AMENDMENT TO H.R. 2225

OFFERED BY MR. FOSTER OF ILLINOIS

Page 58, strike line 12 and all that follows through page 59, line 20, and insert the following:

(d) ADVANCED COMPUTING.—

(1) COMPUTING NEEDS.—To gather information about the computational needs of Foundation-funded projects, the Director shall require grant proposals submitted to the Foundation, as appropriate, to include estimates of computational resource needs for projects that require use of advanced computing. The Director shall encourage and provide access to tools that facilitate the inclusion of these measures, including those identified in the 2016 Academies report entitled “Future Directions for NSF Advanced Computing Infrastructure to Support U.S. Science and Engineering in 2017–2020”.

(2) REPORTS.—The Director shall document and publish every two years a summary of the amount and types of advanced computing capabilities that are needed to fully meet the Foundation’s project needs as identified under paragraph (1).
(3) **ROADMAP.**—To set priorities and guide strategic decisions regarding investments in advanced computing capabilities, the Director shall develop, publish, and regularly update a 5-year advanced computing roadmap that—

(A) describes the advanced computing resources and capabilities that would fully meet anticipated project needs, including through investments in the Mid-Scale Research Infrastructure program and the Major Research Equipment and Facilities Construction account;

(B) draws on community input, information contained in research proposals, allocation requests, insights from Foundation-funded cyber-infrastructure operators, and Foundation-wide information gathering regarding community needs;

(C) considers computational needs of planned major facilities;

(D) reflects anticipated technology trends;

(E) informs users and potential partners about future facilities and services;

(F) addresses the needs of groups historically underrepresented in STEM and geo-
graphic regions with low availability and high demand for advanced computing resources;

(G) considers how Foundation-supported advanced computing capabilities can be leveraged for activities through the Directorate for Science and Engineering Solutions; and

(H) provides an update to Congress about the level of funding necessary to fully meet computational resource needs for the research community.