

**First Regular Session
Seventy-fourth General Assembly
STATE OF COLORADO**

REENGROSSED

*This Version Includes All Amendments
Adopted in the House of Introduction*

LLS NO. 23-0267.01 Sarah Lozano x3858

HOUSE BILL 23-1069

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A BILL FOR AN ACT

101 **CONCERNING THE CREATION OF THE BIOCHAR IN OIL AND GAS WELL**
102 **PLUGGING WORKING ADVISORY GROUP TO MAKE**
103 **RECOMMENDATIONS FOR THE DEVELOPMENT OF A PILOT**
104 **PROGRAM TO STUDY THE USE OF BIOCHAR IN THE PLUGGING OF**
105 **OIL AND GAS WELLS, AND, IN CONNECTION THEREWITH, MAKING**
106 **AN APPROPRIATION.**

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov>.)

The bill creates the biochar in oil and gas well plugging working

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.
Capital letters or bold & italic numbers indicate new material to be added to existing law.
Dashes through the words or numbers indicate deletions from existing law.

HOUSE
3rd Reading Unamended
April 24, 2023

HOUSE
Amended 2nd Reading
April 21, 2023

advisory group (work group) in the oil and gas conservation commission (commission). The work group's purpose is to make recommendations for the development of a pilot program to study the use of biochar in the plugging of oil and gas wells.

No later than September 1, 2023, the work group must submit a draft report to the commission detailing its recommendations for the pilot program. After coordinating with the commission to develop a final report, no later than February 1, 2024, the work group must present the report to the transportation and energy committee of the senate and the energy and environment committee of the house of representatives.

1 *Be it enacted by the General Assembly of the State of Colorado:*

2 **SECTION 1. Legislative declaration.** (1) The general assembly
3 finds and declares that:

4 (a) It is important to focus on finding innovative solutions to:
5 (I) Mitigate the impacts of climate change;
6 (II) Further protect human and animal health; and
7 (III) Lower the carbon footprint of current methods of plugging
8 oil and gas wells;

9 (b) The state recognizes the importance of regulating the oil and
10 gas industry and supports the implementation of practices and
11 technologies to address emission reduction goals and research to develop
12 these practices and technologies;

13 (c) The state should continue to regulate the plugging of oil and
14 gas wells by both state agencies and the oil and gas industry;

15 (d) It is important to create opportunities for the oil and gas
16 industry to permanently sequester carbon from the atmosphere;

17 (e) Exploring the use of biochar in oil and gas well plugging
18 operations may potentially open up economic opportunities for Colorado
19 to become a leader in the use of biochar in oil and gas well plugging
20 operations; and

1 (f) Biochar could be beneficial to efforts by the oil and gas
2 industry to reduce greenhouse gas emissions in Colorado.

3 (2) The general assembly further finds and declares that it is in the
4 interest of Colorado to convene a working advisory group that
5 coordinates with Colorado state university and makes recommendations
6 on establishing a pilot program to study the use of biochar in oil and gas
7 well plugging operations.

8 **SECTION 2.** In Colorado Revised Statutes, **add** 34-60-134 as
9 follows:

10 **34-60-134. Biochar in oil and gas well plugging working**
11 **advisory group - created - members - study by Colorado state**
12 **university - recommendations for the development of a pilot program**
13 **- report - definitions - repeal.** (1) AS USED IN THIS SECTION, UNLESS THE
14 CONTEXT OTHERWISE REQUIRES:

15 (a) "BIOCHAR" MEANS THE SOLID CARBON-RICH PRODUCT MADE
16 WHEN WOODY BIOMASS UNDERGOES PYROLYSIS IN AN OXYGEN-DEPLETED
17 ATMOSPHERE AT APPROXIMATELY EIGHT HUNDRED DEGREES CELSIUS.

18 (b) "COLORADO ENERGY OFFICE" MEANS THE COLORADO ENERGY
19 OFFICE CREATED IN SECTION 24-38.5-101 (1).

