

116TH CONGRESS
1ST SESSION

H. R. 3626

To authorize the Secretary of Defense to carry out research, development, test, and evaluation activities, on a joint basis with the United Kingdom, to establish directed energy capabilities that address threats to the United States, deployed forces of the United States, or the United Kingdom, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 5, 2019

Mr. TED LIEU of California (for himself, Ms. STEFANIK, Mr. LANGEVIN, and Mr. LAMBORN) introduced the following bill; which was referred to the Committee on Armed Services, and in addition to the Committee on Foreign 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 Secretary of Defense to carry out research, development, test, and evaluation activities, on a joint basis with the United Kingdom, to establish directed energy capabilities that address threats to the United States, deployed forces of the United States, or the United Kingdom, 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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “United States-United
3 Kingdom Directed Energy Cooperation Act”.

4 **SEC. 2. FINDINGS.**

5 Congress finds the following:

6 (1) Directed energy platforms are electro-
7 magnetic systems capable of converting chemical or
8 electrical energy to radiated energy and focusing it
9 on a target, resulting in physical damage that de-
10 grades or neutralizes an adversarial capability.
11 These systems include high-energy lasers that emit
12 photons and high-power microwaves that release ra-
13 diofrequency waves.

14 (2) Directed energy platforms hold enormous
15 potential for non-lethal, defensive capabilities, in-
16 cluding protection against advanced missiles and
17 swarms of unmanned aerial systems.

18 (3) At a fraction of the per-use cost of kinetic
19 defense platforms, directed energy capabilities could
20 greatly enhance the deterrence posture of the United
21 States and protect against emerging threats such as
22 hypersonic and maneuverable missiles.

23 (4) Collaboration between the United States
24 and the United Kingdom on the development and
25 application of directed energy weapon technologies
26 can be traced back to 2010. The UK/US Directed

1 Energy Symposium was created under bilateral ex-
2 change agreements between the United States and
3 the United Kingdom, covering topics such as high-
4 energy lasers, modeling and simulation, and protec-
5 tion against high-power radio frequency weapons.

6 (5) In response to technological advances and
7 emerging threats, the United States has increased
8 investments in next-generation directed energy capa-
9 bilities and is exploring the potential for boost-phase
10 ballistic missile defense with the Low-Power Laser
11 Demonstrator program. Existing programs within
12 each service branch are developing technologies to
13 protect members of the Armed Forces from rocket,
14 artillery, mortar, and unmanned aerial systems.

15 (6) In 2017, the United Kingdom’s Ministry of
16 Defence awarded £30M to an international defense
17 consortium to build a prototype for the Laser Di-
18 rected Energy Weapon (LDEW) Capability Demon-
19 strator. The air defense system will be capable of en-
20 gaging targets in land and maritime environments.

21 (7) In 2017, the United Kingdom’s Minister for
22 Defence Procurement Harriett Baldwin said, “The
23 UK has long enjoyed a reputation as a world leader
24 in innovation and it is truly ground-breaking
25 projects like the Laser Directed Energy Weapon

1 which will keep this country ahead of the curve. The
2 Defense Innovation Initiative and £800M Defense
3 Innovation Fund aim to encourage imagination, in-
4 genuity and entrepreneurship, in pursuit of main-
5 taining a military advantage in the future.”.

6 (8) In 2018, while offering remarks at the Di-
7 rected Energy Summit, Undersecretary of Defense
8 for Research and Engineering Michael Griffin ex-
9 pressed support for the United States partnering
10 with allies to develop directed energy technologies.

11 (9) In 2019, the United States Missile Defense
12 Review highlighted the promise that high-powered
13 laser technology holds for boost-phase ballistic mis-
14 sile defense.

