

116TH CONGRESS  
1ST SESSION

# H. R. 4462

To amend the National Telecommunications and Information Administration Organization Act to provide for the establishment of an electromagnetic spectrum sharing research and development program and an integrated spectrum automation enterprise strategy, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 24, 2019

Mr. MICHAEL F. DOYLE of Pennsylvania (for himself and Mr. LATTA) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committee on Science, Space, and Technology, 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 amend the National Telecommunications and Information Administration Organization Act to provide for the establishment of an electromagnetic spectrum sharing research and development program and an integrated spectrum automation enterprise strategy, 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 “Studying How to Har-  
3 ness Airwave Resources Efficiently Act of 2019” or the  
4 “SHARE Act”.

5 **SEC. 2. NTIA ELECTROMAGNETIC SPECTRUM SHARING RE-**  
6 **SEARCH AND DEVELOPMENT PROGRAM AND**  
7 **STRATEGY.**

8       Part A of the National Telecommunications and In-  
9 formation Administration Organization Act (47 U.S.C.  
10 901 et seq.) is amended by adding at the end the fol-  
11 lowing:

12 **“SEC. 106. ELECTROMAGNETIC SPECTRUM SHARING RE-**  
13 **SEARCH AND DEVELOPMENT PROGRAM AND**  
14 **STRATEGY.**

15       “(a) RESEARCH AND DEVELOPMENT PROGRAM.—  
16 Not later than 1 year after the date of the enactment of  
17 the Studying How to Harness Airwave Resources Effi-  
18 ciently Act of 2019, the Assistant Secretary, in consulta-  
19 tion with the Commission, shall establish a program to re-  
20 search and develop innovative technologies and techniques  
21 that facilitate the sharing of the same covered electro-  
22 magnetic spectrum by more than one Federal entity.

23       “(b) DEVELOPMENT OF INTEGRATED SPECTRUM AU-  
24 TOMATION ENTERPRISE STRATEGY.—

25       “(1) IN GENERAL.—Not later than 1 year after  
26 the date of the enactment of the Studying How to

1       Harness Airwave Resources Efficiently Act of 2019,  
2       the Assistant Secretary, in consultation with the  
3       Commission, shall propose, after notice and oppor-  
4       tunity for comment, an integrated spectrum automa-  
5       tion enterprise strategy to address the management  
6       of covered electromagnetic spectrum in order to fa-  
7       cilitate the sharing of such spectrum by more than  
8       one Federal entity.

9               “(2) MATTERS ENCOMPASSED.—In developing  
10       the strategy under paragraph (1), the Assistant Sec-  
11       retary shall consider, at a minimum, whether to pro-  
12       pose—

13                   “(A) changes in policy or to the law, in-  
14                   cluding legislative and regulatory changes; and

15                   “(B) using—

16                           “(i) databases;

17                           “(ii) artificial intelligence;

18                           “(iii) spectrum management proc-  
19                           esses;

20                           “(iv) public-facing application pro-  
21                           gramming interfaces and online tools;

22                           “(v) automatic frequency coordination  
23                           systems;

24                           “(vi) spectrum enforcement require-  
25                           ments;

1 “(vii) listen-before-talk;

2 “(viii) environmental sensing capabilities; and

3  
4 “(ix) electromagnetic spectrum compatibility analyses.

5  
6 “(3) ESTABLISHMENT OF SHARING TEST  
7 BED.—Not later than 15 months after the date of  
8 the enactment of the Studying How to Harness Air-  
9 wave Resources Efficiently Act of 2019, the Assistant  
10 Secretary, in consultation with the Commission,  
11 shall, as part of the strategy proposed under paragraph  
12 (1), establish at least one test bed to demonstrate  
13 the potential for automated technologies to  
14 facilitate the sharing of the same covered electromagnetic  
15 spectrum by more than one Federal entity.

16 “(4) UPDATES TO STRATEGY.—Not later than  
17 1 year after the strategy under paragraph (1) is proposed,  
18 and annually thereafter, the Assistant Secretary  
19 shall update such strategy.

20 “(c) REPORT.—Not later than 18 months after the  
21 date of the enactment of the Studying How to Harness  
22 Airwave Resources Efficiently Act of 2019, and annually  
23 thereafter, the Assistant Secretary, in consultation with  
24 the Commission, shall submit to the Committee on Energy  
25 and Commerce of the House of Representatives and the

1 Committee on Commerce, Science, and Transportation of  
2 the Senate a report containing—

3 “(1) the results of the program established  
4 under subsection (a); and

5 “(2) the strategy proposed under subsection  
6 (b)(1) with respect to the first report submitted  
7 under this subsection and updates to the strategy  
8 proposed under such subsection with respect to re-  
9 ports submitted thereafter.

10 “(d) AUTHORIZATION OF APPROPRIATIONS.—There  
11 is authorized to be appropriated to the Assistant Secretary  
12 to carry out this section \$50,000,000 for fiscal year 2020.  
13 Such amounts are authorized to remain available until ex-  
14 pended.

15 “(e) DEFINITIONS.—In this section:

16 “(1) COVERED ELECTROMAGNETIC SPEC-  
17 TRUM.—The term ‘covered electromagnetic spec-  
18 trum’ means electromagnetic spectrum allocated for  
19 exclusive or primary use by Federal entities.

20 “(2) FEDERAL ENTITY.—The term ‘Federal en-  
21 tity’ has the meaning given such term in section  
22 113(l).”.

1 **SEC. 3. FEDERAL COMMUNICATIONS COMMISSION REPORT**  
2 **ON EXPANDING SPECTRUM SHARING TECH-**  
3 **NIQUES.**

4 (a) REPORT.—Not later than 12 months after the  
5 first assignment of Priority Access Licenses through the  
6 system of competitive bidding, after an opportunity for no-  
7 tice and comment, the Federal Communications Commis-  
8 sion shall submit to the Committee on Energy and Com-  
9 merce of the House of Representatives and the Committee  
10 on Commerce, Science, and Transportation of the Senate  
11 a report that assesses and provides recommendations for  
12 expanding upon and improving spectrum sharing tech-  
13 niques developed for use in the 3.5 gigahertz band and  
14 that includes the following considerations:

15 (1) How to promote an ecosystem of devices  
16 employing such sharing techniques.

17 (2) How to ensure that any Federal protection  
18 zones and corresponding technical rules and power  
19 levels are no more protective than necessary.

20 (3) The applicability of such sharing techniques  
21 to frequencies between 3100 megahertz and 3550  
22 megahertz, inclusive, and frequencies between 7125  
23 megahertz and 8400 megahertz, inclusive, to the ex-  
24 tent any portion of such frequencies cannot be  
25 cleared in a reasonable amount of time.

1       (b) RULE OF CONSTRUCTION.—Nothing in sub-  
2 section (a)(3) may be construed to require that every spec-  
3 trum sharing technique developed for use in the 3.5  
4 gigahertz band be recommended for use in other bands.

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