

116TH CONGRESS
2D SESSION

H. R. 7693

To establish a grant program to fund the installation of green roof systems on public school buildings, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 20, 2020

Ms. VELÁZQUEZ (for herself, Mr. SUOZZI, Mrs. HAYES, Ms. NORTON, Mr. CARSON of Indiana, Mr. GRIJALVA, and Mr. SAN NICOLAS) introduced the following bill; which was referred to the Committee on Education and Labor

A BILL

To establish a grant program to fund the installation of green roof systems on public school buildings, 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 “Public School Green
5 Rooftop Program”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

8 (1) Green roofs on educational facilities can
9 provide an easily accessible site to teach students

1 and visitors about biology, math, STEM, art, sus-
2 tainability, green roof technology, and the benefits of
3 green roofs.

4 (2) The Environmental Protection Agency rec-
5 ognizes the installation of green roofs throughout a
6 city can help reduce surface urban heat islands and
7 cool the air.

8 (3) The General Services Administration recog-
9 nizes a typical green roof lasts more than 40 years
10 before requiring replacement, whereas the life of an
11 unvegetated conventional roof could be 10 to 15
12 years. By making the roof membranes last longer,
13 green roofs can save taxpayer money and reduce the
14 amount of waste that is diverted into landfills.

15 (4) The National Park Service recognizes green
16 roofs can improve the energy performance of build-
17 ings, help manage stormwater, reduce airborne emis-
18 sions, and mitigate the effects of urban heat islands.

19 (5) The Food and Agriculture Organization of
20 the United Nations encourages and supports coun-
21 tries to promote school gardens with educational
22 goals to help students, school staff, and families
23 make the connection between growing food and good
24 diets, develop life skills, and increase environmental
25 awareness.

1 (6) Greater weatherization and insulation of-
2 fered by green roof assemblies reduce the amount of
3 energy needed to moderate the temperature of a
4 building, as roofs can be the source of the greatest
5 heat loss in the winter and the hottest temperatures
6 in the summer.

7 (7) A green roof can protect waterproofing
8 membranes from exposure to ultraviolet radiation
9 and wide temperature fluctuations. This protection
10 feature can greatly extend the lifespan and cost ef-
11 fectiveness of waterproofing membranes.

12 (8) Green roofs can contribute to landfill diver-
13 sion by prolonging the life cycle of waterproofing
14 membranes and insulation materials. By increasing
15 the life cycle and reducing roof replacement costs,
16 less roofing materials over the life of the building
17 need to be disposed of. Green roofs generate the
18 need for recycled components in growing media.
19 Green roofs can prolong the service life of heating,
20 ventilation, and HVAC systems through decreased
21 use.

22 (9) Green roofs can reduce the amount of
23 stormwater runoff and also delay the time at which
24 runoff occurs, resulting in decreased stress on sewer

1 systems and streams at peak flow periods and de-
2 creased pollution in United States waterways.

3 (10) The plants on green roofs can capture air-
4 borne pollutants, atmospheric deposition, and can
5 filter noxious gases, as well as provide habitat for
6 and habitat connectivity for local species of polli-
7 nators.

8 (11) Green roofs can provide much needed ad-
9 ditional greenspaces to urban centers. These
10 greenspaces can create new habitats for a wide vari-
11 ety of plants, animals, and insects needed for
12 healthy biosystems.

13 (12) Green roofs can provide much needed
14 greenspaces for healthy human habitation of dense
15 urban spaces. Green roofs can be used for passive
16 and active recreation and relaxation spaces for hu-
17 mans.

18 (13) Green roofs can generate potential employ-
19 ment for green roof installation and maintenance
20 personnel. Specialized green roof installations can
21 generate income and employment for urban farm op-
22 erations.

23 (14) The temperature moderating effects of
24 green roofs can reduce demand for electrical power
25 and other energy and fuel sources, and potentially

1 decrease the amount of CO₂ and other polluting by-
2 products being released into the air.

3 (15) Through natural transpiration, plants on
4 vertical and horizontal surfaces are able to cool cities
5 during hot summer months and reduce the urban
6 heat island effect.

