

118TH CONGRESS
2D SESSION

S. 3888

To mandate the use of artificial intelligence by Federal agencies to adapt to extreme weather, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 6, 2024

Mr. SCHATZ (for himself, Mr. LUJÁN, Ms. BUTLER, and Mr. WELCH) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To mandate the use of artificial intelligence by Federal agencies to adapt to extreme weather, 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; TABLE OF CONTENTS.**

4 (a) **SHORT TITLE.**—This Act may be cited as the
5 “Transformational Artificial intelligence to Modernize the
6 Economy against Extreme Weather Act” or the “TAME
7 Extreme Weather Act”.

8 (b) **TABLE OF CONTENTS.**—The table of contents for
9 this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Definitions.

Sec. 3. Purpose.

TITLE I—MATTERS RELATING TO THE NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

Sec. 101. Definitions.
 Sec. 102. Earth system reanalysis.
 Sec. 103. Advanced artificial intelligence applications for weather.
 Sec. 104. Technical assistance on use of artificial intelligence weather models.
 Sec. 105. Fire combustion modeling program.
 Sec. 106. Emissions monitoring and analysis program.
 Sec. 107. Partnerships for transformational innovation.
 Sec. 108. Retention of Federal Government expertise.
 Sec. 109. National security.

TITLE II—MATTERS RELATING TO THE DEPARTMENT OF
AGRICULTURE

Sec. 201. Deforestation and illegal wood products.

TITLE III—MATTERS RELATING TO THE DEPARTMENT OF
ENERGY

Sec. 301. Secretary defined.
 Sec. 302. Grid and transmission optimization.
 Sec. 303. Preparation of environmental review documents.

TITLE IV—AUTHORIZATION OF APPROPRIATIONS

Sec. 401. Authorization of appropriations.

1 **SEC. 2. DEFINITIONS.**

2 In this Act:

3 (1) ARTIFICIAL INTELLIGENCE.—

4 (A) IN GENERAL.—The term “artificial in-
 5 telligence” means a machine-based system that
 6 can, for a given set of human-defined objectives,
 7 make predictions, recommendations, or deci-
 8 sions influencing real or virtual environments,
 9 including by using machine-based and human-
 10 based inputs—

1 (i) to abstract those perceptions into
2 models through analysis in an automated
3 manner; and

4 (ii) to use model inferences to formu-
5 late options for information or action.

6 (B) INCLUSIONS.—The term “artificial in-
7 telligence” includes machine learning, neural
8 networks, and natural language processing.

9 (2) CURATE.—The term “curate” means to col-
10 lect and maintain a dataset—

11 (A) to ensure its quality;

12 (B) to provide metadata on its provenance;

13 and

14 (C) to update the dataset periodically, as
15 practicable.

16 (3) OPEN LICENSE.—The term “open license”
17 has the meaning given that term in section 3502(21)
18 of title 44, United States Code.

19 (4) TRAINING DATASET.—The term “training
20 dataset” means a dataset used to train an artificial
21 intelligence.

22 **SEC. 3. PURPOSE.**

23 The purpose of this Act is to mandate the use of arti-
24 ficial intelligence by Federal agencies to adapt to extreme
25 weather by—

- 1 (1) improving weather forecasts;
- 2 (2) increasing the resilience of electrical grids
3 and transmission;
- 4 (3) strengthening analytic capacity to guide
5 where to deploy resources to respond to and mitigate
6 harm from extreme weather; and
- 7 (4) strengthening public-private partnerships in
8 highly technical, high-risk, and high-reward fields.

9 **TITLE I—MATTERS RELATING**
10 **TO THE NATIONAL OCEANIC**
11 **AND ATMOSPHERIC ADMINIS-**
12 **TRATION**

13 **SEC. 101. DEFINITIONS.**

14 In this title:

15 (1) ADMINISTRATOR.—The term “Adminis-
16 trator” means the Administrator of the National
17 Oceanic and Atmospheric Administration.

18 (2) ARTIFICIAL INTELLIGENCE WEATHER
19 MODEL.—The term “artificial intelligence weather
20 model” means a weather model based primarily on
21 artificial intelligence technology to project future
22 Earth system conditions based on machine learning
23 from an Earth system reanalysis dataset.

24 (3) EARTH SYSTEM REANALYSIS DATASET.—
25 The term “Earth system reanalysis dataset” means

1 a dataset that contains continuous global observa-
2 tional data and synthetic data for Earth system
3 variables relevant to weather forecasting.

