

**Calendar No. 639**116<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION**S. 4286****[Report No. 116–332]**

To authorize appropriations for offsetting the costs related to reductions in research productivity resulting from the coronavirus pandemic.

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## IN THE SENATE OF THE UNITED STATES

JULY 22, 2020

Mr. MARKEY (for himself, Mr. TILLIS, Mr. PETERS, Mr. GARDNER, Ms. WARREN, and Ms. COLLINS) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

DECEMBER 15, 2020

Reported by Mr. WICKER, with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]**A BILL**

To authorize appropriations for offsetting the costs related to reductions in research productivity resulting from the coronavirus pandemic.

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 “Research Investment  
3 to Spark the Economy Act” or the “RISE Act”.

4 **SEC. 2. FINDINGS.**

5 Congress finds the following:

6 (1) Agencies provided Federal research grantees  
7 flexibility during the pandemic to support graduate  
8 students, postdocs, principal investigators, and tech-  
9 nical support staff.

10 (2) Agencies will need to provide current Fed-  
11 eral research grants extensions to cover time lost in  
12 research labs and in the field that will impact the  
13 completion of that agency’s research missions and  
14 priorities. Additionally, agencies allowed federally  
15 funded labs to donate necessary equipment, like per-  
16 sonal protective equipment among others, to support  
17 hospitals and first responders, which will need to be  
18 re-purchased and will create additional expenses to  
19 Federal contracts.

20 (3) The need to ensure the United States sus-  
21 tains the critical human infrastructure that under-  
22 girds the United States research enterprise, which  
23 has created a longstanding government-university  
24 partnership which has made America the global  
25 leader in innovation, strengthening the health of our  
26 Nation’s citizens, economy, and national security.

1           (4) While the Federal Government has made  
2 significant investments in new research to address  
3 COVID-19, existing research has been slowed down  
4 or stopped due to COVID-19 modified operations of  
5 campuses and laboratories.

6           (5) Given the modified operations of many uni-  
7 versity-based and national laboratories due to the  
8 pandemic, Congress is concerned that the people  
9 who comprise the research workforce—graduate stu-  
10 dents, postdocs, principal investigators, and tech-  
11 nical support staff—and the future health and  
12 strength of the United States research enterprise  
13 and manufacturing and technology economies,  
14 among others, are at risk.

15           (6) While our Nation's research capacity has  
16 demonstrated it can absorb shocks and pivot to ad-  
17 dress immediate national threats, the scale of this  
18 pandemic is still growing and unprecedented in du-  
19 ration and impact.

20           (7) Without funding, future innovations in  
21 areas such as quantum, artificial intelligence, robot-  
22 ics, computing, 5G, space exploration, digital agri-  
23 culture, cancer, and aging will be forestalled while  
24 the agencies are forced to use future appropriations  
25 for new research, meant to create new knowledge

1 leading to the next generation of discoveries, to  
2 cover existing grants. The Nation must innovate to  
3 launch the next 50 years of unparalleled economic  
4 leadership and be prepared for any future  
5 pandemics.

6 (8) Therefore, Congress believes it is vital that  
7 the Federal Government take measures to help re-  
8 lieve the strain agencies will be forced to face and  
9 sustain the strength of our Nation's ability to re-  
10 main a global leader in an increasingly competitive  
11 global research environment, as other countries con-  
12 tinue to make disproportionately large investments  
13 in key research areas.

14 **SEC. 3. DEFINITIONS.**

15 In this Act:

16 (1) **FEDERAL SCIENCE AGENCY.**—The term  
17 “Federal science agency”<sup>2</sup> means any agency (as de-  
18 fined in section 551 of title 5, United States Code)  
19 with at least \$50,000,000 in basic and applied re-  
20 search obligations in fiscal year 2020.

21 (2) **RESEARCH INSTITUTION.**—The term “re-  
22 search institution”<sup>2</sup> means an institution of higher  
23 education (as defined in section 101(a) of the High-  
24 er Education Act of 1965 (20 U.S.C. 1001(a))) or

1 a nonprofit entity that conducts federally funded re-  
2 search.

