

Dr. Martin Greenwald
Senior Research Scientist



Massachusetts Institute of Technology
77 Massachusetts Avenue, Building NW17-107
Cambridge, Massachusetts 02139-4307

Plasma Science & Fusion Center
Phone 617.253.6053
Fax 617.253.0627
Email g@psfc.mit.edu

January 31, 2013

Dr. William F. Brinkman
Director - Office of Science, SC-1
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Dr. Brinkman,

With this letter, the Fusion Energy Sciences Advisory Committee transmits its report addressing your charge of April 13, 2012 on priorities in the Magnetic Fusion Energy Science Program. We want to thank Prof. Rosner and members of the panel for their efforts in taking on this difficult task.

As requested, the report proposes a set of scientific priorities for the program to target over the next 5-10 years. It then attempts to map those priorities onto major program elements under the three funding scenarios presented in the charge. We also expect that the prioritization will provide useful input for the panel now assessing new facility opportunities. The challenge of meeting the priorities under the budget assumptions, especially the reduced funding assumed in charge 1 is spelled out and the negative consequences that would flow from that scenario are clearly outlined.

FESAC acknowledges that the answers to the charge are incomplete. But given the COI guidance, the panel as constituted was unable to provide greater detail. The report does propose an approach toward that goal in its recommendation under charge 1.

This study generated wide-ranging and lively discussion at the recent FESAC meeting after which the full committee voted 10-4 to endorse the report.

Sincerely,

A handwritten signature in purple ink that reads "Martin Greenwald".

Martin Greenwald
Chair, Fusion Energy Sciences Advisory Committee

Cc: Patricia Dehmer
Edmund Synakowski
Al Opdenaker