4 (4) ENVIRONMENTAL INFORMATION SERVICES
5 WORKING GROUP.—The term “Environmental Infor-
6 mation Services Working Group” means the Envi-
7 ronmental Information Services Working Group es-
8 tablished under section 401 of the Weather Research
9 and Forecasting Innovation Act of 2017 (15 U.S.C.
10 8541), or any similar successor working group.

11 (5) NUMERICAL WEATHER MODEL.—The term
12 “numerical weather model” means a weather model
13 based primarily on atmospheric physics and that
14 uses numerical computation to forecast future Earth
15 system conditions.

16 (6) OBSERVATIONAL DATA.—The term “obser-
17 vational data” means data from actual observations
18 of environmental conditions.

19 (7) REFORECAST ANALYSIS.—The term “refore-
20 cast analysis” means the assessment of a numerical
21 weather model or artificial intelligence weather
22 model by comparing model output and observational
23 data over a period of time in the past.

24 (8) SYNTHETIC DATA.—The term “synthetic
25 data” means data produced from a model or statis-

1 tical method in order to fill gaps in observational
2 data.

3 **SEC. 102. EARTH SYSTEM REANALYSIS.**

4 (a) IN GENERAL.—Not later than two years after the
5 date of the enactment of this Act, the Administrator shall,
6 in consultation with the Secretary of Energy, the Adminis-
7 trator of the National Aeronautics and Space Administra-
8 tion, the Director of the National Science Foundation, the
9 Director of the National Center for Atmospheric Research,
10 the Environmental Information Services Working Group,
11 and such other technical experts as the Administrator con-
12 siders appropriate, develop and curate an Earth system
13 reanalysis dataset that creates a long-term record of past
14 weather in support of—

- 15 (1) furthering the understanding of weather;
16 (2) advancing the science of weather fore-
17 casting, including seasonal and subseasonal fore-
18 casting; and
19 (3) developing artificial intelligence weather
20 forecasting applications.

21 (b) USE OF EXISTING DATASETS.—In order to speed
22 the development of the Earth system reanalysis dataset
23 required under subsection (a), the Administrator shall as-
24 sess, and to the greatest extent practicable build on, exist-

1 ing Earth system reanalysis datasets of the Federal Gov-
2 ernment.

3 (c) ARTIFICIAL INTELLIGENCE WEATHER MODEL.—

4 (1) IN GENERAL.—In carrying out this section,
5 the Administrator, in consultation with the Environ-
6 mental Information Services Working Group, may
7 develop and test a national weather model based on
8 artificial intelligence technologies.

9 (2) REPORT.—Not later than one year after the
10 date of the enactment of this Act, and not less fre-
11 quently than annually thereafter, the Administrator
12 shall submit to the Committee on Commerce,
13 Science, and Transportation of the Senate and the
14 Committee on Science, Space, and Technology of the
15 House of Representatives a report on the activities
16 conducted under paragraph (1).

17 (d) COOPERATIVE INSTITUTES AND CONTRACTING
18 AUTHORITY.—In carrying out this section, subject to the
19 availability of appropriations, the Administrator may com-
20 petitively award contracts, increase the scope of existing
21 cooperative institutes of the National Oceanic and Atmos-
22 pheric Administration, or competitively award a new coop-
23 erative institute.

24 (e) PUBLIC ACCESS.—Subject to section 109, the Ad-
25 ministrator shall make available to the public, at no cost

1 and with no restrictions on copying, publishing, distrib-
2 uting, citing, adapting, or otherwise using under an open
3 license, the Earth system reanalysis dataset developed
4 under subsection (a) and the code for the artificial intel-
5 ligence weather model developed under subsection (c).

6 (f) ENVIRONMENTAL IMPACT.—The Administrator
7 shall develop and disseminate best practices to minimize
8 environmental impacts from the use of artificial intel-
9 ligence technology to carry out this section.

10 (g) CONTINUED SUPPORT FOR OBSERVATIONS,
11 BASIC RESEARCH, AND NUMERICAL WEATHER MOD-
12 ELS.—Notwithstanding the requirements of this section,
13 the Administrator shall continue to support and advance
14 the activities of the National Oceanic and Atmospheric
15 Administration—

16 (1) to collect and acquire observational data rel-
17 evant for artificial intelligence and numerical weath-
18 er forecasting;

19 (2) to advance research on the Earth system
20 and numerical weather forecasting;

21 (3) to develop and advance numerical weather
22 modeling;

23 (4) to identify and acquire novel observational
24 data shown to improve artificial intelligence and nu-
25 merical weather forecasting; and

1 (5) to improve data assimilation techniques.