3 ~~(3) NATIONAL LABORATORY.~~—The term “Na-  
4 tional laboratory” has the meaning given the term in  
5 section 2 of the Energy Policy Act of 2005 (42  
6 U.S.C. 15801).

7 **SEC. 4. USE OF FUNDS.**

8 (a) ~~ALLOWABLE USES.~~—A Federal science agency  
9 may use funds authorized under this Act to—

10 (1) provide supplemental funding to extend the  
11 duration of a grant to a research institution or Na-  
12 tional laboratory that was awarded prior to the date  
13 of enactment of this Act, or to expand the purposes  
14 of such a grant in order to—

15 (A) enable a graduate student or post-doe-  
16 toral researcher to complete work that was dis-  
17 rupted by COVID-19;

18 (B) enable a principal investigator to com-  
19 plete work that was disrupted by COVID-19;

20 (C) extend the training of a graduate stu-  
21 dent or the employment of a post-doctoral re-  
22 searcher on an ongoing research project for up  
23 to 2 years because of the disruption of the job  
24 market due to COVID-19;

1           ~~(D)~~ allow for the use of laboratory ani-  
2 mals, reagents, equipment, or other items re-  
3 quired for research funded by a grant that was  
4 awarded prior to the date of enactment of this  
5 Act, but need to be replaced, refurbished, or  
6 otherwise made usable after disruption because  
7 of COVID-19;

8           ~~(E)~~ reconfigure laboratories, restart equip-  
9 ment and disrupted research, and other activi-  
10 ties necessary to safely resume on-site research  
11 activities in laboratories that were temporarily  
12 closed or redirected to COVID-19 response;  
13 and

14           ~~(F)~~ facilitate other competitively awarded  
15 research and training activities that have been  
16 disrupted by COVID-19;

17           ~~(2)~~ provide supplemental funding through exist-  
18 ing competitively awarded cooperative agreements  
19 and contracts to cover the increased costs of con-  
20 struction of scientific facilities and equipment that  
21 have been delayed because of COVID-19; and

22           ~~(3)~~ award grants and cooperative agreements to  
23 institutions of higher education to conduct research  
24 on the behavioral, social, or economic effects of

1        COVID-19 and the responses to the disease, or on  
2        the effectiveness of such responses.

3        (b) AWARDS.—Each Federal science agency author-  
4        ized to receive funds under this Act shall develop proce-  
5        dures to award such funds and shall award such funds  
6        as rapidly as possible.

7        (c) TIMING.—Funds authorized under this Act shall  
8        be awarded during fiscal years 2020 and 2021 and funds  
9        so awarded shall remain available for expenditure for up  
10       to 2 years.

11       **SEC. 5. REGULATIONS.**

12        Until such time as a research institution has deter-  
13        mined it can safely reopen a research laboratory funded  
14        by a Federal science agency, such agency shall continue  
15        to interpret regulations in a manner consistent with—

16                (1) the memorandum issued by the Office of  
17        Management and Budget on March 19, 2020, enti-  
18        tled “Administrative Relief for Recipients and Appli-  
19        cants of Federal Financial Assistance Directly Im-  
20        pacted by the Novel Coronavirus (COVID-19) due  
21        to Loss of Operations”; and

22                (2) the memorandum issued by the Office of  
23        Management and Budget on March 19, 2020, enti-  
24        tled “Managing Federal Contract Performance

1 Issues Associated with the Novel Coronavirus  
2 (COVID-19)”.  
3

3 **SEC. 6. AUTHORIZATIONS OF APPROPRIATIONS.**

4 (a) DEPARTMENT OF AGRICULTURE.—There is au-  
5 thorized to be appropriated to the Department of Agri-  
6 culture for fiscal year 2020—

7 (1) \$300,000,000 to fund activities under sec-  
8 tion 4; and

9 (2) \$80,000,000 to carry out cooperative exten-  
10 sion and education programs in response to exigent  
11 circumstances created by the COVID-19 pandemic.

12 (b) DEPARTMENT OF COMMERCE.—There is author-  
13 ized to be appropriated \$650,000,000 to the Department  
14 of Commerce for fiscal year 2020 to fund activities under  
15 section 4 of this Act, of which at least \$350,000,000 shall  
16 be for use by the National Oceanic and Atmospheric Ad-  
17 ministration and at least \$300,000,000 shall be for the  
18 National Institute of Standards and Technology.

