

117TH CONGRESS
1ST SESSION

S. _____

To require the Administrator of the Environmental Protection Agency to establish a pilot program for hyperlocal air quality monitoring projects in environmental justice communities, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. MARKEY (for himself, Mrs. GILLIBRAND, Mr. PADILLA, Mr. DURBIN, Mr. BOOKER, Ms. SMITH, Mr. SANDERS, and Ms. DUCKWORTH) introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To require the Administrator of the Environmental Protection Agency to establish a pilot program for hyperlocal air quality monitoring projects in environmental justice communities, 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 “Environmental Justice
5 Air Quality Monitoring Act of 2021”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

1 (1) air pollution inflicts disproportionate harm
2 on Black people, Indigenous people, and People of
3 Color;

4 (2) air quality can vary up to 800 percent from
5 block to block within a single neighborhood;

6 (3) it is possible to identify and attribute
7 sources of pollution based on fingerprint analysis of
8 multiple pollutants; and

9 (4) existing methods that are prescribed for
10 basin-wide air quality monitoring—

11 (A) are cost-prohibitive for monitoring
12 community-scale air quality; and

13 (B) do not, as of the date of enactment of
14 this Act, measure the intrinsic variability of
15 persistently poor air quality in environmental
16 justice communities at the neighborhood block
17 level.

18 **SEC. 3. DEFINITIONS.**

19 In this Act:

20 (1) **ADMINISTRATOR.**—The term “Adminis-
21 trator” means the Administrator of the Environ-
22 mental Protection Agency.

23 (2) **AIR POLLUTANT.**—The term “air pollutant”
24 means—

1 (A) a criteria pollutant for which there are
2 national ambient air quality standards under
3 section 109 of the Clean Air Act (42 U.S.C.
4 7409);

5 (B) a hazardous air pollutant (as defined
6 in section 112(a) of that Act (42 U.S.C.
7 7412(a))); and

8 (C) a greenhouse gas.

9 (3) ELIGIBLE HYPERLOCAL AIR QUALITY DATA
10 PROVIDER.—The term “eligible hyperlocal air qual-
11 ity data provider” means an organization with the
12 demonstrated ability to deploy hyperlocal air quality
13 monitoring systems in support of State, local, or
14 Tribal air agencies.

15 (4) ENVIRONMENTAL JUSTICE.—The term “en-
16 vironmental justice” means the fair treatment and
17 meaningful involvement of all people, regardless of
18 race, color, culture, natural origin, or income, in the
19 development, implementation, and enforcement of
20 environmental laws (including regulations) and poli-
21 cies to ensure that each person enjoys—

22 (A) the same degree of protection from en-
23 vironmental and health hazards; and

24 (B) equal access to any Federal agency ac-
25 tion relating to the development, implementa-

1 tion, and enforcement of environmental laws
2 (including regulations) and policies for the pur-
3 pose of having a healthy environment in which
4 to live, learn, work, and recreate.

5 (5) ENVIRONMENTAL JUSTICE COMMUNITY.—

6 The term “environmental justice community” means
7 a community with significant representation of com-
8 munities of color, low-income communities, or Tribal
9 and Indigenous communities that experiences, or is
10 at risk of experiencing, higher or more adverse
11 human health or environmental effects, as compared
12 to other communities.

13 (6) GREENHOUSE GAS.—The term “greenhouse
14 gas” means any of the following:

15 (A) Carbon dioxide.

16 (B) Methane.

17 (C) Nitrous oxide.

18 (D) Hydrofluorocarbons.

19 (E) Perfluorocarbons.

20 (F) Sulfur hexafluoride.

21 (7) HYPERLOCAL AIR QUALITY MONITORING

22 SYSTEM.—The term “hyperlocal air quality moni-
23 toring system” means a method of monitoring ambi-
24 ent air quality and greenhouse gases and detecting
25 the presence of air pollutants that—

1 (A) yields frequently repeated, ongoing
2 measurements of air pollutants at a block-level
3 resolution; and

4 (B) identifies hotspots of persistent ele-
5 vated levels of air pollutants localized to, and
6 caused by the characteristics of, a specific geo-
7 graphic location.