20 (c) "DIRECTOR" MEANS THE DIRECTOR OF THE COMMISSION
21 APPOINTED PURSUANT TO SECTION 34-60-104.5 (1) OR THE DIRECTOR'S
22 DESIGNEE.

23 (d) "ENVIRONMENTAL JUSTICE ADVISORY BOARD" MEANS THE
24 ENVIRONMENTAL JUSTICE ADVISORY BOARD CREATED IN SECTION
25 25-1-134 (2)(a).

26 (e) "LOCAL GOVERNMENT" MEANS A HOME RULE OR STATUTORY
27 COUNTY, MUNICIPALITY, OR CITY AND COUNTY.

1 (f) "PILOT PROGRAM" MEANS THE PILOT PROGRAM DESCRIBED IN
2 SUBSECTION (4)(b) OF THIS SECTION.

3 (g) "SELECTED OIL AND GAS WELLS" MEANS THE OIL AND GAS
4 WELLS SELECTED BY THE WORK GROUP PURSUANT TO SUBSECTION
5 (4)(c)(II) OF THIS SECTION.

6 (h) "STATE FOREST SERVICE" MEANS THE COLORADO STATE
7 FOREST SERVICE IDENTIFIED IN SECTION 23-31-302.

8 (i) "UNIVERSITY" MEANS COLORADO STATE UNIVERSITY
9 ESTABLISHED IN SECTION 23-31-101.

10 (j) "WORK GROUP" MEANS THE BIOCHAR IN OIL AND GAS WELL
11 PLUGGING WORKING ADVISORY GROUP CREATED IN SUBSECTION (2)(a) OF
12 THIS SECTION.

13 (2) (a) THE BIOCHAR IN OIL AND GAS WELL PLUGGING WORKING
14 ADVISORY GROUP IS CREATED IN THE COMMISSION.

15 (b) THE WORK GROUP CONSISTS OF THE FOLLOWING MEMBERS:

16 (I) A MEMBER OF THE COMMISSION'S TECHNICAL STAFF WITH
17 EXPERTISE IN ENGINEERING OR ORPHANED WELLS, APPOINTED BY THE
18 DIRECTOR;

19 (II) A MEMBER REPRESENTING THE DEPARTMENT OF PUBLIC
20 HEALTH AND ENVIRONMENT CREATED IN SECTION 24-1-119 (1),
21 APPOINTED BY THE EXECUTIVE DIRECTOR OF THE DEPARTMENT OF PUBLIC
22 HEALTH AND ENVIRONMENT;

23 (III) A MEMBER REPRESENTING THE COLORADO ENERGY OFFICE,
24 APPOINTED BY THE DIRECTOR OF THE COLORADO ENERGY OFFICE;

25 (IV) A MEMBER REPRESENTING THE OIL AND GAS INDUSTRY,
26 APPOINTED BY THE DIRECTOR;

27 (V) A MEMBER, APPOINTED BY THE DIRECTOR OF THE COLORADO

1 ENERGY OFFICE, REPRESENTING AN ENVIRONMENTAL ADVOCACY
2 ORGANIZATION WITH:

3 (A) A FOCUS ON THE REDUCTION OF GREENHOUSE GAS EMISSIONS;

4 AND

5 (B) EXPERIENCE WITH CARBON REMOVAL AND SEQUESTRATION
6 SOLUTIONS;

7 (VI) A MEMBER WITH EXPERTISE IN THE BIOCHAR INDUSTRY,
8 APPOINTED BY THE DIRECTOR; AND

9 (VII) A MEMBER OF THE COMMISSION, WHO IS THE CHAIR OF THE
10 WORK GROUP, APPOINTED BY THE DIRECTOR.