2 **SEC. 103. ADVANCED ARTIFICIAL INTELLIGENCE APPLICA-**
3 **TIONS FOR WEATHER.**

4 The Administrator shall explore advanced applica-
5 tions of artificial intelligence to improve weather forecasts,
6 such as by—

7 (1) improving data assimilation;

8 (2) accounting for Earth system processes that
9 cause model areas, such as cloud cover, ocean ed-
10 dies, and photosynthesis; and

11 (3) using artificial intelligence weather models
12 to quickly emulate running numerical weather mod-
13 els to assess and improve the confidence in and reli-
14 ability of weather forecasts.

15 **SEC. 104. TECHNICAL ASSISTANCE ON USE OF ARTIFICIAL**
16 **INTELLIGENCE WEATHER MODELS.**

17 (a) IN GENERAL.—The Administrator shall regularly
18 inventory and assess major non-Federal Government arti-
19 ficial intelligence weather models in order to provide—

20 (1) technical assistance on using such models;

21 (2) best practices on providing forecasts based
22 on outputs from both artificial intelligence weather
23 models and numerical weather models; and

24 (3) support for emergency managers to make
25 operational decisions based on outputs from both ar-

1 tificial intelligence weather models and numerical
2 weather models.

3 (b) REFORECAST ANALYSIS.—

4 (1) IN GENERAL.—The Administrator shall
5 support the development of a common framework for
6 the assessment of numerical weather models and ar-
7 tificial intelligence weather models through refore-
8 cast analysis and such other methodologies as the
9 Administrator considers appropriate.

10 (2) BEST PRACTICES.—In carrying out this
11 subsection, the Administrator may develop and dis-
12 seminate best practices in collaboration with—

13 (A) the National Institute for Standards
14 and Technology, the National Aeronautics and
15 Space Administration, the National Science
16 Foundation, and the Department of Energy;

17 (B) academic and research institutions;
18 and

19 (C) the private sector.

20 (3) PUBLIC AVAILABILITY OF DATASET.—

21 (A) IN GENERAL.—The Administrator may
22 make available to the public, as the Adminis-
23 trator determines appropriate and subject to
24 section 109, at no cost and with no restrictions
25 on copying, publishing, distributing, citing,

1 adapting, or otherwise using under an open li-
2 cense, any reforecast dataset developed under
3 this subsection.

4 (B) DETERMINATION.—In determining
5 whether to make a reforecast dataset public
6 under subparagraph (A), the Administrator
7 shall consider factors such as—

8 (i) the difficulty of replicating the re-
9 forecast dataset; and

10 (ii) the utility of the reforecast
11 dataset to non-Federal partners of the Na-
12 tional Oceanic and Atmospheric Adminis-
13 tration.

14 (4) REPORT ON USE OF ANALYSIS TO IMPROVE
15 MODELS.—Not later than one year after the date of
16 the enactment of this Act, the Administrator shall
17 submit to the Committee on Commerce, Science, and
18 Transportation of the Senate and the Committee on
19 Science, Space, and Technology of the House of
20 Representatives a report on the feasibility of using
21 reforecast analysis techniques to improve seasonal
22 and subseasonal models.

23 (c) WARNING COORDINATION METEOROLOGISTS AND
24 REGIONAL FORECAST OFFICES.—In carrying out this sec-
25 tion, the Administrator shall provide technical assistance,

1 best practices, and support required under subsection (a)
2 through the warning coordination meteorologists and
3 weather forecast offices of the National Oceanic and At-
4 mospheric Administration.

5 (d) INDEPENDENT STUDY ON THE IMPACTS OF ARTI-
6 FICIAL INTELLIGENCE WEATHER MODELS.—The Admin-
7 istrator may enter into an agreement with the National
8 Academy of Sciences to assess the impacts of artificial in-
9 telligence weather models on the weather enterprise and
10 make recommendations to improve the integration of such
11 models in operational forecasting.