15 **SEC. 3. UNITED STATES-UNITED KINGDOM DIRECTED EN-**
16 **ERGY CAPABILITIES COOPERATION.**

17 (a) **AUTHORITY.**—

18 (1) **IN GENERAL.**—The Secretary of Defense,
19 upon request of the United Kingdom’s Secretary of
20 State for Defence and with the concurrence of the
21 Secretary of State, is authorized to carry out re-
22 search, development, test, and evaluation activities,
23 on a joint basis with the United Kingdom, to estab-
24 lish directed energy capabilities that address threats
25 to the United States, deployed forces of the United

1 States, or the United Kingdom. Any activities car-
2 ried out pursuant to such authority shall be con-
3 ducted in a manner that appropriately protects sen-
4 sitive information and the national security interests
5 of the United States and the national security inter-
6 ests of the United Kingdom.

7 (2) REPORT.—The activities described in para-
8 graph (1) may be carried out after the Secretary of
9 Defense submits to the appropriate committees of
10 Congress a report setting forth the following:

11 (A) A memorandum of agreement between
12 the United States and the United Kingdom re-
13 garding sharing of research and development
14 costs for the capabilities described in paragraph
15 (1), and any supporting documents.

16 (B) A certification that the memorandum
17 of agreement—

18 (i) requires sharing of costs of
19 projects, including in-kind support, be-
20 tween the United States and the United
21 Kingdom;

22 (ii) establishes a framework to nego-
23 tiate the rights to any intellectual property
24 developed under the memorandum of
25 agreement; and

1 (iii) requires the United States Gov-
2 ernment to receive semiannual reports on
3 expenditure of funds, if any, by the Gov-
4 ernment of the United Kingdom, including
5 a description of what the funds have been
6 used for, when funds were expended, and
7 an identification of entities that expended
8 the funds.

9 (b) SUPPORT IN CONNECTION WITH ACTIVITIES.—

10 (1) IN GENERAL.—The Secretary of Defense is
11 authorized to provide maintenance and sustainment
12 support to the United Kingdom for the directed en-
13 ergy capabilities research, development, test, and
14 evaluation activities authorized in subsection (a)(1).
15 Such authority includes authority to install equip-
16 ment necessary to carry out such research, develop-
17 ment, test, and evaluation.

18 (2) REPORT.—The support described in para-
19 graph (1) may not be provided until 15 days after
20 the Secretary of Defense submits to the appropriate
21 committees of Congress a report setting forth a de-
22 tailed description of the support to be provided.

23 (3) MATCHING CONTRIBUTION.—The support
24 described in paragraph (1) may not be provided un-
25 less the Secretary of Defense certifies to the appro-

1 appropriate committees of Congress that the Government
2 of the United Kingdom will contribute to such sup-
3 port—

4 (A) an amount equal to not less than the
5 amount of support to be so provided; or

6 (B) an amount that otherwise meets the
7 best efforts of the United Kingdom, as mutually
8 agreed to by the United States and the United
9 Kingdom.

10 (c) LEAD AGENCY.—The Secretary of Defense shall
11 designate an appropriate research and development entity
12 of a military department as the lead agency of the Depart-
13 ment of Defense in carrying out this section.

14 (d) SEMIANNUAL REPORT.—The Secretary of De-
15 fense shall submit to the appropriate committees of Con-
16 gress on a semiannual basis a report that contains a copy
17 of the most recent semiannual report provided by the Gov-
18 ernment of the United Kingdom to the Department of De-
19 fense pursuant to subsection (a)(2)(B)(iii).

20 (e) APPROPRIATE COMMITTEES OF CONGRESS DE-
21 FINED.—In this section, the term “appropriate commit-
22 tees of Congress” means—

23 (1) the Committee on Armed Services, the
24 Committee on Foreign Relations, the Committee on
25 Homeland Security and Governmental Affairs, the

1 Committee on Appropriations, and the Select Com-
2 mittee on Intelligence of the Senate; and

3 (2) the Committee on Armed Services, the
4 Committee on Foreign Affairs, the Committee on
5 Homeland Security, the Committee on Appropria-
6 tions, and the Permanent Select Committee on Intel-
7 ligence of the House of Representatives.

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