19 (c) DEPARTMENT OF DEFENSE.—There is author-  
20 ized to be appropriated \$3,000,000,000 to the Depart-  
21 ment of Defense for fiscal year 2020 to fund activities  
22 under section 4.

23 (d) DEPARTMENT OF EDUCATION.—There is author-  
24 ized to be appropriated \$200,000,000 to the Department



1 of Education for fiscal year 2020 to fund activities under  
2 section 4 for the Institute for Education Sciences.

3 (e) DEPARTMENT OF ENERGY.—There is authorized  
4 to be appropriated \$5,000,000,000 to the Department of  
5 Energy for fiscal year 2020 to fund activities under sec-  
6 tion 4, of which at least \$3,000,000,000 shall be for use  
7 by the Office of Science, at least \$900,000,000 shall be  
8 for Energy Efficiency and Renewable Energy, at least  
9 \$450,000,000 shall be for Nuclear Energy, at least  
10 \$300,000,000 shall be for Fossil Research and Develop-  
11 ment, at least \$150,000,000 shall be for ARPA-E, and  
12 at least \$100,000,000 shall be for the Office of Electricity.

13 (f) DEPARTMENT OF INTERIOR.—There is authorized  
14 to be appropriated \$300,000,000 to the Department of In-  
15 terior for fiscal year 2020 to fund activities under section  
16 4 for the United States Geological Survey.

17 (g) DEPARTMENT OF HEALTH AND HUMAN SERV-  
18 ICES.—There is authorized to be appropriated  
19 \$10,000,000,000 to the Department of Health and  
20 Human Services for fiscal year 2020 to fund activities  
21 under section 4 for the National Institutes of Health.

22 (h) NASA.—There is authorized to be appropriated  
23 \$2,000,000,000 to the National Aeronautics and Space  
24 Administration for fiscal year 2020 to fund activities  
25 under section 4.

1       (i) NATIONAL SCIENCE FOUNDATION.—There is au-  
 2 thorized to be appropriated \$3,000,000,000 to the Na-  
 3 tional Science Foundation for fiscal year 2020 to fund ae-  
 4 tivities under section 4.

5       (j) ENVIRONMENTAL PROTECTION AGENCY.—There  
 6 is authorized to be appropriated \$200,000,000 to the En-  
 7 vironmental Protection Agency for fiscal year 2020 to  
 8 fund activities under section 4.

9       **SECTION 1. SHORT TITLE.**

10       *This Act may be cited as the “Research Investment to*  
 11 *Spark the Economy Act of 2020” or the “RISE Act of*  
 12 *2020”.*

13       **SEC. 2. FINDINGS.**

14       *Congress finds the following:*

15               (1) *Federal agencies have provided Federal re-*  
 16 *search awardees flexibility during the Coronavirus*  
 17 *Disease 2019 (COVID–19) pandemic to support grad-*  
 18 *uate and undergraduate students, post-doctoral stu-*  
 19 *dents, principal investigators, and administrative*  
 20 *and technical support staff.*

21               (2) *Federal agencies may need to provide current*  
 22 *Federal research awardees extensions to cover time*  
 23 *lost in awardee facilities and in the field that will af-*  
 24 *fect the completion of that agencies’ research missions*  
 25 *and priorities. Additionally, agencies have allowed*

1 *federally funded laboratories to donate necessary*  
2 *equipment, such as personal protective equipment, to*  
3 *support hospitals and first responders, which may*  
4 *need to be repurchased and will create additional ex-*  
5 *penses under Federal contracts, grants, and coopera-*  
6 *tive agreements.*

7 *(3) The United States needs to sustain the crit-*  
8 *ical human infrastructure that undergirds the United*  
9 *States research enterprise, which has created a long-*  
10 *standing government-university partnership, that has*  
11 *made the United States the global leader in innova-*  
12 *tion, strengthening the health of citizens of the United*  
13 *States, the economy of the United States, and na-*  
14 *tional security.*