12 **SEC. 105. FIRE COMBUSTION MODELING PROGRAM.**

13 (a) IN GENERAL.—Not later than one year after the
14 date of the enactment of this Act, the Administrator, in
15 consultation with the Secretary of the Interior, the Sec-
16 retary of Agriculture, the Administrator of the National
17 Aeronautics and Space Administration, the Secretary of
18 Energy, the Director of the National Science Foundation,
19 the Director of the National Center for Atmospheric Re-
20 search, the Environmental Information Services Working
21 Group, and such other technical experts as the Adminis-
22 trator considers appropriate, shall develop a program to
23 use artificial intelligence to analyze available data on the
24 built and natural environments in order to—

1 (1) warn and protect at-risk communities, fire-
2 fighters, and other responders;

3 (2) detect wildfires as early as possible; and

4 (3) forecast wildfire propagation and combus-
5 tion risks based on an analysis of the availability of
6 combustible materials in the built and natural envi-
7 ronments.

8 (b) TRAINING DATASET.—In carrying out this sec-
9 tion, the Administrator shall gather observational data
10 and synthetic data on the built and natural environments
11 collected across the Federal Government to develop and
12 curate a related training dataset for purposes of training
13 the artificial intelligence technology used in furtherance
14 of this section.

15 (c) DATA ACQUISITION.—In carrying out this section,
16 the Administrator may contract to acquire relevant data.

17 (d) WEATHER INTEGRATION.—In carrying out this
18 section, the Administrator shall integrate outputs from
19 weather and other environmental models and data.

20 (e) ENVIRONMENTAL IMPACT.—The Administrator
21 shall develop and disseminate best practices to minimize
22 environmental impacts from the use of artificial intel-
23 ligence technology to carry out this section.

24 (f) PUBLIC ACCESS.—Subject to section 109, the Ad-
25 ministrator shall make available to the public, at no-cost

1 and with no restrictions on copying, publishing, distrib-
2 uting, citing, adapting, or otherwise using under an open
3 license, the code for the artificial intelligence used under
4 subsection (a) and the training dataset developed under
5 subsection (b).

6 **SEC. 106. EMISSIONS MONITORING AND ANALYSIS PRO-**
7 **GRAM.**

8 (a) IN GENERAL.—Not later than one year after the
9 date of the enactment of this Act, the Administrator, in
10 consultation with the Administrator of the Environmental
11 Protection Agency, the Administrator of the National Aer-
12 onautics and Space Administration, the Secretary of En-
13 ergy, the Director of the National Science Foundation, the
14 Director of the National Center for Atmospheric Research,
15 the Environmental Information Services Working Group,
16 and such other technical experts as the Administrator con-
17 siders appropriate, shall develop a program to use artifi-
18 cial intelligence to analyze global atmospheric observations
19 in order to—

- 20 (1) improve atmospheric dispersion models;
- 21 (2) detect leaks from fuel transmission infra-
22 structure;
- 23 (3) detect, monitor, and track smoke and other
24 emissions from wildfires;

1 (4) identify significant changes in global green-
2 house gas emissions;

3 (5) infer the geographical and production
4 sources of emissions; and

5 (6) support the enforcement of applicable do-
6 mestic and international laws.

7 (b) LAW ENFORCEMENT.—The Administrator shall
8 collaborate with Federal, international, State, local, and
9 Tribal law enforcement entities to ensure the program de-
10 veloped under subsection (a) delivers outputs that support
11 law enforcement activities.

12 (c) TRAINING DATASET.—In carrying out this sec-
13 tion, the Administrator shall gather observational data
14 and synthetic data on the atmosphere and its chemical
15 components collected across the Federal Government to
16 develop, curate, and regularly update a global atmospheric
17 chemistry training dataset for purposes of training the ar-
18 tificial intelligence technology used in furtherance of this
19 section.

20 (d) DATA ACQUISITION.—In carrying out this sec-
21 tion, the Administrator—

22 (1) shall seek to negotiate with foreign govern-
23 ments for access to relevant data; and

24 (2) may contract to acquire relevant data.

1 (e) ENVIRONMENTAL IMPACT.—The Administrator
2 shall develop and disseminate best practices to minimize
3 environmental impacts from the use of artificial intel-
4 ligence technology to carry out this section.

5 (f) PUBLIC ACCESS.—Subject to section 109, the Ad-
6 ministrator shall make available to the public, at no-cost
7 and with no restrictions on copying, publishing, distrib-
8 uting, citing, adapting, or otherwise using under an open
9 license, the code for the artificial intelligence used under
10 subsection (a) and the training dataset developed under
11 subsection (c).

