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:

1   (d) ADVANCED COMPUTING.—

2   (1) COMPUTING NEEDS.—To gather informa-

3   tion about the computational needs of Foundation-

4   funded projects, the Director shall require grant pro-

5   posals submitted to the Foundation to include esti-

6   mates of computational resource needs for projects

7   that require use of advanced computing. The Direc-

8   tor shall encourage and provide access to tools that

9   facilitate the inclusion of these measures, including

10   those identified in the 2016 Academies report enti-

11   tled "Future Directions for NSF Advanced Com-

12   puting Infrastructure to Support U.S. Science and

13   Engineering in 2017–2020".

14   (2) REPORTS.—The Director shall document

15   and publish every two years a summary of the

16   amount and types of advanced computing capabili-

17   ties that are needed to fully meet the Foundation's

18   project needs as identified under paragraph (1).

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1   (3) ROADMAP.—To set priorities and guide
2 strategic decisions regarding investments in ad-
3 vanced computing capabilities, the Director shall de-
4 velop, publish, and regularly update a 5-year ad-
5 vanced computing roadmap that—

6   (A) establishes the advanced computing re-
7   sources that would fully meet anticipated
8   project needs;

9   (B) draws on community input, informa-
10   tion contained in research proposals, allocation
11   requests, insights from Foundation-funded
12   cyber-infrastructure operators, and Foundation-
13   wide information gathering regarding commu-
14   nity needs;

15   (C) reflects anticipated technology trends;

16   (D) informs users and potential partners
17   about future facilities and services;

18   (E) addresses the needs of groups histori-
19   cally underrepresented in STEM and geo-
20   graphic regions with low availability and high
21   demand for advanced computing resources;

22   (F) considers computational needs of
23   planned major facilities;

24   (G) considers how the Mid-Scale Research
25   Infrastructure programs and Major Research

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1   Equipment   and   Facilities   Construction
2   (MREFC) account can be leveraged to support
3   provisioning of resources to meet full computa-
4   tional needs;

5   (H) describes the portfolio of necessary re-
6   sources and considers how NSF advanced com-
7   puting capabilities can be leveraged for partner-
8   ships and translation activities through the Di-
9   rectorate for Science and Engineering Solu-
10   tions; and

11   (I) provides an update to Congress about
12   the level of funding necessary to fully meet
13   computational resource needs for the research
14   community.

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