15 *(4) While the Federal Government has made sig-*  
16 *nificant investments in new biomedical research to*  
17 *address COVID–19, existing research has been slowed*  
18 *down or stopped due to COVID–19-modified oper-*  
19 *ations of campuses and laboratories.*

20 *(5) Given the modified operations of many uni-*  
21 *versity-based and national laboratories due to the*  
22 *pandemic, Congress is concerned that the people who*  
23 *comprise the research workforce (for example, grad-*  
24 *uate and undergraduate students, post-doctoral stu-*  
25 *dents, principal investigators, and administrative*

1        *and technical support staff) and the future health and*  
2        *strength of the United States research enterprise and*  
3        *manufacturing and technology economies, among oth-*  
4        *ers, are at risk.*

5            *(6) While the research capacity of the United*  
6        *States has demonstrated that it can absorb shocks and*  
7        *pivot to address immediate national threats, the scale*  
8        *of the COVID–19 pandemic is still growing and un-*  
9        *precedented in duration and effect.*

10           *(7) Without additional funding, future innova-*  
11        *tions in areas such as quantum, artificial intel-*  
12        *ligence, robotics, computing, advanced wireless, space*  
13        *exploration, digital agriculture, earth system observa-*  
14        *tion and prediction, health, and science, technology,*  
15        *engineering, and mathematics education infrastruc-*  
16        *ture will be forestalled as agencies are forced to use*  
17        *future appropriations intended for new research to*  
18        *cover existing awards. The United States must inno-*  
19        *vate to launch the next 50 years of unparalleled eco-*  
20        *nommic leadership and be prepared for any future*  
21        *pandemics.*

22           *(8) It is vital that the Federal Government take*  
23        *measures to help relieve the strain that Federal agen-*  
24        *cies will be forced to face and sustain the strength of*  
25        *the ability of the United States to remain a global*



1           (A) *An institution of higher education (as*  
2 *defined in section 101(a) of the Higher Edu-*  
3 *cation Act of 1965 (20 U.S.C. 1001(a)).*

4           (B) *A Tribal College or University (as de-*  
5 *defined in section 316 of the Higher Education Act*  
6 *of 1965 (20 U.S.C. 1059c)).*

7           (C) *A nonprofit entity that conducts Feder-*  
8 *ally funded research.*

9           (4) *RESEARCH LABORATORY.—The term “Re-*  
10 *search Laboratory” means the following:*

11           (A) *A National Laboratory (as defined in*  
12 *section 2 of the Energy Policy Act of 2005 (42*  
13 *U.S.C. 15801)).*

14           (B) *A Federally-Funded Research and De-*  
15 *velopment Center for purposes of section 35.017*  
16 *of title 48, Code of Federal Regulations.*

17           (b) *AUTHORITY.—*

18           (1) *IN GENERAL.—Each officer specified in*  
19 *paragraph (2) may exercise the authorities described*  
20 *in paragraph (3).*

21           (2) *OFFICERS.—The officers specified in this*  
22 *paragraph are as follows:*

23           (A) *The Secretary of Commerce, acting*  
24 *through the Administrator of the National Oce-*  
25 *anic and Atmospheric Administration and the*

1            *Director of the National Institute of Standards*  
2            *and Technology.*

3            *(B) The Secretary of Agriculture.*

4            *(C) The Secretary of Defense.*

5            *(D) The Secretary of Education.*

6            *(E) The Secretary of Energy, acting for the*  
7            *Department of Energy (with respect to Energy*  
8            *Efficiency and Renewable Energy, Nuclear En-*  
9            *ergy, and Fossil Research and Development) and*  
10           *through the Office of Science, the Advanced Re-*  
11           *search Projects Agency–Energy (ARPA–E), and*  
12           *the Office of Electricity.*

13           *(F) The Secretary of Interior, acting*  
14           *through the Director of the United States Geo-*  
15           *logical Survey.*

16           *(G) The Secretary of Health, acting through*  
17           *the Director of the National Institutes of Health.*

18           *(H) The Secretary of Transportation.*

19           *(I) The Administrator of the National Aero-*  
20           *navics and Space Administration.*

21           *(J) The Administrator of the Environ-*  
22           *mental Protection Agency.*

23           *(K) The Director of the National Science*  
24           *Foundation.*