12 **SEC. 107. PARTNERSHIPS FOR TRANSFORMATIONAL INNO-**
13 **VATION.**

14 (a) IN GENERAL.—The Administrator shall explore
15 novel structures for partnerships with private entities and
16 academic entities for transformative innovation in weather
17 forecasting and other environmental forecasts in order
18 to—

- 19 (1) further the understanding of weather;
20 (2) advance the science of weather forecasting,
21 including seasonal and subseasonal forecasting; and
22 (3) develop artificial intelligence weather fore-
23 casting applications.

24 (b) CO-INVESTMENT.—In carrying out this section,
25 subject to applicable law, the Administrator shall consider

1 and adopt novel co-investment strategies with the private
2 sector and academic sector, including—

3 (1) non-Federal Government contributions to
4 resource and support high-risk, high-return research
5 and development in environmental forecasting, data
6 science, artificial intelligence, and related fields;

7 (2) shared rights to intellectual property from
8 research and development activities under this sec-
9 tion; and

10 (3) other approaches to sharing resources and
11 results under this section.

12 **SEC. 108. RETENTION OF FEDERAL GOVERNMENT EXPER-**
13 **TISE.**

14 Subject to applicable law, the Administrator shall
15 consider methods to recruit and retain expert personnel
16 to support activities under this title, including methods to
17 be competitive with salaries outside the Federal Govern-
18 ment.

19 **SEC. 109. NATIONAL SECURITY.**

20 (a) IN GENERAL.—Notwithstanding any other provi-
21 sion of this title, the Administrator, in consultation with
22 the Secretary of Defense, as appropriate, may withhold
23 any model, code, or data developed or used under this title
24 if the Administrator determines doing so to be necessary

1 to protect the national security interests of the United
2 States.

3 (b) RULE OF CONSTRUCTION.—Nothing in this title
4 shall be construed to supersede any other provision of law
5 governing the protection of the national security interests
6 of the United States.

7 **TITLE II—MATTERS RELATING**
8 **TO THE DEPARTMENT OF AG-**
9 **RICULTURE**

10 **SEC. 201. DEFORESTATION AND ILLEGAL WOOD PRODUCTS.**

11 (a) IN GENERAL.—Not later than 1 year after the
12 date of enactment of this Act, the Secretary of Agriculture
13 (referred to in this section as the “Secretary”), acting
14 through the Administrator of the Animal and Plant
15 Health Inspection Service, shall develop a program (re-
16 ferred to in this section as the “program”) to use artificial
17 intelligence to analyze available environmental, commer-
18 cial, law enforcement, and related data—

19 (1) to expand and improve global observations
20 of forested lands;

21 (2) to detect changes in the amount of forested
22 lands globally;

23 (3) to infer the causes of the changes described
24 in paragraph (2);

1 (4) to analyze past patterns in the movement of
2 illegal wood products;

3 (5) to predict future movements of illegal wood
4 products;

5 (6) to support the efficient deployment of inter-
6 national and domestic law enforcement assets to pre-
7 vent the movement of illegal wood products;

8 (7) to analyze how the movement of illegal wood
9 products is affected by the deployment of law en-
10 forcement assets described in paragraph (6); and

11 (8) to accomplish other related purposes.

12 (b) BEST PRACTICES.—The Secretary shall develop
13 and disseminate best practices for minimizing the environ-
14 mental impacts of the use of artificial intelligence tech-
15 nology under this section.

16 (c) TRAINING DATASET.—In carrying out the pro-
17 gram, the Secretary, acting through the Administrator of
18 the Animal and Plant Health Inspection Service, shall col-
19 lect and curate a training dataset, which shall source
20 from—

21 (1) the domestic and foreign intelligence com-
22 munities;

23 (2) satellite imagery;

24 (3) acoustic monitoring of forest habitats;

1 (4) data from Federal law enforcement agen-
2 cies;

3 (5) to the extent practicable, foreign govern-
4 ments; and

5 (6) other relevant data, as determined by the
6 Secretary.

7 (d) **CONTRACTS FOR ADDITIONAL DATA.**—Subject to
8 the availability of appropriations, the Secretary may enter
9 into contracts to acquire additional relevant data to carry
10 out the program.

