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. Mулlin, 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

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
housed at the National Laboratories, as well as data
from other sources, on science, innovation, and
health care outcomes through the use and advance-
ment of artificial intelligence and high-performance
computing capabilities of the Department of Energy;

(3) promoting collaborative research through
the establishment of partnerships to improve data
sharing between Federal agencies, National Labora-
tories, institutions of higher education, and non-
profit institutions;

(4) establishing multiple scientific computing
user facilities to house and provision available data
to foster transformational outcomes; and

(5) driving the development of technology to im-
prove artificial intelligence, high-performance com-
puting, and networking relevant to mission applica-
tions of the Department of Energy, including mod-
eling, simulation, machine learning, and advanced
data analytics.

SEC. 4. DEPARTMENT OF ENERGY VETERANS HEALTH RE-
SEARCH AND DEVELOPMENT.

(a) IN GENERAL.—The Secretary shall establish and
carry out a research program in artificial intelligence and
high-performance computing, focused on the development
of tools to solve big data challenges associated with vet-
eran’s healthcare, and to support the efforts of the Department of Veterans Affairs to identify potential health risks and challenges utilizing data on long-term healthcare, health risks, and genomic data collected from veteran populations. The Secretary shall carry out this program through a competitive, merit-reviewed process, and consider applications from National Laboratories, institutions of higher education, multi-institutional collaborations, and other appropriate entities.

(b) **Program Components.**—In carrying out the program established under subsection (a), the Secretary may—

1. conduct basic research in modeling and simulation, machine learning, large-scale data analytics, and predictive analysis in order to develop novel or optimized algorithms for prediction of disease treatment and recovery;
2. develop methods to accommodate large data sets with variable quality and scale, and to provide insight and models for complex systems;
3. develop new approaches and maximize the use of algorithms developed through artificial intelligence, machine learning, data analytics, natural language processing, modeling and simulation, and develop new algorithms suitable for high-perform-
ance computing systems and large biomedical data sets;

(4) advance existing and construct new data en-
claves capable of securely storing data sets provided
by the Department of Veterans Affairs, Department
of Defense, and other sources; and

(5) promote collaboration and data sharing be-
tween National Laboratories, research entities, and
user facilities of the Department by providing the
necessary access and secure data transfer capabili-
ties.

(c) COORDINATION.—In carrying out the program re-
quired under subsection (a), the Secretary is authorized
to—

(1) enter into memoranda of understanding in
order to carry out reimbursable agreements with the
Department of Veterans Affairs and other entities in
order to maximize the effectiveness of Department
of Energy research and development to improve vet-
erans’ healthcare;

(2) consult with the Department of Veterans
Affairs and other Federal agencies as appropriate;
and

(3) ensure that data storage meets all privacy
and security requirements established by the Depart-
ment of Veterans Affairs, and that access to data is
provided in accordance with relevant Department of
Veterans Affairs data access policies, including in-
formed consent.

(d) REPORT.—Not later than two years after the date
of the enactment of this Act, the Secretary shall submit
to the Committee on Science, Space, and Technology and
the Committee on Veterans’ Affairs of the House of Rep-
resentatives, and the Committee on Energy and Natural
Resources and the Committee on Veterans’ Affairs of the
Senate, a report detailing the effectiveness of—

(1) the interagency coordination between each
Federal agency involved in the research program
carried out under this section;

(2) collaborative research achievements of the
program; and

(3) potential opportunities to expand the tech-
nical capabilities of the Department.

(e) FUNDING.—The Secretary of Veterans Affairs
shall allocate up to $27,000,000 during the period of fiscal
years 2019 through 2023 to carry out this section, subject
to the availability of appropriations.

SEC. 5. INTERAGENCY COLLABORATION.

(a) IN GENERAL.—The Secretary is authorized to
carry out research, development, and demonstration activi-
ties to develop tools to apply to big data that enable Federal agencies, institutions of higher education, nonprofit research organizations, and industry to better leverage the capabilities of the Department to solve complex, big data challenges. The Secretary shall carry out these activities through a competitive, merit-reviewed process, and consider applications from National Laboratories, institutions of higher education, multi-institutional collaborations, and other appropriate entities.

(b) ACTIVITIES.—In carrying out the research, development, and demonstration activities authorized under subsection (a), the Secretary may—

(1) utilize all available mechanisms to prevent duplication and coordinate research efforts across the Department;

(2) establish multiple user facilities to serve as data enclaves capable of securely storing data sets created by Federal agencies, institutions of higher education, nonprofit organizations, or industry at National Laboratories; and

(3) promote collaboration and data sharing between National Laboratories, research entities, and user facilities of the Department by providing the necessary access and secure data transfer capabilities.
(c) REPORT.—Not later than two years after the date of the enactment of this Act, the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report evaluating the effectiveness of the activities authorized under subsection (a).

(d) FUNDING.—There are authorized to be appropriated to the Secretary of Energy to carry out subsection (a) $15,000,000 for each of the fiscal years 2020 through 2023.