11 (c) THE WORK GROUP ALSO CONSISTS OF THE FOLLOWING
12 MEMBERS, WHO SHALL PARTICIPATE IN THE WORK GROUP IN AN ADVISORY,
13 NONVOTING CAPACITY:

14 (I) A MEMBER REPRESENTING THE STATE FOREST SERVICE,
15 APPOINTED BY THE DIRECTOR OF THE STATE FOREST SERVICE;

16 (II) A MEMBER REPRESENTING A BIOCHAR MANUFACTURING
17 ENTITY LOCATED IN THE STATE, APPOINTED BY THE DIRECTOR;

18 (III) A MEMBER REPRESENTING A LOCAL GOVERNMENT WHO HAS
19 A DEMONSTRATED FOCUS ON ENVIRONMENTAL AIR QUALITY ISSUES, WITH
20 CLIMATE PROTECTION AS A DEMONSTRATED PRIORITY, APPOINTED BY THE
21 DIRECTOR OF THE COLORADO ENERGY OFFICE;

22 (IV) A MEMBER, APPOINTED BY THE DIRECTOR, REPRESENTING THE
23 FEDERAL BUREAU OF LAND MANAGEMENT WHO HAS KNOWLEDGE
24 CONCERNING:

25 (A) THE FEDERAL STANDARDS FOR PLUGGING OIL AND GAS WELLS;

26 AND

27 (B) THE OPPORTUNITIES FOR OBTAINING FEDERAL FUNDING FOR

1 THE PILOT PROGRAM;

2 (V) A MEMBER WITH EXPERTISE IN PLUGGING AND ABANDONMENT
3 OPERATIONS AND METHANE MITIGATION FROM WELLBORES, APPOINTED BY
4 THE DIRECTOR;

5 (VI) A MEMBER OF THE ENVIRONMENTAL JUSTICE ADVISORY
6 BOARD, APPOINTED BY THE CHAIR OF THE ENVIRONMENTAL JUSTICE
7 ADVISORY BOARD; AND

8 (VII) A MEMBER REPRESENTING THE INTERESTS OF
9 DISPROPORTIONATELY IMPACTED COMMUNITIES, AS DEFINED IN SECTION
10 24-4-109 (2)(b)(II), APPOINTED BY THE CHAIR OF THE ENVIRONMENTAL
11 JUSTICE ADVISORY BOARD.

12 (d) THE APPOINTING AUTHORITIES SHALL MAKE ALL
13 APPOINTMENTS TO THE WORK GROUP NO LATER THAN JULY 1, 2023. THE
14 MEMBERS OF THE WORK GROUP SERVE WITHOUT COMPENSATION BUT
15 SHALL BE REIMBURSED FOR EXPENSES INCURRED BY THEM IN THE
16 PERFORMANCE OF THEIR OFFICIAL DUTIES.

17 (e) THE WORK GROUP SHALL CONDUCT MEETINGS AS OFTEN AS
18 NECESSARY TO PERFORM THE WORK GROUP'S DUTIES PURSUANT TO THIS
19 SECTION, INCLUDING CONSULTING AND COORDINATING WITH THE
20 UNIVERSITY ON THE UNIVERSITY'S DUTIES PURSUANT TO THIS SECTION.

21 (3) (a) THE UNIVERSITY SHALL:

22 (I) REVIEW PEER-REVIEWED SCIENTIFIC ARTICLES AND STUDIES ON
23 BIOCHAR'S CAPACITY TO:

24 (A) LOWER GREENHOUSE GAS EMISSIONS;

25 (B) LOWER CHEMICAL LEAKS;

26 (C) REMOVE AND SEQUESTER CARBON;

27 (D) LOWER THE CARBON FOOTPRINT IN CEMENT;