11 (e) **INTERNATIONAL AGREEMENTS.**—

12 (1) **IN GENERAL.**—The Secretary shall seek to
13 enter into agreements with foreign governments to
14 share relevant data and artificial intelligence anal-
15 ysis for enforcing international and domestic laws
16 prohibiting the trade of illegal wood products.

17 (2) **TECHNICAL ASSISTANCE.**—The Secretary
18 may provide technical assistance to a foreign govern-
19 ment with which the Secretary has an agreement
20 under paragraph (1) to increase the capacity of the
21 foreign government to participate in intelligence
22 sharing and law enforcement activities relating to
23 the trade of illegal wood products.

1 **TITLE III—MATTERS RELATING**
2 **TO THE DEPARTMENT OF EN-**
3 **ERGY**

4 **SEC. 301. SECRETARY DEFINED.**

5 In this title, the term “Secretary” means the Sec-
6 retary of Energy.

7 **SEC. 302. GRID AND TRANSMISSION OPTIMIZATION.**

8 (a) ESTABLISHMENT OF PROGRAM.—

9 (1) IN GENERAL.—The Secretary, in consulta-
10 tion with the Chairman of the Federal Energy Regu-
11 latory Commission, shall establish a program (re-
12 ferred to in this section as the “program”) to use
13 artificial intelligence to optimize energy grids and
14 transmission—

15 (A) to minimize the loss of electrical en-
16 ergy;

17 (B) to stabilize energy flows to minimize
18 power outages and power surges;

19 (C) to compensate for variability in energy
20 production;

21 (D) to maximize the efficient use of new
22 energy sources; and

23 (E) to account for other factors, as appro-
24 priate.

1 (2) DEADLINE.—The program shall be estab-
2 lished not later than 1 year after the later of—

3 (A) the date on which the report required
4 under section 5.2(g)(i) of Executive Order
5 14110 (88 Fed. Reg. 75191; relating to safe,
6 secure, and trustworthy development and use of
7 artificial intelligence) is issued; and

8 (B) the date of enactment of this Act.

9 (b) TRAINING DATASET.—In establishing and car-
10 rying out the program, the Secretary shall collect data on
11 electrical production, transmission, use, and other factors,
12 as appropriate, to gather and curate a regularly updated
13 dataset for purposes of training artificial intelligence tech-
14 nology used in furtherance of the program.

15 (c) DATA ACQUISITION.—The Secretary may con-
16 tract to acquire relevant data for purposes of this section.

17 (d) PUBLIC ACCESS.—Subject to subsection (e), the
18 Secretary shall make available to the public, at no cost
19 and with no restrictions on copying, publishing, distrib-
20 uting, citing, adapting, or otherwise using under an open
21 license—

22 (1) the code for any artificial intelligence devel-
23 oped in furtherance of the program; and

24 (2) the training dataset curated under sub-
25 section (b).

1 (e) NATIONAL SECURITY.—

2 (1) IN GENERAL.—Notwithstanding any other
3 provision of this section, the Secretary may withhold
4 any model, code, or data from disclosure under sub-
5 section (d) or any other law if the Secretary, in con-
6 sultation with the Secretary of Defense, as appro-
7 priate, determines that withholding the model, code,
8 or data is necessary to protect—

9 (A) the national security interests of the
10 United States; or

11 (B) the security of the electrical grids or
12 transmission systems of the United States.

13 (2) RULE OF CONSTRUCTION.—Nothing in this
14 section supersedes any other provision of law gov-
15 erning the protection of the national security inter-
16 ests of the United States.

17 **SEC. 303. PREPARATION OF ENVIRONMENTAL REVIEW**
18 **DOCUMENTS.**

19 (a) DEFINITIONS.—In this section:

20 (1) NATIONAL ACADEMIES.—The term “Na-
21 tional Academies” means the National Academies of
22 Sciences, Engineering, and Medicine.

23 (2) NEPA; IMPACTS; MAJOR FEDERAL AC-
24 TION.—The terms “NEPA”, “impacts”, and “major
25 Federal action” have the meanings given those

1 terms in section 1508.1 of title 40, Code of Federal
2 Regulations (as in effect on the date of enactment
3 of this Act).

