Suspend the Rules and Pass the Bill, H. R. 617, With an Amendment

(The amendment strikes all after the enacting clause and inserts a new text)

116TH CONGRESS
1ST SESSION

H. R. 617

To authorize the Department of Energy to conduct collaborative research with the Department of Veterans Affairs in order to improve healthcare services for veterans in the United States, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 16, 2019

Mr. NORMAN (for himself, Mr. JONES, Mr. BILIRAKIS, Mr. MARSHALL, Mr. WEBER of Texas, Mr. GOSAR, Mr. LIPINSKI, Mr. MULLIN, Mr. WATKINS, Mr. LUCAS, Mr. JOHNSON of Ohio, Mr. MEADOWS, and Mrs. LESKO) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Veterans' Affairs, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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A BILL

To authorize the Department of Energy to conduct collaborative research with the Department of Veterans Affairs in order to improve healthcare services for veterans in the United States, 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,*

SECTION 1. SHORT TITLE.

This Act may be cited as the "Department of Energy Veterans' Health Initiative Act".

SEC. 2. DEFINITIONS.

In this Act:

(1) DEPARTMENT.—The term "Department" means the Department of Energy.

(2) NATIONAL LABORATORY.—The term "National Laboratory" has the meaning given that term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

(3) SECRETARY.—The term "Secretary" means the Secretary of Energy.

SEC. 3. PURPOSES.

The purposes of this Act are to advance Department of Energy expertise in artificial intelligence and high-performance computing in order to improve health outcomes for veteran populations by—

(1) supporting basic research through the application of artificial intelligence, high-performance computing, modeling and simulation, machine learning, and large-scale data analytics to identify and solve outcome-defined challenges in the health sciences;

(2) maximizing the impact of the Department of Veterans Affairs' health and genomics data

1 housed at the National Laboratories, as well as data

2 from other sources, on science, innovation, and

3 health care outcomes through the use and advance-

4 ment of artificial intelligence and high-performance

5 computing capabilities of the Department of Energy;

6 (3) promoting collaborative research through

7 the establishment of partnerships to improve data

8 sharing between Federal agencies, National Labora-

9 tories, institutions of higher education, and non-

10 profit institutions;

11 (4) establishing multiple scientific computing

12 user facilities to house and provision available data

13 to foster transformational outcomes; and

14 (5) driving the development of technology to im-

15 prove artificial intelligence, high-performance com-

16 puting, and networking relevant to mission applica-

17 tions of the Department of Energy, including mod-

18 eling, simulation, machine learning, and advanced

19 data analytics.

20 **SEC. 4. DEPARTMENT OF ENERGY VETERANS HEALTH RE-**

21 **SEARCH AND DEVELOPMENT.**

22 (a) IN GENERAL.—The Secretary shall establish and

23 carry out a research program in artificial intelligence and

24 high-performance computing, focused on the development

25 of tools to solve big data challenges associated with vet-

1 eran's healthcare, and to support the efforts of the De-
2 partment of Veterans Affairs to identify potential health
3 risks and challenges utilizing data on long-term health-
4 care, health risks, and genomic data collected from veteran
5 populations. The Secretary shall carry out this program
6 through a competitive, merit-reviewed process, and con-
7 sider applications from National Laboratories, institutions
8 of higher education, multi-institutional collaborations, and
9 other appropriate entities.

10 (b) PROGRAM COMPONENTS.—In carrying out the
11 program established under subsection (a), the Secretary
12 may—

13   (1) conduct basic research in modeling and sim-
14   ulation, machine learning, large-scale data analytics,
15   and predictive analysis in order to develop novel or
16   optimized algorithms for prediction of disease treat-
17   ment and recovery;

18   (2) develop methods to accommodate large data
19   sets with variable quality and scale, and to provide
20   insight and models for complex systems;

21   (3) develop new approaches and maximize the
22   use of algorithms developed through artificial intel-
23   ligence, machine learning, data analytics, natural
24   language processing, modeling and simulation, and
25   develop new algorithms suitable for high-perform-

1 ance computing systems and large biomedical data

2 sets;

3 　　　　(4) advance existing and construct new data en-

4 claves capable of securely storing data sets provided

5 by the Department of Veterans Affairs, Department

6 of Defense, and other sources; and

7 　　　　(5) promote collaboration and data sharing be-

8 tween National Laboratories, research entities, and

9 user facilities of the Department by providing the

10 necessary access and secure data transfer capabili-

11 ties.