- 1 (E) ADD STRENGTH TO CEMENT; AND
- 2 (F) BIND CHEMICALS SUCH AS METHANE, BENZENE, AND CARBON
- 3 DIOXIDE FROM FUGITIVE EMISSIONS;
- 4 (II) REVIEW ANY APPLICABLE FEDERAL LAWS AND LAWS OF OTHER
- 5 STATES THAT ADDRESS THE USE OF BIOCHAR IN THE PLUGGING OF OIL AND
- 6 GAS WELLS;
- 7 (III) CONDUCT DESK RESEARCH RELATED TO BIOCHAR, INCLUDING
- 8 GEOMECHANICAL MODELING AND CALCULATIONS TO LIMIT VARIABLES;
- 9 (IV) CONDUCT LABORATORY RESEARCH, INCLUDING RESEARCH TO
- 10 CHARACTERIZE:
- 11 (A) THE MECHANICAL STRENGTH, PERMEABILITY, PORE
- 12 STRUCTURE, AND GAS ABSORPTION OF BIOCHAR;
- 13 (B) THE GEOCHEMICAL REACTION OF BIOCHAR WITH WATER FROM
- 14 AN UNDERGROUND FORMATION; AND
- 15 (C) THE CHEMICAL REACTION OF BIOCHAR WITH CEMENT USED IN
- 16 THE PLUGGING OF OIL AND GAS WELLS;
- 17 (V) EVALUATE WHETHER ANY FEDERAL OR STATE PROGRAMS OR
- 18 PRIVATE ENTITIES COULD PROVIDE FUNDING FOR THE PILOT PROGRAM;
- 19 (VI) ASSESS THE COSTS ASSOCIATED WITH USING BIOCHAR IN THE
- 20 PLUGGING OF AN OIL AND GAS WELL;
- 21 (VII) DETERMINE THE AMOUNT OF BIOCHAR THAT IS AVAILABLE
- 22 FOR USE IN THE STATE;
- 23 (VIII) EXAMINE WHETHER THE USE OF BIOCHAR IN THE PLUGGING
- 24 OF OIL AND GAS WELLS IS CONSISTENT WITH THE STATE'S SHORT-TERM AND
- 25 LONG-TERM GREENHOUSE GAS AND POLLUTION REDUCTION GOALS, AS SET
- 26 FORTH IN SECTION 25-7-102 (2)(g), TAKING INTO CONSIDERATION THE
- 27 EMISSIONS OF GREENHOUSE GASES AND OTHER POLLUTANTS CAUSED BY

1 THE PRODUCTION OF BIOCHAR AND THE USE OF BIOCHAR IN THE PLUGGING
2 OF OIL AND GAS WELLS; AND

3 (IX) DETERMINE WHETHER THE USE OF BIOCHAR WHEN PLUGGING
4 AN OIL AND GAS WELL:

5 (A) COULD, WITH VERIFIED NET PERMANENT REMOVAL OF
6 ATMOSPHERIC CARBON AS ESTABLISHED ACCORDING TO
7 INTERNATIONALLY RECOGNIZED STANDARDS, ALLOW AN OPERATOR OR
8 OTHER PERSON PLUGGING AN OIL AND GAS WELL TO RECEIVE LEGITIMATE
9 CARBON CREDITS OR OFFSETS;

10 (B) WOULD REQUIRE ANY CHANGES TO STATE LAW TO ALLOW THE
11 USE OF BIOCHAR IN THE PLUGGING OF AN OIL AND GAS WELL OR TO ALLOW
12 A STATE AGENCY TO COORDINATE WITH APPLICABLE FEDERAL AGENCIES
13 AND OTHER ENTITIES IN THE IMPLEMENTATION OF THE PILOT PROGRAM;
14 AND

15 (C) WOULD COMPLY, IN THE CASE OF PLUGGING AN OIL AND GAS
16 WELL OWNED BY THE UNITED STATES OR A TRIBAL LAND TRUST, WITH
17 FEDERAL LAW OR ANY OTHER APPLICABLE LAW.

18 (b) IN PERFORMING ITS DUTIES PURSUANT TO SUBSECTION (3)(a)
19 OF THIS SECTION, THE UNIVERSITY SHALL UTILIZE ANY APPLICABLE
20 EXISTING FEDERAL, STATE, OR LOCAL PROGRAMS OR FUNDING AND MAY
21 COORDINATE AND CONSULT WITH OTHER INSTITUTIONS OF HIGHER
22 EDUCATION.