4 (b) ESTABLISHMENT OF PROGRAM.—Not later than
5 1 year after the date of enactment of this Act, the Sec-
6 retary shall establish a program (referred to in this section
7 as the “program”)—

8 (1) to use artificial intelligence, including large
9 language models, to assist in the preparation of doc-
10 uments to comply with NEPA;

11 (2) to provide ready access to publicly filed
12 NEPA compliance documents to further support the
13 development of documents to comply with NEPA;
14 and

15 (3) to assess the reliability of outputs from the
16 artificial intelligence used under paragraph (1), in-
17 cluding the viability of using those outputs to sup-
18 port compliance with NEPA.

19 (c) BEST PRACTICES.—The Secretary shall develop
20 and disseminate best practices for minimizing the environ-
21 mental impacts of the use of artificial intelligence tech-
22 nology under this section.

23 (d) TRAINING DATASET.—

24 (1) IN GENERAL.—In establishing and carrying
25 out the program, the Secretary shall gather and cu-

1 rate a training dataset of publicly filed NEPA com-
2 pliance documents relating to—

3 (A) the mission of the Department of En-
4 ergy; and

5 (B) any related statutory authorities.

6 (2) INCORPORATION OF METADATA.—The
7 training dataset described in paragraph (1) may in-
8 corporate metadata, as appropriate to aid in car-
9 rying out subsection (f).

10 (e) IMPLEMENTATION AND SCOPE.—In carrying out
11 this section, the Secretary—

12 (1) shall adopt an incremental approach, with
13 utilization by a limited number of participants and
14 careful assessment, to ensure—

15 (A) the viability of the artificial intelligence
16 technology used for purposes of the program;
17 and

18 (B) compliance with all applicable environ-
19 mental statutes, rules, regulations, and inter-
20 national laws; and

21 (2) may broaden the scope of the program to
22 include the application of artificial intelligence tech-
23 nology to assist with the preparation of other envi-
24 ronmental compliance documents, subject to all ap-

1 plicable environmental statutes, rules, regulations,
2 and international laws.

3 (f) PUBLIC ACCESS.—The Secretary shall make
4 available to the public, at no cost and with no restrictions
5 on copying, publishing, distributing, citing, adapting, or
6 otherwise using under an open license—

7 (1) the code for any artificial intelligence devel-
8 oped in furtherance of the program;

9 (2) the training dataset curated under sub-
10 section (d); and

11 (3) the particular NEPA documents used in the
12 training dataset curated under subsection (d), which
13 shall be searchable, at a minimum, by—

14 (A) project name;

15 (B) geography;

16 (C) keywords;

17 (D) type of major Federal action; and

18 (E) other parameters, as appropriate or
19 convenient.

20 (g) PROGRAM REVIEW.—

21 (1) IN GENERAL.—Not later than 2 years after
22 the date on which the program is established, the
23 Secretary shall enter into a contract with the Na-
24 tional Academies to assess—

1 (A) the program, including a comparison
2 of the efficacy, accuracy, and speed of pre-
3 paring comparable documents using the artifi-
4 cial intelligence described in subsection (b) and
5 traditional methods;

6 (B) the training dataset curated under
7 subsection (d); and

8 (C) any artificial intelligence developed in
9 furtherance of the program.

10 (2) REQUIREMENTS.—In carrying out the as-
11 sessment under paragraph (1), the National Acad-
12 emies shall consider—

13 (A) the legal viability of the NEPA compli-
14 ance documents prepared using—

15 (i) an artificial intelligence developed
16 under this section; or

17 (ii) the training dataset curated under
18 subsection (d); and

19 (B) the capacity of the program—

20 (i) to take into account the unique
21 cultural concerns regarding impacts to spe-
22 cific sites and communities from a major
23 Federal action; and

24 (ii) to avoid bias arising from the lim-
25 itations of the training dataset.

1 (3) RECOMMENDATIONS.—In carrying out the
2 assessment under paragraph (1), the National Acad-
3 emies shall issue recommendations on how the Sec-
4 retary may improve—

5 (A) the artificial intelligence; and

6 (B) the curation of the training dataset
7 under subsection (d).

8 (h) SAVINGS PROVISION.—Nothing in this section
9 shall—

10 (1) limit or modify any applicable environ-
11 mental law; or

12 (2) affect compliance of applications for permits
13 and other permissions with all applicable statutes,
14 rules, regulations, and international laws.

15 **TITLE IV—AUTHORIZATION OF**
16 **APPROPRIATIONS**

17 **SEC. 401. AUTHORIZATION OF APPROPRIATIONS.**

18 There are authorized to be appropriated such sums
19 as are necessary to carry out this Act.

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