12 (c) COORDINATION.—In carrying out the program re-

13 quired under subsection (a), the Secretary is authorized

14 to—

15 　　　　(1) enter into memoranda of understanding in

16 order to carry out reimbursable agreements with the

17 Department of Veterans Affairs and other entities in

18 order to maximize the effectiveness of Department

19 of Energy research and development to improve vet-

20 erans' healthcare;

21 　　　　(2) consult with the Department of Veterans

22 Affairs and other Federal agencies as appropriate;

23 and

24 　　　　(3) ensure that data storage meets all privacy

25 and security requirements established by the Depart-

1 ment of Veterans Affairs, and that access to data is

2 provided in accordance with relevant Department of

3 Veterans Affairs data access policies, including in-

4 formed consent.

5 (d) REPORT.—Not later than two years after the date

6 of the enactment of this Act, the Secretary shall submit

7 to the Committee on Science, Space, and Technology and

8 the Committee on Veterans' Affairs of the House of Rep-

9 resentatives, and the Committee on Energy and Natural

10 Resources and the Committee on Veterans' Affairs of the

11 Senate, a report detailing the effectiveness of—

12 (1) the interagency coordination between each

13 Federal agency involved in the research program

14 carried out under this section;

15 (2) collaborative research achievements of the

16 program; and

17 (3) potential opportunities to expand the tech-

18 nical capabilities of the Department.

19 (e) FUNDING.—The Secretary of Veterans Affairs

20 shall allocate up to $27,000,000 during the period of fiscal

21 years 2019 through 2023 to carry out this section, subject

22 to the availability of appropriations.

23 **SEC. 5. INTERAGENCY COLLABORATION.**

24 (a) IN GENERAL.—The Secretary is authorized to

25 carry out research, development, and demonstration activi-

1 ties to develop tools to apply to big data that enable Fed-

2 eral agencies, institutions of higher education, nonprofit

3 research organizations, and industry to better leverage the

4 capabilities of the Department to solve complex, big data

5 challenges. The Secretary shall carry out these activities

6 through a competitive, merit-reviewed process, and con-

7 sider applications from National Laboratories, institutions

8 of higher education, multi-institutional collaborations, and

9 other appropriate entities.

10   (b) ACTIVITIES.—In carrying out the research, devel-

11 opment, and demonstration activities authorized under

12 subsection (a), the Secretary may—

13   (1) utilize all available mechanisms to prevent

14   duplication and coordinate research efforts across

15   the Department;

16   (2) establish multiple user facilities to serve as

17   data enclaves capable of securely storing data sets

18   created by Federal agencies, institutions of higher

19   education, nonprofit organizations, or industry at

20   National Laboratories; and

21   (3) promote collaboration and data sharing be-

22   tween National Laboratories, research entities, and

23   user facilities of the Department by providing the

24   necessary access and secure data transfer capabili-

25   ties.

1   (c) REPORT.—Not later than two years after the date
2 of the enactment of this Act, the Secretary shall submit
3 to the Committee on Science, Space, and Technology of
4 the House of Representatives and the Committee on En-
5 ergy and Natural Resources of the Senate a report evalu-
6 ating the effectiveness of the activities authorized under
7 subsection (a).

8   (d) FUNDING.—There are authorized to be appro-
9 priated to the Secretary of Energy to carry out subsection
10 (a) $15,000,000 for each of the fiscal years 2020 through
11 2023.