7 (16) Green roofs plants can capture dust and
8 particulate matter throughout cities, as well as the
9 production of smog. This can play a role in reducing
10 greenhouse gas emissions and adapting urban areas
11 to a future climate with warmer summers.

12 (17) Green roofs improve human health and
13 wellbeing through improvement of local air quality,
14 regulation of temperature, and sequestration of
15 harmful airborne substances, particularly among
16 children and other vulnerable or at-risk commu-
17 nities.

18 (18) Green roofs on public infrastructure pro-
19 vide cost-savings for the life of the project, through
20 defraying future replacement and energy costs.

21 (19) Green roofs contribute to the stabilization
22 of neighborhoods as a result of improved health, sce-
23 nic qualities, and elevated nearby property valuation.

24 (20) Green roofs provide habitat for wildlife
25 such as pollinators and migratory birds.

1 **SEC. 3. GRANTS FOR PLANNING ASSISTANCE.**

2 (a) GRANT PROGRAM AUTHORIZED.—The Secretary,
3 taking into account recommendations from the Director
4 of the Weatherization and Intergovernmental Programs
5 Office of the Department of Energy, shall make grants
6 to eligible entities to pay the costs of planning assistance
7 for a green roof system described in subsection (b).

8 (b) ALLOWABLE USE OF FUNDS FOR GRANTS FOR
9 PLANNING ASSISTANCE.—An eligible entity receiving a
10 grant under this section shall use the grant for the fol-
11 lowing purposes:

12 (1) Identification of opportunities to use green
13 roofs.

14 (2) Assessment of vertical structures, or pos-
15 sible vertical structures, to support vegetation and
16 ground-level areas that support vegetation in the
17 same school building.

18 (3) Permitting and siting issues, including po-
19 tential synergy of the green roof with green roofs,
20 green walls, and rain gardens in neighboring build-
21 ings.

22 (4) Business planning and financial analysis.

23 (5) Architectural and engineering analysis, in-
24 cluding analysis of—

25 (A) a site to determine required structural
26 loading capacity;

1 (B) plans for material transportation to
2 roof;

3 (C) the distribution of material and equip-
4 ment during construction;

5 (D) plans for reinforcement of roof;

6 (E) plans for structural safety;

7 (F) plans to increase available loading;

8 (G) plans to determine need and location
9 of vegetation-free zones for access to mechan-
10 ical equipment, roof parapets, and other com-
11 mon roof structures;

12 (H) plans for need for permanent or semi-
13 permanent irrigation systems to provide supple-
14 mental water during times of drought; and

15 (I) plans to determine need for a leak de-
16 tection system.

17 (6) Cost estimation, including—

18 (A) technical information on the cost of
19 construction (market prices, labor, materials,
20 and transportation);

21 (B) a life cycle cost analysis;

22 (C) an estimate of operational costs; and

23 (D) an estimate of costs to include rec-
24 reational space in order to meet the require-

1 ments of title III of the Americans with Disabil-
2 ities Act of 1990 (42 U.S.C. 12101 et seq.).

3 (7) Grant writing services, including reimburse-
4 ment for grant writing services used to obtain a
5 grant under this section.

6 (c) APPLICATION.—To receive a grant under this sec-
7 tion, an eligible entity shall submit to the Secretary an
8 application at such time, in such manner, and containing
9 such information as the Secretary may require.

10 **SEC. 4. PUBLIC SCHOOL GREEN ROOF INSTALLATION**
11 **GRANT PROGRAM.**

12 (a) PUBLIC SCHOOL GREEN ROOF INSTALLATION
13 PROGRAM.—Not later than 1 year after the date of the
14 enactment of this Act, the Secretary shall award grants,
15 on a competitive basis, to eligible entities to install an ex-
16 tensive or intensive green roof system.

