

HOUSE COMMITTEE OF REFERENCE AMENDMENT

Committee on Energy & Environment.

HB23-1069 be amended as follows:

1 Amend printed bill, strike everything below the enacting clause and
2 substitute:

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

5 (a) It is important to focus on finding innovative solutions to:

6 (I) Mitigate the impacts of climate change;

7 (II) Further protect human and animal health; and

8 (III) Lower the carbon footprint of current methods of plugging
9 oil and gas wells;

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

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

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

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

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

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

29 SECTION 2. In Colorado Revised Statutes, add 34-60-134 as
30 follows:

31 34-60-134. Biochar in oil and gas well plugging working
32 advisory group - created - members - study by Colorado state
33 university - recommendations for the development of a pilot program
34 - report - definitions - repeal. (1) AS USED IN THIS SECTION, UNLESS THE
35 CONTEXT OTHERWISE REQUIRES:

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

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

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

4 (d) "ENVIRONMENTAL JUSTICE ADVISORY BOARD" MEANS THE
5 ENVIRONMENTAL JUSTICE ADVISORY BOARD CREATED IN SECTION
6 25-1-134 (2)(a).

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

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

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

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

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

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

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

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

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

27 (II) A MEMBER REPRESENTING THE DEPARTMENT OF PUBLIC
28 HEALTH AND ENVIRONMENT CREATED IN SECTION 24-1-119 (1),
29 APPOINTED BY THE EXECUTIVE DIRECTOR OF THE DEPARTMENT OF PUBLIC
30 HEALTH AND ENVIRONMENT;

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

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

35 (V) A MEMBER, APPOINTED BY THE DIRECTOR OF THE COLORADO
36 ENERGY OFFICE, REPRESENTING AN ENVIRONMENTAL ADVOCACY
37 ORGANIZATION WITH:

38 (A) A FOCUS ON THE REDUCTION OF GREENHOUSE GAS EMISSIONS;
39 AND

40 (B) EXPERIENCE WITH CARBON REMOVAL AND SEQUESTRATION
41 SOLUTIONS;

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

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

3 (c) THE WORK GROUP ALSO CONSISTS OF THE FOLLOWING
4 MEMBERS, WHO SHALL PARTICIPATE IN THE WORK GROUP IN AN ADVISORY,
5 NONVOTING CAPACITY:

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

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

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

14 (IV) A MEMBER, APPOINTED BY THE DIRECTOR, REPRESENTING THE
15 FEDERAL BUREAU OF LAND MANAGEMENT WHO HAS KNOWLEDGE
16 CONCERNING:

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

19 (B) THE OPPORTUNITIES FOR OBTAINING FEDERAL FUNDING FOR
20 THE PILOT PROGRAM;

21 (V) A MEMBER WITH EXPERTISE IN PLUGGING AND ABANDONMENT
22 OPERATIONS AND METHANE MITIGATION FROM WELLBORES, APPOINTED BY
23 THE DIRECTOR;

24 (VI) A MEMBER OF THE ENVIRONMENTAL JUSTICE ADVISORY
25 BOARD, APPOINTED BY THE CHAIR OF THE ENVIRONMENTAL JUSTICE
26 ADVISORY BOARD; AND

27 (VII) A MEMBER REPRESENTING THE INTERESTS OF
28 DISPROPORTIONATELY IMPACTED COMMUNITIES, AS DEFINED IN SECTION
29 24-4-109 (2)(b)(II), APPOINTED BY THE CHAIR OF THE ENVIRONMENTAL
30 JUSTICE ADVISORY BOARD.

31 (d) THE APPOINTING AUTHORITIES SHALL MAKE ALL
32 APPOINTMENTS TO THE WORK GROUP NO LATER THAN JULY 1, 2023. THE
33 MEMBERS OF THE WORK GROUP SERVE WITHOUT COMPENSATION BUT
34 SHALL BE REIMBURSED FOR EXPENSES INCURRED BY THEM IN THE
35 PERFORMANCE OF THEIR OFFICIAL DUTIES.

36 (e) THE WORK GROUP SHALL CONDUCT MEETINGS AS OFTEN AS
37 NECESSARY TO PERFORM THE WORK GROUP'S DUTIES PURSUANT TO THIS
38 SECTION, INCLUDING CONSULTING AND COORDINATING WITH THE
39 UNIVERSITY ON THE UNIVERSITY'S DUTIES PURSUANT TO THIS SECTION.

