

Congress of the United States
Washington, DC 20515

March 08, 2018

The Honorable Thad Cochran
Chairman
Committee on Appropriations
Room S-128, The Capitol
Washington, D.C. 20510

The Honorable Patrick Leahy
Ranking Member
Committee on Appropriations
Room S-146A, The Capitol
Washington, DC 20510

The Honorable Rodney Frelinghuysen
Chairman
Committee on Appropriations
H-305, The Capitol
Washington, DC 20515

The Honorable Nita Lowey
Ranking Member
Committee on Appropriations
1016 Longworth House Office Building
Washington, DC 20515

Dear Chairman Cochran and Ranking Member Leahy, and Chairman Frelinghuysen and Ranking Member Lowey:

As you finalize a Fiscal Year (FY) 2018 omnibus appropriations bill, we ask for your continued support for the OMEGA Laser Facility at the University of Rochester's Laboratory for Laser Energetics and the National Nuclear Security Administration's (NNSA) Inertial Confinement Fusion (ICF) program. Specifically, we strongly urge you to provide \$75,000,000 for the OMEGA Laser Facility at the University of Rochester's Laboratory for Laser Energetics and \$544,934,000 for the Inertial Confinement Fusion (ICF) program, consistent with the Senate mark in S. 1609, the FY 2018 Energy and Water Development appropriations bill, and the FY 2018 budget request in the Stockpile Stewardship and Management Plan. This level of funding is needed for cutting-edge research and operation of state-of-the-art facilities in support of the stockpile stewardship program. More specifically, it supports critical decisions related to the maintenance and modernization of weapons systems and achieving scientific milestones set in NNSA's ten-year strategic plan for ICF.

While we appreciate the \$68,000,000 for the OMEGA Laser Facility in H.R. 3266, the Fiscal Year (FY) 2018 Energy and Water Development appropriations bill, the \$75,000,000 in funding provided in the Senate is consistent with the five-year Cooperative Agreement between the NNSA and the LLE and allows the lab to meet scientific milestones in NNSA's ten-year strategic plan for ICF in support of stockpile stewardship. In particular, this level of support allows the LLE to support growing facility operations and experiments on OMEGA to make progress on all three of the most viable approaches to fusion and support the research programs of the three NNSA labs. Funding at this level will provide the necessary resources to support the LLE's research and academic programs to help maintain the nation's stockpile and continue to train the future workforce. This includes the needed scientific and technical support for the 400 users from the 55 universities and over 35 centers and national laboratories that use OMEGA annually to conduct more than 2,100 experiments in cutting-edge research. Currently, demand

for these facilities exceeds available time by a factor of two. This level of funding will also accelerate development and deployment of state-of-the-art diagnostics to improve measurements and collect better data on the behavior of matter under extreme conditions. Better diagnostics will fully leverage the capabilities of existing facilities.

The LLE's OMEGA laser facility is a vital contributor to national security and an invaluable source of scientific education and leadership. LLE also has an important role to play in helping the U.S. be the first country to achieve ignition to avoid technological surprise as other countries invest in similar capabilities, especially Russia and China. The OMEGA lasers (Omega and Omega EP) are the largest and most capable found at any academic institution in both the United States and worldwide. The LLE is recognized nationally and internationally for its critical contributions to the DOE's science-based stewardship programs in partnership with three national security laboratories (Los Alamos National Laboratory (LANL), Sandia National Laboratory (SNL), and Lawrence Livermore National Laboratory (LLNL)). The LLE is the most cost-effective facility in the science-based stockpile stewardship program – performing 80 percent of all the target shots used in the national Inertial Confinement Fusion (ICF) and high energy density physics programs with only 13 percent of NNSA's ICF budget.

NNSA is currently pursuing three credible research approaches to demonstrating ignition – Direct Drive, Indirect Drive and Pulsed Power. Progress is being made in all three approaches thanks, in part, to LLE's contributions. The LLE is the lead laboratory for the Direct Drive approach to ignition, but is also the staging and support facility for experiments at LLNL's National Ignition Facility (NIF) and supports laser research at the Z machine for SNL's fusion approach as well as innovative fusion approaches in partnership with Los Alamos. In partnership with the national laboratories, the LLE is also pursuing critical performance enhancements to the OMEGA Laser Facility that are required to extend its capabilities and maintain a balanced approach to fusion ignition.

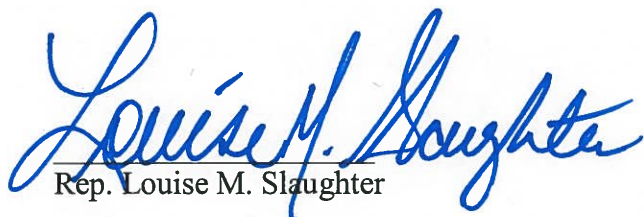
As Lisa Gordon-Haggerty, the Administration's newly confirmed Administrator for NNSA recently testified at her recent confirmation hearing, recruiting and maintaining the "brightest and the best" for NNSA is a priority and the ICF program is a magnet for such talent. They are attracted by the challenge of fusion and the long-term implications for energy that will be motivated by fusion ignition in the laboratory. These future scientists not only ensure the safety and reliability of the country's nuclear stockpile but are the experts that we call upon to evaluate the capabilities of U.S. adversaries.

As the U.S. Department of Energy's and NNSA's largest university-based program, the LLE is the only major facility that trains graduate students, from both the University of Rochester and other leading institutions such as SUNY Geneseo, State University of New York at Stony Brook, MIT, University of Michigan, Princeton, Idaho State University, and the University of California, and serves as a pipeline to educate and train future talent that is critically important to our national and economic security. More than 360 scientists, engineers and technicians are currently involved at OMEGA, and LLE's National Laser User's Facility


brings more than 400 scientists from around the world to Western New York every year to carry out fundamental research, training and education. Through its groundbreaking research, the LLE provides a strong stimulus to New York's economy as a source of new start-up companies and a driver of the region's optics, imaging and photonics sector.

For these reasons, we thank you for your past support and strongly urge that you please provide \$75,000,000 for the OMEGA Laser Facility at the University of Rochester's Laboratory for Laser Energetics and \$544,934,000 for the Inertial Confinement Fusion (ICF) program in the final FY 2018 omnibus appropriation bill to advance the ICF program.

Sincerely,



Rep. Louise M. Slaughter



Rep. Chris Collins



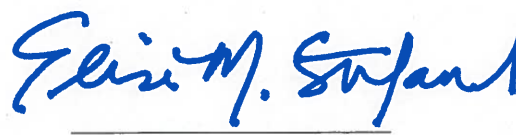
Sen. Kirsten Gillibrand



Rep. John Katko



Rep. Brian Higgins



Rep. Elise M. Stefanik



Rep. Claudia Tenney



Rep. Paul Tonko

CC:

The Honorable Lamar Alexander
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The Honorable Dianne Feinstein
Chairman
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The Honorable Mike Simpson
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