

Public Comment to FESAC October 2, 2019 Meeting
Steve Dean, Fusion Power Associates

Concern

Your current charge was provided to you on 30 November 2018 by then Deputy Director for Science Programs, DOE Office of Science, approximately two weeks prior to the release of the National Academies year-long fusion program study. **Your current charge makes no reference on how or whether you are to take into account the recommendations of that Academies report.**

Your **current charge letter** requests the FESAC “undertake a new long-range strategic planning activity for the Fusion Energy Sciences (FES) program. The strategic planning activity – to encompass the entire FES research portfolio (namely, burning plasma science and discovery plasma science) – should identify and prioritize the research required to advance both the scientific foundation needed to develop a fusion energy source, as well as the broader FES mission to steward plasma science.”

The **Academies report** states, “This report of the Committee on a Strategic Plan for U.S. Burning Plasma Research describes a strategic plan for fusion research to guide implementation of the committee’s two main recommendations:

First, the United States should remain an ITER partner as the most cost-effective way to gain experience with a burning plasma at the scale of a power plant.

Second, the United States should start a national program of accompanying research and technology leading to the construction of a compact pilot plant that produces electricity from fusion at the lowest possible capital cost.

It is the absence of this second of the Academies recommended objectives from your current charge that concerns me most.

The Academies Executive Summary states “**A new national focus on developing a compact pilot plant in the long term will help set priorities for the near and mid-term fusion program.**”

While one might argue that your current charge could be interpreted to include the Academies second recommendation of having “a new national focus on developing a compact pilot plant in the long term” to “help set priorities for the near and mid-term fusion program”, I would argue that a more precise charge from the **current** Director of the Office of Science, to consider the recommendations of the Academies in formulating your proposed strategy, is needed – especially since the current Director was not in place when your current charge was written.

My view is that, in preparing a “strategy” for fusion, the first question to ask yourselves is “a strategy for accomplishing what?” I interpret the Academies report to call for a strategy that leads to “**A new national focus on developing a compact pilot plant in the long term will help set priorities for the near and mid-term fusion program.**” Consideration of such a “new national focus” is not currently explicitly included for consideration in your present charge.

Recommendation

I recommend that FESAC request an updated or revised charge from the current Director of the Office of Science specifically telling FESAC to consider the recommendations of the National Academies 2018 report while undertaking "a new long-range strategic planning activity for the Fusion Energy Sciences (FES) program".