8 (8) NONPROFIT ORGANIZATION.—The term
9 “nonprofit organization” means an organization de-
10 scribed in section 501(c)(3) of the Internal Revenue
11 Code of 1986 and exempt from taxation under sec-
12 tion 501(a) of that Code.

13 (9) PILOT PROGRAM.—The term “pilot pro-
14 gram” means the pilot program established under
15 section 4(a).

16 **SEC. 4. PILOT PROGRAM FOR HYPERLOCAL AIR QUALITY**
17 **MONITORING PROJECTS IN ENVIRONMENTAL**
18 **JUSTICE COMMUNITIES.**

19 (a) ESTABLISHMENT.—Subject to the availability of
20 appropriations, the Administrator shall carry out a pilot
21 program to award, on a competitive basis, grants or con-
22 tracts to State, local, and Tribal air agencies, in partner-
23 ship with local nonprofit organizations or eligible
24 hyperlocal air quality data providers, to carry out projects

1 described in subsection (b) for hyperlocal air quality moni-
2 toring systems in environmental justice communities.

3 (b) PROJECTS.—A State, local, or Tribal air agency
4 that receives a grant or contract under the pilot program
5 shall use amounts received under the grant or contract
6 to carry out an air quality monitoring project within a geo-
7 graphical region specified by the State, local, or Tribal air
8 agency—

9 (1) to monitor air quality at a level of discrete-
10 ness capable of monitoring an area that is the small-
11 er of—

12 (A) a block; and

13 (B) a 100-meter radius;

14 (2) to identify areas of persistent elevated air
15 pollution levels above a relevant background level;

16 (3) to regularly monitor air quality using moni-
17 toring technology that meets the data quality objec-
18 tives of the Environmental Protection Agency, which
19 may, in the determination of the Administrator, in-
20 clude a requirement that the technology qualify as a
21 Federal Reference Method or a Federal Equivalent
22 Method;

23 (4) to resolve changes in ambient levels of rel-
24 evant air pollutants;

1 (5) to generate equity maps by geographical
2 area, including generating maps using such variables
3 as demographic data relating to race, ethnicity, and
4 income level; and

5 (6) to report hyperlocal air quality data and
6 mapping tools to—

7 (A) community residents through an online
8 platform to increase public awareness and en-
9 gagement; and

10 (B) relevant local, State, Tribal, and Fed-
11 eral air pollution managers to inform manage-
12 ment decisions, such as the placement or reloca-
13 tion of stationary air pollution monitors, trans-
14 portation or land use planning, investments in
15 mitigating air pollution sources, and other plan-
16 ning decisions.

17 (c) PROJECT SELECTION.—

18 (1) APPLICATIONS.—A State, local, or Tribal
19 air agency seeking a grant or contract under the
20 pilot program shall submit to the Administrator an
21 application at such time, in such manner, and con-
22 taining such information as the Administrator may
23 require.

24 (2) PRIORITIZATION.—In selecting projects to
25 receive grants or contracts under the pilot program,

1 the Administrator shall give priority to projects
2 that—

3 (A) would be carried out in areas with high
4 rates of illness associated with exposure to air
5 pollution, as determined by the Administrator,
6 including childhood asthma, adult asthma,
7 chronic obstructive pulmonary disease, heart
8 disease, chronic bronchitis, and cancer;

9 (B) seek to identify pollution sources
10 through multipollutant analysis when relevant;

11 (C) would be able to assess pollution bur-
12 dens on sensitive individuals who may be at
13 greater risk of adverse health effects from expo-
14 sure to the air pollutants to be monitored as
15 compared to the general population; and

16 (D) would promote—

17 (i) public access and transparency of
18 data; and

19 (ii) proactive outreach for community
20 engagement and awareness.

