

Charge to the Burning Plasma Assessment Committee

The committee will carry out an assessment of a program of burning plasma experiments and its role in magnetic fusion research. The study will have three components:

1. An assessment of the importance of a burning plasma experimental program to (a) fusion energy sciences and technology and the development of fusion as an energy source, (b) plasma physics, and (c) science in general.
2. An assessment of scientific and technical readiness to undertake a burning plasma experimental program.
3. An independent review and assessment of the plan for the U.S. magnetic fusion burning plasma experimental program as developed by the Department of Energy through the FESAC and Snowmass processes. The committee will make recommendations on the program strategy aimed at maximizing the yield of scientific and technical understanding as the foundation for the future development of fusion as an energy source. Criteria for judging experiments will include the prospects for (a) achieving technical objectives, (b) extracting scientific and technological understanding and making progress of broad and generic applicability, and (c) contributing to the next steps in the experimental program. An interim report will address the importance of the science and the readiness to undertake a burning plasma experiment. It will provide interim advice to the Department of Energy regarding reentering negotiations to be a participant in a multinational burning plasma experiment (ITER). The committee is not asked to evaluate fusion as an energy option.

The committee will discuss and analyze the budget implications of its recommendations on program strategy but will not make budget recommendations per se.