1           (3) *AUTHORITIES.*—*The officers specified in*  
2           *paragraph (1) may—*

3                   (A) *provide supplemental funding to extend*  
4                   *the duration of an award disrupted because of*  
5                   *the COVID–19 public health emergency to a re-*  
6                   *search institution, Research Laboratory, or indi-*  
7                   *vidual that was awarded before the date of the*  
8                   *enactment of this Act, or to expand the purposes*  
9                   *of such an award, in order to—*

10                           (i) *enable a post-secondary student or*  
11                           *post-doctoral researcher to complete work;*

12                           (ii) *enable research scientists, technical*  
13                           *staff, research associates, and principal in-*  
14                           *vestigators to complete work;*

15                           (iii) *extend the training of a post-sec-*  
16                           *ondary student, or the employment of a*  
17                           *post-doctoral researcher, on an ongoing re-*  
18                           *search project for up to 2 years because of*  
19                           *the disruption of the job market;*

20                           (iv) *create research opportunities for*  
21                           *up to 2 years for graduate students and*  
22                           *post-doctoral researchers;*

23                           (v) *replace, refurbish, or otherwise*  
24                           *make usable laboratory animals, reagents,*



1                    *equipment, or other items required for re-*  
2                    *search;*

3                    *(vi) facilitate other research (including*  
4                    *field work), training, and ongoing construc-*  
5                    *tion activities, including at institutions*  
6                    *that are disproportionately affected by the*  
7                    *COVID–19 public health emergency (such*  
8                    *as minority-serving institutions and 2-year*  
9                    *institutions of higher education);*

10                    *(vii) enable experimental field cam-*  
11                    *paigns and maintenance of field infrastruc-*  
12                    *ture, including through replacement of dis-*  
13                    *rupted experimental data to enable comple-*  
14                    *tion of impacted research;*

15                    *(viii) support training in online course*  
16                    *delivery and virtual research experiences*  
17                    *that will improve quality and access needed*  
18                    *to continue undergraduate, graduate, and*  
19                    *post-doctoral training;*

20                    *(B) issue awards to research institutions,*  
21                    *Research Laboratories, or other individuals to*  
22                    *conduct research on the effects of the Coronavirus*  
23                    *Disease 2019 and future potential pandemics, on*  
24                    *the effects and effectiveness of responses to such*

1           *diseases, and on improving the prediction of the*  
2           *possible courses of such pandemics; and*

3           (C) *provide flexibility on an award for*  
4           *funds made available to an agency, by any prior*  
5           *or subsequent Act, by modifying the terms and*  
6           *conditions of the award with a research institu-*  
7           *tion, Research Laboratory, or individual due to*  
8           *facility closures or other limitations during the*  
9           *COVID–19 public health emergency.*

10          (4) *MODIFICATIONS.—The modifications author-*  
11          *ized by paragraph (3)(C) include, but are not limited*  
12          *to—*

13                 (A) *the provision of supplemental funding*  
14                 *to extend the duration of the award concerned; or*

15                 (B) *flexibility on the allowable expenses*  
16                 *under such award.*

17          (c) *PROCEDURES.—The officers specified in subsection*  
18          *(b)(2) shall each establish procedures to carry out subsection*  
19          *(b).*

20          (d) *EXPEDITED AWARDS.—Awards under subsection*  
21          *(b) shall be issued as expeditiously as possible.*

22          (e) *AUTHORIZATIONS OF APPROPRIATIONS.—*

23                 (1) *DEPARTMENT OF COMMERCE.— There is au-*  
24                 *thorized to be appropriated for fiscal year 2021 for*

1 *the Department of Commerce, \$450,000,000 to carry*  
2 *out subsection (b), of which—*

3 *(A) \$300,000,000 shall be for use by the Na-*  
4 *tional Oceanic and Atmospheric Administration;*  
5 *and*

6 *(B) \$150,000,000 shall be for use by the Na-*  
7 *tional Institute of Standards and Technology.*

8 *(2) DEPARTMENT OF AGRICULTURE.—There is*  
9 *authorized to be appropriated for fiscal year 2021 for*  
10 *the Department of Agriculture, \$380,000,000 to carry*  
11 *out subsection (b).*

