

115TH CONGRESS  
1ST SESSION

**S.** \_\_\_\_\_

To provide for the development, construction and operation of a backup to the Global Positioning System, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

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Mr. CRUZ (for himself and Mr. MARKEY) introduced the following bill; which was read twice and referred to the Committee on \_\_\_\_\_

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## A BILL

To provide for the development, construction and operation of a backup to the Global Positioning System, 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 “National Timing Resil-

5        ience and Security Act of 2017”.

6        **SEC. 2. BACKUP GLOBAL POSITIONING SYSTEM.**

7        (a) IN GENERAL.—Subject to the availability of ap-

8        propriations, the Secretary of Transportation, in consulta-

9        tion with the Secretary of Homeland Security, shall pro-

10       vide for the establishment, sustainment, and operation of

1 a land-based, resilient, and reliable alternative timing sys-  
2 tem to—

3 (1) reduce critical dependencies and provide a  
4 complement to and backup for the timing component  
5 of the Global Positioning System (in this section re-  
6 ferred to as “GPS”); and

7 (2) to ensure the availability of uncorrupted  
8 and non-degraded timing signals for military and ci-  
9 vilian users in the event that GPS timing signals are  
10 corrupted, degraded, unreliable, or otherwise un-  
11 available.

12 (b) ESTABLISHMENT OF REQUIREMENTS.—

13 (1) IN GENERAL.—Not later than 180 days  
14 after the date of the enactment of this Act, the Sec-  
15 retary of Transportation, in consultation with the  
16 Secretary of Homeland Security, shall establish re-  
17 quirements for the procurement of the system re-  
18 quired by subsection (a) as a complement to and  
19 backup for the timing component of GPS in accord-  
20 ance with the timing requirements study required by  
21 section 1618 of the National Defense Authorization  
22 Act for Fiscal Year 2017 (Public Law 114–328; 130  
23 Stat. 2595).

24 (2) REQUIREMENTS.—The Secretary of Trans-  
25 portation shall ensure, to the maximum extent prac-

1            ticable, that the system established under subsection

2            (a)—

3                    (A) be wireless;

4                    (B) be terrestrial;

5                    (C) provide wide-area coverage;

6                    (D) deliver a precise, high-power 100 kilo-  
7            hertz signal;

8                    (E) be synchronized with coordinated uni-  
9            versal time;

10                    (F) be resilient and extremely difficult to  
11            disrupt or degrade;

12                    (G) be able to penetrate underground and  
13            inside buildings;

14                    (H) be capable of deployment to remote lo-  
15            cations;

16                    (I) take full advantage of the infrastruc-  
17            ture and spectrum of the existing, unused gov-  
18            ernment long-range navigation system (com-  
19            monly known as “LORAN”);

20                    (J) be developed, constructed, and oper-  
21            ated incorporating applicable private sector ex-  
22            pertise;

23                    (K) work in concert with and complement  
24            any other similar positioning, navigation, and  
25            timing systems, including enhanced long-range

1 navigation systems and Nationwide Differential  
2 GPS systems;

3 (L) be made available by the Secretary of  
4 Transportation for use by other Federal and  
5 non-Federal Government agencies for public  
6 purposes at no cost;

7 (M) be capable of adaptation and expan-  
8 sion to provide position and navigation capabili-  
9 ties;

10 (N) incorporate the recommendations from  
11 any GPS back-up demonstration program initi-  
12 ated and completed by the Secretary, in coordi-  
13 nation with other Federal agencies, before the  
14 date specified in subsection (c)(1); and

15 (O) incorporate such other elements as the  
16 Secretary considers appropriate.

17 (c) IMPLEMENTATION PLAN.—

18 (1) PLAN REQUIRED.—Not later than 180 days  
19 after the date of the enactment of this Act, the Sec-  
20 retary of Transportation shall submit to the Com-  
21 mittee on Commerce, Science, and Transportation of  
22 the Senate and the Committee on Transportation  
23 and Infrastructure of the House of Representatives  
24 a report setting forth the following:

1 (A) A plan to develop, construct, and oper-  
2 ate the system required by subsection (a).

3 (B) A description and assessment of the  
4 advantages of a system to provide a follow-on  
5 complementary and backup positioning and  
6 navigation capability to the timing component  
7 of GPS.

8 (2) DEADLINE FOR COMMENCEMENT OF OPER-  
9 ATION.—The system required by subsection (a) shall  
10 be in operation by not later than two years after the  
11 date of the enactment of this Act.