21 (3) **EQUITABLE FUNDING DISTRIBUTION.**—A
22 State, local, or Tribal air agency that receives a
23 grant or contract under the pilot program shall en-
24 sure that air quality monitoring projects deployed
25 using amounts from the grant or contract—

1 (A) provide full-time, salaried employment
2 opportunities, with benefits, to local residents of
3 environmental justice communities, which may
4 include employment or training for positions
5 such as—

6 (i) air quality monitoring device in-
7 stallation, maintenance, and calibration
8 technicians;

9 (ii) data scientists, atmospheric sci-
10 entists, chemists, epidemiologists, and so-
11 cial scientists;

12 (iii) software developers, engineers,
13 and interface designers;

14 (iv) community engagement and com-
15 munications and outreach specialists;

16 (v) air quality monitor operators;

17 (vi) environmental justice organizer;

18 and

19 (vii) environmental health advocate;

20 and

21 (B) direct not less than 40 percent of the
22 amount received from the grant or contract to-
23 ward the employment opportunities described in
24 subparagraph (A).

1 (d) DURATION.—A project carried out using a grant
2 or contract awarded under the pilot program may not ex-
3 ceed 5 years in duration.

4 (e) EVALUATION METRICS.—To evaluate the effec-
5 tiveness of the pilot program, the Administrator shall es-
6 tablish, based on the project requirements described in
7 paragraphs (1) through (6) of subsection (b), metrics and
8 reporting requirements for grant recipients.

9 (f) REPORTS.—

10 (1) ANNUAL REPORTS.—Not later than 180
11 days after the end of each fiscal year in which the
12 Administrator carries out the pilot program, the Ad-
13 ministrator shall submit to Congress a report on the
14 results of the pilot program for the previous fiscal
15 year, which shall include, with respect to the fiscal
16 year covered by the report—

17 (A) a description of each project awarded
18 a grant or contract under the pilot program;

19 (B) a description of the evaluation metrics
20 established under subsection (e);

21 (C) the results of and the insights devel-
22 oped from the monitoring carried out under
23 projects for which grants or contracts were
24 awarded under the pilot program; and

1 (D) whether the Administrator proposes to
2 continue air quality monitoring at the locations
3 monitored by projects for which those grants or
4 contracts were awarded.

5 (2) FINAL REPORT.—Not later than 180 days
6 after the date on which the final project carried out
7 using a grant or contract awarded under the pilot
8 program is completed, the Administrator shall sub-
9 mit to Congress a report that describes the results
10 of the pilot program, which shall include—

11 (A) a description of the pilot program;

12 (B) a description of the air quality moni-
13 toring data collected under projects that re-
14 ceived grants or contracts under the pilot pro-
15 gram;

16 (C) an assessment of the effectiveness of
17 the pilot program using the evaluation metrics
18 established under subsection (e) and informa-
19 tion received from the reporting requirements
20 established under that subsection;

21 (D) a description of the cost of the pilot
22 program, including an estimate of the cost of
23 making the pilot program permanent;

24 (E) an estimate of the cost of expanding
25 the pilot program to monitor air quality in air

1 basins that are adjacent to air basins for which
2 air quality was monitored under projects that
3 received grants or contracts under the pilot pro-
4 gram; and

5 (F) such recommendations for legislation,
6 regulation, or administrative action as the Ad-
7 ministrator considers appropriate, including rec-
8 ommendations for—

9 (i) reducing air pollution burdens in
10 identified hotspots; and

11 (ii) extending the pilot program or
12 making the pilot program permanent.

13 (g) AUTHORIZATION OF APPROPRIATIONS.—

14 (1) IN GENERAL.—There is authorized to be
15 appropriated to the Administrator \$100,000,000 for
16 each of fiscal years 2022 through 2027 to carry out
17 the pilot program.

18 (2) SUPPLEMENT, NOT SUPPLANT.—Amounts
19 made available under paragraph (1) shall supple-
20 ment, and not supplant, other amounts made avail-
21 able to address harms resulting from air pollution.