12 *(3) DEPARTMENT OF DEFENSE.—There is au-*  
13 *thorized to be appropriated for fiscal year 2021 for*  
14 *the Department of Defense, \$3,000,000,000 to carry*  
15 *out subsection (b).*

16 *(4) DEPARTMENT OF EDUCATION.—There is au-*  
17 *thorized to be appropriated for fiscal year 2021 for*  
18 *the Department of Education, \$200,000,000 to carry*  
19 *out subsection (b), which shall be for use by the Insti-*  
20 *tute for Education Sciences.*

21 *(5) DEPARTMENT OF ENERGY.—There is author-*  
22 *ized to be appropriated for fiscal year 2021 for the*  
23 *Department of Energy, \$5,000,000,000 to carry out*  
24 *subsection (b), of which—*

1           (A) not less than \$3,000,000,000 shall be for  
2 use by the Office of Science;

3           (B) not less than \$900,000,000 shall be for  
4 Energy Efficiency and Renewable Energy;

5           (C) not less than \$450,000,000 shall be for  
6 Nuclear Energy;

7           (D) not less than \$300,000,000 shall be for  
8 Fossil Research and Development;

9           (E) not less than \$150,000,000 shall be for  
10 use by the Advanced Research Projects Agency—  
11 Energy; and

12           (F) not less than \$100,000,000 shall be for  
13 use by the Office of Electricity.

14           (6) DEPARTMENT OF INTERIOR.—There is au-  
15 thorized to be appropriated for fiscal year 2021 for  
16 the Department of Interior, \$300,000,000 to carry out  
17 subsection (b), which shall be for use by the United  
18 States Geological Survey.

19           (7) DEPARTMENT OF HEALTH AND HUMAN SERV-  
20 ICES.—There is authorized to be appropriated for fis-  
21 cal year 2021 for the Department of Health and  
22 Human Services, \$10,000,000,000 to carry out sub-  
23 section (b), which shall be for use by the National In-  
24 stitutes of Health.

1           (8) *DEPARTMENT OF TRANSPORTATION.*—*There*  
2           *is authorized to be appropriated for fiscal year 2021*  
3           *for the Department of Transportation, \$300,000,000*  
4           *to carry out subsection (b), of which not less than*  
5           *\$130,000,000 shall be for use by the Federal Aviation*  
6           *Administration.*

7           (9) *NATIONAL AERONAUTICS AND SPACE ADMIN-*  
8           *ISTRATION.*—*There is authorized to be appropriated*  
9           *for fiscal year 2021 for the National Aeronautics and*  
10          *Space Administration, \$2,000,000,000 to carry out*  
11          *subsection (b).*

12          (10) *ENVIRONMENTAL PROTECTION AGENCY.*—  
13          *There is authorized to be appropriated for fiscal year*  
14          *2021 for the Environmental Protection Agency,*  
15          *\$200,000,000 to carry out subsection (b).*

16          (11) *NATIONAL SCIENCE FOUNDATION.*—*There is*  
17          *authorized to be appropriated for fiscal year 2021 for*  
18          *the National Science Foundation, \$3,000,000,000 to*  
19          *carry out subsection (b).*

20          (12) *AVAILABILITY OF FUNDS FOR ADMINISTRA-*  
21          *TION.*—

22                 (A) *IN GENERAL.*—*Amounts authorized to*  
23                 *be appropriated by this subsection may be used*  
24                 *for the payment of indirect costs of Federal*  
25                 *awards under subsection (b), up to the limit oth-*

1            *erwise allowable by law and subject to the re-*  
2            *quirements of part 200 of title 2, Code of Federal*  
3            *Regulations.*

4            *(B) LIMITATION.—Not more than 5 percent*  
5            *of each of the amounts appropriated pursuant to*  
6            *this subsection may be used for administration*  
7            *of awards under subsection (b).*

8            *(13) DURATION OF AVAILABILITY.—Amounts au-*  
9            *thorized to be appropriated by this subsection shall be*  
10           *available for the purposes described in this subsection*  
11           *through fiscal year 2021.*



Calendar No. 639

116<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

**S. 4286**

[Report No. 116-332]

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