17 (b) APPLICATION.—To receive a grant under sub-
18 section (a), an eligible entity shall submit to the Secretary
19 an application at such time, in such manner, and con-
20 taining such information as the Secretary may require,
21 which shall include—

22 (1) a letter of compliance from local regulatory
23 bodies to—

1 (A) certify a complete review of proposed
2 design to ensure that it meets municipal re-
3 quirements;

4 (B) ensure that installation is carried out
5 in accordance with local standards and incentive
6 program performance requirements (if avail-
7 able);

8 (C) determine requirements for issuing
9 permits;

10 (D) determine occupancy requirements for
11 fire codes; and

12 (E) ensure projects meet the minimum
13 performance standard specified within the Liv-
14 ing Architecture Performance Tool (LAPT) rat-
15 ing system for green roofs and walls; and

16 (2) a complete description of the eligible enti-
17 ty's plan for the installation and operation of a
18 green roof system, including descriptions of—

19 (A) the hiring criteria and qualifications
20 for green roof installation and maintenance per-
21 sonnel with the inclusion of local workforce
22 trainees, including at least one Green Roof Pro-
23 fessional (GRP) as accredited by the Green
24 Roof Industry Association;

1 (B) the methods for the green roof instal-
2 lation and maintenance;

3 (C) a plan for utilization of the green roof,
4 including weatherization, recreational space,
5 education, food production, or whether access
6 and utilization will be extended to members of
7 the neighborhood;

8 (D) a plan for intensive green roof applica-
9 tions that include recreational space use to
10 meet the requirements of title III of the Ameri-
11 cans with Disabilities Act of 1990 (42 U.S.C.
12 12101 et seq.);

13 (E) a strategy for increasing energy effi-
14 ciency and reducing heat reflection; and

15 (F) a plan for hiring low-income individ-
16 uals or individuals registered with a one-stop
17 career center for installation and maintenance
18 positions.

19 (3) the eligible entity's maintenance plan.

20 (c) PRIORITY.—In awarding grants under subsection
21 (a), the Secretary shall give priority to eligible entities in
22 which not fewer than 30 percent of students served by
23 such entities are from families with incomes below the pov-
24 erty line.

1 (d) INSTALLATION.—Not later than 4 years after re-
2 ceiving a grant under subsection (a), an eligible entity
3 shall complete installation of a green roof system.

4 (e) MAINTENANCE OF INFRASTRUCTURE.—In addi-
5 tion to receiving a grant under subsection (a), each eligible
6 entity that meets the installation requirements of sub-
7 section (d) shall receive additional funding for an addi-
8 tional 4-year period for maintenance activities, which may
9 include the following:

10 (1) Conducting routine inspections throughout
11 the year to monitor the condition of the green roof
12 and surrounding roof areas and structures, espe-
13 cially after storm events.

14 (2) Monitoring plant health and replacing any
15 plants, as necessary.

16 (3) Noting any areas impacted by rooftop
17 microclimates (including wind erosion, shady spots,
18 exhaust vents, drip edges, and intense reflected
19 light) where replanting may not be successful, and
20 alternate planting types, planting techniques, or an
21 alternate approach may be necessary.

22 (4) Watering nonirrigated systems during pro-
23 longed drought periods and maintenance of any irri-
24 gation system for the green roof.

1 (5) Addressing weeds and pests when needed
2 using organic, essential-oils based products.

3 (6) For intensive green roofs where more highly
4 diverse plant groups and types are used, ensuring
5 plant maintenance and care is generally consistent
6 with the requirements of ground-level landscaping,
7 including consultation with a horticulturalist, agron-
8 omist, or landscape professional.

9 (7) Engaging local workforce trainees.

10 **SEC. 5. REPORT TO THE CONGRESS.**

11 Not later than 1 year after the date of the enactment
12 of this Act, the Secretary shall submit a report to the
13 Committee on Energy and Commerce of the House of
14 Representatives and the Committee on Health, Education,
15 Labor, and Pensions of the Senate, and make publically
16 available on the internet website of the Department of En-
17 ergy, a report describing—

18 (1) each grant application received under this
19 Act; and

20 (2) any grants awarded under this Act, includ-
21 ing—

22 (A) the name and location of the eligible
23 entity;

24 (B) the total amount of the grant;

1 (C) the date on which the grant was
2 awarded; and

3 (D) any other data the Secretary deter-
4 mines to be necessary for an evaluation of the
5 benefits of a public school green roof.

6 **SEC. 6. DEFINITIONS.**

7 In this Act:

8 (1) **ELEMENTARY SCHOOL.**—The term “elemen-
9 tary school” has the meaning given the term in sec-
10 tion 8101 of the Elementary and Secondary Edu-
11 cation Act of 1965 (20 U.S.C. 7801), except that
12 such section shall be applied as if the term “State”,
13 as it appears in such section, had the meaning given
14 such term in this section.