23 (4) (a) NO LATER THAN MARCH 1, 2024, THE UNIVERSITY SHALL
24 PROVIDE AN UNOFFICIAL PROGRESS REPORT OF ITS FINDINGS PURSUANT TO
25 SUBSECTION (3)(a) OF THIS SECTION TO THE WORK GROUP.

26 (b) NO LATER THAN JUNE 1, 2024, THE UNIVERSITY SHALL PROVIDE
27 AN OFFICIAL REPORT OF ITS FINDINGS PURSUANT TO SUBSECTION (3)(a) OF

1 THIS SECTION TO THE WORK GROUP. IF, BASED ON THE REPORT, THE WORK
2 GROUP DETERMINES THAT A PILOT PROGRAM TO STUDY THE USE OF
3 BIOCHAR IN THE PLUGGING OF OIL AND GAS WELLS WOULD HAVE A
4 POSITIVE IMPACT ON THE HEALTH, SAFETY, AND WELFARE OF THE STATE
5 AND WOULD BE CONSISTENT WITH THE STATE'S SHORT-TERM AND
6 LONG-TERM GREENHOUSE GAS AND POLLUTION REDUCTION GOALS, AS SET
7 FORTH IN SECTION 25-7-102 (2)(g), THE WORK GROUP SHALL, NO LATER
8 THAN AUGUST 1, 2024, DIRECT THE UNIVERSITY TO MAKE
9 RECOMMENDATIONS REGARDING THE DEVELOPMENT OF THE PILOT
10 PROGRAM.

11 (c) THE RECOMMENDATIONS PURSUANT TO SUBSECTION (4)(b) OF
12 THIS SECTION MUST INCLUDE RECOMMENDATIONS REGARDING A PLAN TO:

13 (I) DEVELOP STANDARDS FOR:

14 (A) USING BIOCHAR IN THE PLUGGING OF THE SELECTED OIL AND
15 GAS WELLS;

16 (B) MONITORING THE EMISSIONS OF THE SELECTED OIL AND GAS
17 WELLS; AND

18 (C) COMPARING EMISSIONS DATA FROM THE SELECTED OIL AND
19 GAS WELLS TO EMISSIONS DATA FROM OIL AND GAS WELLS THAT HAVE NOT
20 BEEN PLUGGED USING BIOCHAR;

21 (II) SELECT OIL AND GAS WELLS WHERE AN OPERATOR OR OTHER
22 PERSON PLUGGING AN OIL AND GAS WELL WILL USE BIOCHAR WHEN
23 PLUGGING THE WELL IN ACCORDANCE WITH THE STANDARDS DEVELOPED
24 PURSUANT TO SUBSECTION (4)(c)(I)(A) OF THIS SECTION; AND

25 (III) CONTINUE, AFTER THE SELECTED OIL AND GAS WELLS ARE
26 PLUGGED, TO:

27 (A) MONITOR EMISSIONS AND COMPARE EMISSIONS DATA FROM

1 THE SELECTED OIL AND GAS WELLS IN ACCORDANCE WITH THE STANDARDS
2 DEVELOPED PURSUANT TO SUBSECTIONS (4)(c)(I)(B) AND (4)(c)(I)(C) OF
3 THIS SECTION;

4 (B) ASSESS THE CONDITION OF THE SELECTED OIL AND GAS WELLS;
5 AND

6 (C) CONDUCT LABORATORY TESTING ON THE SELECTED OIL AND
7 GAS WELLS TO DETERMINE THE ABILITY OF BIOCHAR TO ABSORB OR
8 ADSORB METHANE AND OTHER CHEMICALS FOUND IN A PLUGGED OIL AND
9 GAS WELL AND TO DETERMINE THE BEST ESTIMATE OF THE LONG-TERM
10 DURABILITY OF BIOCHAR WHEN USED IN THE PLUGGING OF AN OIL AND GAS
11 WELL.

