific and technological challenge–in fact, it is one of the National Academy of Engineering's Grand Challenges for Engineering–but the rewards of fusion power and the benefits of a sustainable domestic source of energy make it a challenge worth taking.

The FY-2013 budget request by the Administration endangers the United States' domestic fusion program as well as our country's scientific contributions to the ITER international project. If implemented, the FY-2013 budget reductions will deal a major blow to the U.S. fusion research program and further erode its leadership position. After years of operating on minimal budgets and essentially level funding, the U.S. fusion program cannot withstand the proposed reductions without significant negative impacts.

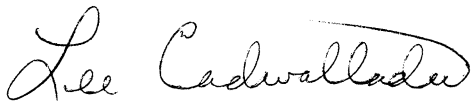
U.S. fusion researchers were told a few years ago that there would be some "belt tightening" to divert fusion research funds to ITER construction. Without any quantitative guidance from the DOE on belt-tightening, there was speculation that it might be 1% or perhaps even as much as a 5% budget reduction for a few years. The FY-2013 budget, however, proposes a 16% reduction ($45 million) of fusion research funds, and DOE officials have given warnings that reductions of up to $100 million more will be needed in the coming years. If the Administration's FY-2013 budget is implemented, the DOE will close a unique fusion experiment, the Alcator machine at MIT, and the students and staff there will be dispersed. Deeper cuts in the future will disperse even more staff and students at institutions around the country who would use the ITER results, and greatly reduce the number of American engineers and scientists who will be educated and trained in fusion.

April 10, 2012

We urge the U.S. to consistently and adequately support the fusion research program as outlined in the Energy Policy Act of 2005 (PL 109-58, sec 971-972) and reverse this position, restoring funds to the domestic fusion program budget and, separately, fully funding this nation's promised annual ITER contribution.

The path to discover commercially viable fusion energy is one of the grand scientific challenges of our time. With ITER under construction to explore the science of burning plasmas, the world fusion program is poised to enter its final era of research. Other nations, including China, the European Union, Japan, Russia, and South Korea, are forging ahead rapidly, investing heavily in their domestic fusion programs and in educating the next generation of fusion researchers. They are fully supporting ITER as well. The U.S. has consistently led the fusion field and should continue to do so. American leadership in fusion energy would be in the best interests of the U.S. and science itself.

Sincerely,



Lee Cadwallader
Chair, Fusion Energy Division
lccjac@cableone.net

Minami Yoda
Vice-Chair, Fusion Energy Division

cc: The Honorable Dr. Steven Chu, Secretary of Energy
The Honorable Dr. William Brinkman, Director, Office of Science, Department of Energy
Dr. Edmund Synakowski, Associate Director, Office of Fusion Energy Sciences