12 (3) MINIMUM DURATION OF OPERATIONAL CA-  
13 PABILITY.—The system required by subsection (a)  
14 shall be designed to be fully operational for not less  
15 than 20 years.

16 (d) LORAN FACILITIES.—

17 (1) IN GENERAL.—If the Secretary of Trans-  
18 portation determines that any LORAN infrastruc-  
19 ture, including the underlying real property and any  
20 spectrum associated with LORAN, in the possession  
21 of the Coast Guard is required by the Department  
22 of Transportation for the purpose of establishing the  
23 system required by subsection (a), the Commandant  
24 of the Coast Guard shall transfer such property,  
25 spectrum, and equipment to the Secretary.

1           (2) CERCLA NOT AFFECTED.—This subsection  
2 shall not be construed to limit the application of or  
3 otherwise affect section 120(h) of the Comprehensive  
4 Environmental Response, Compensation, and Liabil-  
5 ity Act of 1980 (42 U.S.C. 9620(h)) with respect to  
6 the Federal Government facilities described in para-  
7 graph (1).

8           (e) AGREEMENT.—

9           (1) IN GENERAL.—The Secretary of Transpor-  
10 tation, in consultation with the Secretary of Home-  
11 land Security, may enter into a cooperative agree-  
12 ment (as that term is defined in section 6305 of title  
13 31 United States Code) with an entity upon such  
14 terms and conditions as the Secretary of Transpor-  
15 tation determines will fulfill the purpose and require-  
16 ments of this section and be in the public interest.  
17 Such agreement shall, at a minimum, require the  
18 Secretary of Transportation to—

19           (A) authorize the entity to sell timing and  
20 other services to commercial and non-commer-  
21 cial third parties, subject to any national secu-  
22 rity requirements determined by the Secretary,  
23 in consultation with the Secretary of Defense;

24           (B) require the entity to develop, con-  
25 struct, and operate at private expense the

1 backup timing system in accordance with this  
2 section;

3 (C) allow the entity to make any invest-  
4 ments in technologies necessary over the life of  
5 such agreement to meet future requirements for  
6 advanced timing resilience and technologies;

7 (D) require the entity to share revenue so  
8 as to provide for an equitable share of the rev-  
9 enue received with the Secretary by the entity  
10 from the sale of timing services to third parties,  
11 taking into account the entity's capital invest-  
12 ment and its costs to operate, maintain, and  
13 upgrade the system;

14 (E) require the entity—

15 (i) to assume all financial risk for the  
16 completion and operational capability of  
17 the system, after the Secretary provides fa-  
18 cilities necessary for the system under sub-  
19 section (d); and

20 (ii) to furnish performance and pay-  
21 ment bonds in connection with the system  
22 in a reasonable amount as determined by  
23 the Secretary; and

24 (F) require the entity to make any invest-  
25 ments in technologies necessary over the life of

1           the agreement to meet future requirements for  
2           advanced timing resiliency.

3           (2) COMPETITION REQUIRED.—The Secretary  
4           shall use competitive procedures similar to those au-  
5           thorized under section 2667 of title 10, United  
6           States Code, in selecting an entity to enter into a co-  
7           operative agreement pursuant to this subsection.

8           (3) AUTHORIZATION TO PURCHASE SERV-  
9           ICES.—The Secretary may, subject to the availability  
10          of appropriations, purchase timing system services  
11          from the entity, once the system achieves operational  
12          status, for use by the Department of Transportation  
13          and for provision to other Federal and non-Federal  
14          agencies as described in this section. The costs of  
15          such services may be offset, in whole or in part, pur-  
16          suant to the revenue sharing provision required by  
17          paragraph (1)(D).

18          (4) DETERMINATION.—The Secretary may not  
19          enter into a cooperative agreement under this sub-  
20          section unless the Secretary determines that the  
21          agreement is in the best financial interest of the  
22          Federal Government. The Secretary shall notify the  
23          Committee on Commerce, Science, and Transpor-  
24          tation of the Senate and the Committee on Trans-  
25          portation and Infrastructure of the House of Rep-

1        representatives of such determination not later than 30  
2        days after the date of the determination.

3            (5) DEFINITION.—In this subsection the term  
4        “entity” means a non-Federal entity with the dem-  
5        onstrated technical expertise and requisite adminis-  
6        trative and financial resources to meet any terms  
7        and conditions established by the Secretary for pur-  
8        poses of this subsection.