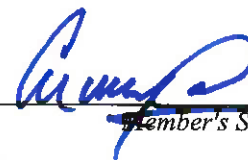

H. R. # / H. J. Res. #



Member's Signature

Anthony Gonzalez

Member's Name (printed)

Constitutional Authority Statement

To accompany:

Advanced Recycling Research and Development Act of 2021

Pursuant to clause 7 of Rule XII of the Rules of the House of Representatives, the following statement is submitted regarding the specific powers granted to Congress in the Constitution to enact the accompanying bill or joint resolution.

Congress has the power to enact this legislation pursuant to the following:

Congress has the power to enact this legislation pursuant to the following:
Article 1, Section 8, Clause 18 of the Constitution stating that Congress has the authority to "make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all other powers vested by this Constitution."



(Original Signature of Member)

117TH CONGRESS
1ST SESSION

H. R.

To direct the Secretary of Energy to establish and support advanced recycling research and development programs, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. GONZALEZ of Ohio introduced the following bill; which was referred to the Committee on _____

A BILL

To direct the Secretary of Energy to establish and support advanced recycling research and development programs, 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 “Advanced Recycling Research and Development Act of
6 2021”.

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

- Sec. 1. Short title; table of contents.
Sec. 2. Definitions.
Sec. 3. Optimized plastics recycling research and development program.
Sec. 4. Lithium-based battery recycling research and development program.

1 **SEC. 2. DEFINITIONS.**

2 In this Act:

3 (1) DEPARTMENT.—The term “Department”
4 means the Department of Energy.

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

9 (3) SECRETARY.—The term “Secretary” means
10 the Secretary of Energy.

11 (4) RECYCLABLE PLASTIC.—The term “recyclable
12 plastic” means plastic that is designed to be
13 readily, economically, and efficiently recyclable or
14 otherwise recoverable for beneficial use.

15 (5) CRITICAL MATERIAL.—The term “critical
16 material” has the meaning given such term in sec-
17 tion 7002 of Division Z of the Consolidated Appro-
18 priations Act, 2021 (Public Law 116–260).

19 (6) COMPOSITE.—The term “composite” means
20 plastic reinforced with fiber or particulate secondary
21 material like bio-derived fibers, carbon fibers, glass
22 or any other solid material.

1 **SEC. 3. OPTIMIZED PLASTICS RECYCLING RESEARCH AND**
2 **DEVELOPMENT PROGRAM.**

3 (a) IN GENERAL.—The Secretary shall carry out a
4 research, development, and demonstration program to ac-
5 celerate innovation in energy-efficient recyclable plastics,
6 next-generation plastics, and composites recycling and
7 upcycling strategies and technologies, in order to increase
8 the economic value of plastics supply streams and to re-
9 duce the environmental impact of global plastics consump-
10 tion.

11 (b) EXECUTION.—In carrying out the program under
12 this section, the Secretary shall—

13 (1) develop novel collection and sorting tech-
14 nologies to prevent plastics and composites, includ-
15 ing waterborne plastics, from entering landfills and
16 the marine environment;

17 (2) develop biological, chemical, and hybrid bio-
18 chemical technologies and methods for
19 deconstructing plastic and composite waste into use-
20 ful chemical and material streams;

21 (3) develop technologies to upcycle waste, in-
22 cluding chemical, material, and gaseous streams,
23 into higher-value products;

24 (4) develop new economically recyclable-by-de-
25 sign plastics and composites that can be scaled for
26 domestic manufacturability and recovery;

1 (5) develop new energy-efficient advanced man-
2 ufacturing techniques for reclaimed plastics and
3 composites; and

4 (6) develop new data collection methods and
5 practices in collaboration with relevant Federal
6 agencies and the National Laboratories.

7 (c) LEVERAGING.—In carrying out the program
8 under this section, the Secretary shall leverage resources
9 and expertise from—

10 (1) the Basic Energy Sciences Program and the
11 Biological and Environmental Research Program of
12 the Office of Science; and

13 (2) the Office of Energy Efficiency and Renew-
14 able Energy.

15 (d) STANDARD OF REVIEW.—The Secretary shall pe-
16 riodically review activities carried out under the program
17 under this section to determine the achievement of tech-
18 nical milestones as determined by the Secretary.

