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(Original Signature of Member)

117TH CONGRESS  
1ST SESSION

**H. R.** \_\_\_\_\_

To provide for advanced biological and environmental research and development capabilities and infrastructure at the Department of Energy, and for other purposes.

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IN THE HOUSE OF REPRESENTATIVES

Mr. BAIRD introduced the following bill; which was referred to the Committee on \_\_\_\_\_  
\_\_\_\_\_

**A BILL**

To provide for advanced biological and environmental research and development capabilities and infrastructure at the Department of Energy, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Department of Energy  
5 Biological Innovation Opportunities Act” or the “Depart-  
6 ment of Energy BIO Act”.

1 **SEC. 2. AMENDMENTS TO BIOLOGICAL AND ENVIRON-**  
2 **MENTAL RESEARCH PROGRAM.**

3 (a) IN GENERAL.—Section 977(f) of the Energy Pol-  
4 icy Act of 2005 (42 U.S.C. 16317) is amended to read  
5 as follows:

6 “(f) BIOENERGY RESEARCH CENTERS.—

7 “(1) IN GENERAL.—In carrying out activities  
8 under subsection (a), the Director shall select and  
9 establish up to four bioenergy research centers to  
10 conduct basic and fundamental research in plant  
11 and microbial systems biology, bio imaging and anal-  
12 ysis, and genomics to inform the production of fuels,  
13 chemicals from sustainable biomass resources, and  
14 to facilitate the translation of basic research results  
15 to industry.

16 “(2) SELECTION.—The Director shall select  
17 centers under paragraph (1) on a competitive, merit-  
18 reviewed basis. The Director shall consider applica-  
19 tions from National Laboratories, multi-institutional  
20 collaborations, and other appropriate entities.

21 “(3) DURATION.—A center established under  
22 this subsection shall receive support for a period of  
23 not more than 5 years, subject to the availability of  
24 appropriations.

25 “(4) EXISTING CENTERS.—The Director may  
26 select a center for participation under this sub-

1 section that is in existence, or undergoing a renewal  
2 process, on the date of enactment of the Department  
3 of Energy BIO Act. Such center shall be eligible to  
4 receive support for the duration the 5-year period  
5 beginning on the date of establishment of such cen-  
6 ter.

7 “(5) RENEWAL.—Upon the expiration of any  
8 period of support of a center under this subsection,  
9 the Director may renew support for the center, on  
10 a merit-reviewed basis, for a period of not more than  
11 5 years.

12 “(6) TERMINATION.—Consistent with the exist-  
13 ing authorities of the Department, the Director may  
14 terminate an underperforming center for cause dur-  
15 ing the performance period.”.

16 (b) USER FACILITIES.—Section 306 of the Depart-  
17 ment of Energy Research and Innovation Act (42 U.S.C.  
18 18644) is amended by adding at the end the following:

19 “(e) BIOLOGICAL AND ENVIRONMENTAL RESEARCH  
20 USER FACILITIES.—

21 “(1) IN GENERAL.—The Director shall carry  
22 out a program for the development, construction, op-  
23 eration, and maintenance of user facilities to en-  
24 hance the collection and analysis of observational

1 data related to complex biological, earth, and envi-  
2 ronmental systems.

3 “(2) FACILITY REQUIREMENTS.—To the max-  
4 imum extent practicable, the user facilities devel-  
5 oped, constructed, operated, or maintained under  
6 paragraph (1) shall include—

7 “(A) distributed field research and obser-  
8 vation platforms for understanding earth sys-  
9 tem processes;

10 “(B) instruments and modeling resources  
11 for understanding the physical, chemical, and  
12 cellular processes of biological and environ-  
13 mental systems;

14 “(C) integrated high-throughput sequenc-  
15 ing, DNA design and synthesis, metabolomics  
16 and computational analysis; and

17 “(D) such other facilities as the Director  
18 considers appropriate, consistent with section  
19 209 of the Department of Energy Organization  
20 Act (42 U.S.C. 7139).

21 “(3) EXISTING FACILITIES.—In carrying out  
22 the program established in paragraph (1), the Direc-  
23 tor is encouraged to evaluate the capabilities of ex-  
24 isting user facilities and, to the maximum extent

1       practicable, invest in modernization of those capa-  
2       bilities to address emerging research priorities.”.