12 (d) THE RECOMMENDATIONS PURSUANT TO SUBSECTION (4)(b) OF
13 THIS SECTION MUST INCLUDE, AT A MINIMUM, RECOMMENDATIONS
14 REGARDING:

15 (I) THE ESTIMATED COSTS TO IMPLEMENT THE PILOT PROGRAM;

16 (II) THE DURATION OF THE PILOT PROGRAM;

17 (III) A DETAILED PLAN FOR THE IMPLEMENTATION OF THE PILOT
18 PROGRAM BY THE COMMISSION;

19 (IV) A DESCRIPTION OF ANY OPPORTUNITIES TO WORK WITH OR
20 RECEIVE FUNDING FROM FEDERAL AGENCIES OR PRIVATE ENTITIES IN THE
21 IMPLEMENTATION OF THE PILOT PROGRAM; AND

22 (V) A PROCESS FOR REPORTING THE FINDINGS OF THE PILOT
23 PROGRAM.

24 (5) NO LATER THAN DECEMBER 1, 2024, THE UNIVERSITY SHALL
25 SUBMIT A DRAFT REPORT DESCRIBING ITS RECOMMENDATIONS FOR THE
26 DEVELOPMENT OF A PILOT PROGRAM PURSUANT TO SUBSECTIONS (4)(b),
27 (4)(c), AND (4)(d) OF THIS SECTION TO THE WORK GROUP. NO LATER THAN

- 1 DECEMBER 15, 2024, THE UNIVERSITY SHALL:
- 2 (a) IN CONSULTATION WITH THE WORK GROUP, CREATE A FINAL
- 3 REPORT THAT INCORPORATES THE WORK GROUP'S COMMENTS REGARDING
- 4 THE DRAFT REPORT; AND
- 5 (b) PROVIDE A COPY OF THE FINAL REPORT TO THE DIRECTOR.
- 6 (6) THE DIRECTOR SHALL POST A COPY OF THE FINAL REPORT
- 7 DESCRIBED IN SUBSECTION (5)(b) OF THIS SECTION ON THE COMMISSION'S
- 8 WEBSITE.
- 9 (7) THIS SECTION IS REPEALED, EFFECTIVE SEPTEMBER 1, 2025.

10 **SECTION 3.** In Colorado Revised Statutes, 34-60-124, **amend**

11 (4)(b); and **add** (4)(d) as follows:

12 **34-60-124. Oil and gas conservation and environmental**

13 **response fund - repeal.** (4) The oil and gas conservation and

14 environmental response fund may be expended:

15 (b) For purposes authorized by section 23-41-114 (4); ~~C.R.S.~~ AND

16 (d) (I) BY THE COMMISSION AND COLORADO STATE UNIVERSITY,

17 ESTABLISHED IN SECTION 23-31-101, FOR THE PURPOSES OF THE STUDY

18 CONDUCTED PURSUANT TO SECTION 34-60-134.

19 (II) THIS SUBSECTION (4)(d) IS REPEALED, EFFECTIVE SEPTEMBER

20 1, 2025.

21 **SECTION 4. Appropriation.** (1) For the 2023-24 state fiscal

22 year, \$370,140 is appropriated to the department of higher education. This

23 appropriation is from the oil and gas conservation and environmental

24 response fund created in section 34-60-122 (5)(a), C.R.S., and is based on

25 an assumption that the department will require an additional 3.0 FTE. To

26 implement this act, the department may use this appropriation for the

27 board of governors of the Colorado state university system for the biochar

1 in oil and gas well plugging working advisory group.

2 (2) For the 2023-24 state fiscal year, \$5,600 is appropriated to the
3 department of natural resources for use by the oil and gas conservation
4 commission. This appropriation is from the oil and gas conservation and
5 environmental response fund created in section 34-60-122 (5)(a), C.R.S.
6 To implement this act, the commission may use this appropriation for
7 program costs.

8 **SECTION 5. Safety clause.** The general assembly hereby finds,
9 determines, and declares that this act is necessary for the immediate
10 preservation of the public peace, health, or safety.