19 (e) FUNDING.—From within funds authorized to be
20 appropriated—

21 (1) to the Department's Office of Science, there
22 shall be made available to the Secretary to carry out
23 the program under this section \$15,000,000 for each
24 of fiscal years 2022 through 2026; and

1 (2) to the Department's Office of Energy Effi-
2 ciency and Renewable Energy, there shall be made
3 available to the Secretary to carry out the program
4 under this section \$25,000,000 for each of fiscal
5 years 2022 through 2026.

6 **SEC. 4. LITHIUM-BASED BATTERY RECYCLING RESEARCH**
7 **AND DEVELOPMENT PROGRAM.**

8 (a) **IN GENERAL.**—The Secretary shall carry out a
9 research, development, and demonstration program to
10 support the development of—

11 (1) advanced materials for batteries with con-
12 siderations given to resource availability and envi-
13 ronmentally benign disposal and recycling; and

14 (2) innovative technologies to reclaim and recy-
15 cle critical materials from advanced and lithium-
16 based battery technologies used in consumer elec-
17 tronics, defense, stationary storage, and transpor-
18 tation applications.

19 (b) **EXECUTION.**—In carrying out the program under
20 this section, the Secretary shall—

21 (1) promote the discovery of new domestically
22 sourced raw materials for batteries that can degrade
23 without causing damage to the environment;

24 (2) develop innovative and cost-effective tech-
25 nologies and processes for the collection, storage,

1 and transportation of discarded lithium-based bat-
2 teries that prioritize the use of domestic mining re-
3 sources; and

4 (3) research and develop cost-effective recycling
5 processes to recover critical materials from discarded
6 lithium-based batteries and enable their reintroduc-
7 tion in new lithium-based cell technologies and in-
8 crease availability of domestically sourced raw mate-
9 rials for batteries and for use in other relevant in-
10 dustries.

11 (c) LEVERAGING.—In carrying out the program
12 under this section, the Secretary shall leverage resources
13 and expertise from—

14 (1) the Basic Energy Sciences Program of the
15 Office of Science;

16 (2) the Office of Energy Efficiency and Renew-
17 able Energy, including current lithium-based battery
18 recycling activities supported by the Vehicle Tech-
19 nologies Office within the Office of Energy Effi-
20 ciency and Renewable Energy;

21 (3) the Office of Fossil Energy; and

22 (4) the Office of Technology Transitions.

23 (d) STANDARD OF REVIEW.—The Secretary shall pe-
24 riodically review activities carried out under the program

1 under this section to determine the achievement of tech-
2 nical milestones as determined by the Secretary.

3 (e) FUNDING.—From within funds authorized to be
4 appropriated—

5 (1) to the Department's Office of Science, there
6 shall be made available to the Secretary to carry out
7 the activities under this section \$10,000,000 for
8 each of fiscal years 2022 through 2026;

9 (2) to the Department's Office of Energy Effi-
10 ciency and Renewable Energy, there shall be made
11 available to the Secretary to carry out the activities
12 under this section \$10,000,000 for each of fiscal
13 years 2022 through 2026; and

14 (3) to the Department's Office of Fossil En-
15 ergy, there shall be made available to the Secretary
16 to carry out the activities under this section
17 \$5,000,000 for each of fiscal years 2022 through
18 2026.

ADD A COSPONSOR

Pursuant to clause 7 of Rule XII of the Rules of the House of Representatives, the following sponsors are hereby added to:

CONGRESS: 117th

SESSION: 1st

DATE: 4/22/21

H.R. _____

H. Con. Res. _____

H.J. Res. _____

H. Res. _____

MEMBER NAME (PRINT)	ORIGINAL SIGNATURE	STATE
1 <u>Haley Stevens</u>	_____	<u>MI</u>
2 <u>Frank Lucas</u>	_____	<u>OK</u>
3 _____	_____	_____
4 _____	_____	_____
5 _____	_____	_____
6 _____	_____	_____
7 _____	_____	_____
8 _____	_____	_____
9 _____	_____	_____
10 _____	_____	_____
11 _____	_____	_____
12 _____	_____	_____
13 _____	_____	_____
14 _____	_____	_____
15 _____	_____	_____
16 _____	_____	_____
17 _____	_____	_____
18 _____	_____	_____
19 _____	_____	_____
20 _____	_____	_____

Primary Sponsor's Original Signature 

Print Member Name Anthony Gonzalez