15 (2) **ELIGIBLE ENTITY.**—The term “eligible enti-
16 ty” means—

17 (A) a public elementary school or sec-
18 ondary school;

19 (B) a local educational agency; or

20 (C) a partnership between a nonprofit or-
21 ganization and an entity described in para-
22 graphs (1) or (2).

23 (3) **GREEN ROOF.**—The term “green roof”
24 means a layer of vegetation planted over a water-
25 proofing system or waterproof management practice

1 that is installed on top of a flat or slightly sloped
2 roof that may support plant growth, including—

3 (A) an extensive green roof with a growing
4 media layer that is up to 6 inches thick; or

5 (B) an intensive green roof with a growing
6 media layer that is 6.0 to 48 inches thick.

7 (4) INDIAN TRIBE.—The term “Indian tribe”
8 has the meaning given the term in section 4 of the
9 Indian Self-Determination and Education Assistance
10 Act (25 U.S.C. 5304).

11 (5) LOCAL EDUCATIONAL AGENCY.—The term
12 “local educational agency” has the meaning given
13 the term in section 8101 of the Elementary and Sec-
14 ondary Education Act of 1965 (20 U.S.C. 7801), ex-
15 cept that such section shall be applied as if the term
16 “State”, as it appears in such section, had the
17 meaning given such term in this section.

18 (6) LOW-INCOME INDIVIDUAL.—The term “low-
19 income individual” means, with respect to any cal-
20 endar year, any individual who lives in a household
21 that has a gross income that does not exceed 300
22 percent of the poverty line.

23 (7) NONPROFIT ORGANIZATION.—The term
24 “nonprofit organization” means an organization de-
25 scribed in section 501(c)(3) of the Internal Revenue

1 Code of 1986 which is exempt from taxation under
2 section 501(a) of such Code.

3 (8) ONE-STOP CAREER CENTER.—The term
4 “one-stop career center” means a comprehensive
5 one-stop center described in section 361.305 of title
6 34, Code of Federal Regulations (as in effect on the
7 date of the enactment of this Act).

8 (9) POVERTY LINE.—The term “poverty line”
9 has the meaning given the term in section 8101 of
10 the Elementary and Secondary Education Act of
11 1965 (20 U.S.C. 7801).

12 (10) SECONDARY SCHOOL.—The term “sec-
13 ondary school” has the meaning given the term in
14 section 8101 of the Elementary and Secondary Edu-
15 cation Act of 1965 (20 U.S.C. 7801), except that
16 such section shall be applied as if the term “State”,
17 as it appears in such section, had the meaning given
18 such term in this section.

19 (11) SECRETARY.—The term “Secretary”
20 means the Secretary of Energy.

21 (12) STATE.—The term “State” means each of
22 the 50 States and the District of Columbia, each of
23 territories, and each of the Indian tribes.

24 (13) TERRITORY.—The term “territory” means
25 the United States Virgin Islands, Puerto Rico,

1 Guam, American Samoa, and the Commonwealth of
2 the Northern Mariana Islands.

3 (14) WEATHERIZATION.—The term “weather-
4 ization” means the practice of protecting a building
5 and its interior from the elements, particularly from
6 sunlight, precipitation, and wind, and of modifying
7 a building to reduce energy consumption and opti-
8 mize energy efficiency.

9 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

10 (a) APPROPRIATION FOR GRANTS FOR PLANNING AS-
11 SISTANCE.—There is authorized to be appropriated
12 \$100,000,000 to carry out section 3 for each of fiscal
13 years 2021 through 2025.

14 (b) APPROPRIATION FOR GREEN ROOF INSTALLA-
15 TION.—There is authorized to be appropriated
16 \$300,000,000 to award grants under section 4(a) for each
17 of fiscal years 2022 through 2025.

18 (c) APPROPRIATION FOR MAINTENANCE OF INFRA-
19 STRUCTURE.—There is authorized to be appropriated
20 \$100,000,000 to provide funds under section 4(e) for each
21 of fiscal years 2021 through 2025.

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