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Dr. J. Stephen Binkley
Acting Director
Office of Science
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Dr. Binkley,

On November 30, 2018, you charged the Fusion Energy Sciences Advisory Committee (FESAC) to undertake a new long-range strategic planning (LRSP) activity for the Fusion Energy Sciences (FES) program to encompass the entire FES research portfolio, namely, burning plasma science and discovery plasma science. FESAC was to identify and prioritize the research required to advance both the scientific foundation to develop a fusion energy source, as well as the broader FES mission to steward plasma science. The FESAC report was to provide recommendations on the priorities for an optimized FES program over the next ten years (FY 2022-2031) under three budget scenarios with the FY 2019 enacted budget for the FES program as the baseline. The LRSP activities were separated in two phases. Phase-1 was a Community Planning Process (CPP) led by the APS-DPP to provide broad input to this LRSP. Phase-2 then involved a FESAC Subcommittee to develop the LRSP. You asked if FESAC would complete this report by December 2020.

Phase-1 work by the CPP delivered an outstanding Community Plan for Fusion Energy and Discovery Plasma Sciences report that was completed and issued on time in March 2020. As observers, FESAC members were especially impressed by the CPP Co-Chairs (Scott Baalrud, Nathaniel Ferraro, Lauren Garrison, Nathan Howard, Carolyn Kuranz, John Sarff, Earl Scime, and Wayne Solomon), delivering the CPP completion of Phase-1, that provided a strong base for Phase-2.

Phase-2 began in March 2020 when we were fortunate to select talented, determined, and persistent scientists and engineers from the community to populate our Subcommittee that represented the entire balanced FES research portfolio. The FESAC Subcommittee, led by Troy Carter, was devoted to this process, taking on this formidable task and completing its work in an extraordinarily short period of 9 months, providing plans and transparent information to FESAC members and the public at FESAC meetings in March, June, August, and December 2020.

The FESAC Subcommittee Report “Powering the Future Fusion & Plasmas, A long-range plan to deliver fusion energy and to advance plasma science” was presented to our FESAC meeting on December 7, 8 and 10, 2020. This report fully addressed the 2018 Charge. All 21 FESAC members attended this meeting, reviewed the report and its recommendations, and asked questions from Subcommittee members. Following discussions and deliberations, FESAC members separately approved each of the report’s 29 recommendations, resulting in unanimous approval of the LRSP report. All FESAC members unanimously approved the entire report with minor revisions.

With this letter, on behalf of all 21 FESAC members, I respectfully submit for your consideration the final report of the LRSP.

Sincerely,



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