40 (3) (a) THE UNIVERSITY SHALL:

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

43 (A) LOWER GREENHOUSE GAS EMISSIONS;

1 (B) LOWER CHEMICAL LEAKS;
2 (C) REMOVE AND SEQUESTER CARBON;
3 (D) LOWER THE CARBON FOOTPRINT IN CEMENT;
4 (E) ADD STRENGTH TO CEMENT; AND
5 (F) BIND CHEMICALS SUCH AS METHANE, BENZENE, AND CARBON
6 DIOXIDE FROM FUGITIVE EMISSIONS;
7 (II) REVIEW ANY APPLICABLE FEDERAL LAWS AND LAWS OF OTHER
8 STATES THAT ADDRESS THE USE OF BIOCHAR IN THE PLUGGING OF OIL AND
9 GAS WELLS;
10 (III) CONDUCT DESK RESEARCH RELATED TO BIOCHAR, INCLUDING
11 GEOMECHANICAL MODELING AND CALCULATIONS TO LIMIT VARIABLES;
12 (IV) CONDUCT LABORATORY RESEARCH, INCLUDING RESEARCH TO
13 CHARACTERIZE:
14 (A) THE MECHANICAL STRENGTH, PERMEABILITY, PORE
15 STRUCTURE, AND GAS ABSORPTION OF BIOCHAR;
16 (B) THE GEOCHEMICAL REACTION OF BIOCHAR WITH WATER FROM
17 AN UNDERGROUND FORMATION; AND
18 (C) THE CHEMICAL REACTION OF BIOCHAR WITH CEMENT USED IN
19 THE PLUGGING OF OIL AND GAS WELLS;
20 (V) EVALUATE WHETHER ANY FEDERAL OR STATE PROGRAMS OR
21 PRIVATE ENTITIES COULD PROVIDE FUNDING FOR THE PILOT PROGRAM;
22 (VI) ASSESS THE COSTS ASSOCIATED WITH USING BIOCHAR IN THE
23 PLUGGING OF AN OIL AND GAS WELL;
24 (VII) DETERMINE THE AMOUNT OF BIOCHAR THAT IS AVAILABLE
25 FOR USE IN THE STATE;
26 (VIII) EXAMINE WHETHER THE USE OF BIOCHAR IN THE PLUGGING
27 OF OIL AND GAS WELLS IS CONSISTENT WITH THE STATE'S SHORT-TERM AND
28 LONG-TERM GREENHOUSE GAS AND POLLUTION REDUCTION GOALS, AS SET
29 FORTH IN SECTION 25-7-102 (2)(g), TAKING INTO CONSIDERATION THE
30 EMISSIONS OF GREENHOUSE GASES AND OTHER POLLUTANTS CAUSED BY
31 THE PRODUCTION OF BIOCHAR AND THE USE OF BIOCHAR IN THE PLUGGING
32 OF OIL AND GAS WELLS; AND
33 (IX) DETERMINE WHETHER THE USE OF BIOCHAR WHEN PLUGGING
34 AN OIL AND GAS WELL:
35 (A) COULD, WITH VERIFIED NET PERMANENT REMOVAL OF
36 ATMOSPHERIC CARBON AS ESTABLISHED ACCORDING TO
37 INTERNATIONALLY RECOGNIZED STANDARDS, ALLOW AN OPERATOR OR
38 OTHER PERSON PLUGGING AN OIL AND GAS WELL TO RECEIVE LEGITIMATE
39 CARBON CREDITS OR OFFSETS;
40 (B) WOULD REQUIRE ANY CHANGES TO STATE LAW TO ALLOW THE
41 USE OF BIOCHAR IN THE PLUGGING OF AN OIL AND GAS WELL OR TO ALLOW
42 A STATE AGENCY TO COORDINATE WITH APPLICABLE FEDERAL AGENCIES
43 AND OTHER ENTITIES IN THE IMPLEMENTATION OF THE PILOT PROGRAM;

1 AND

2 (C) WOULD COMPLY, IN THE CASE OF PLUGGING AN OIL AND GAS

3 WELL OWNED BY THE UNITED STATES OR A TRIBAL LAND TRUST, WITH

4 FEDERAL LAW OR ANY OTHER APPLICABLE LAW.

5 (b) IN PERFORMING ITS DUTIES PURSUANT TO SUBSECTION (3)(a)

6 OF THIS SECTION, THE UNIVERSITY SHALL UTILIZE ANY APPLICABLE

7 EXISTING FEDERAL, STATE, OR LOCAL PROGRAMS OR FUNDING AND MAY

8 COORDINATE AND CONSULT WITH OTHER INSTITUTIONS OF HIGHER

9 EDUCATION.

10 (4) (a) NO LATER THAN MARCH 1, 2024, THE UNIVERSITY SHALL

11 PROVIDE AN UNOFFICIAL PROGRESS REPORT OF ITS FINDINGS PURSUANT TO

12 SUBSECTION (3)(a) OF THIS SECTION TO THE WORK GROUP.

13 (b) NO LATER THAN JUNE 1, 2024, THE UNIVERSITY SHALL PROVIDE

14 AN OFFICIAL REPORT OF ITS FINDINGS PURSUANT TO SUBSECTION (3)(a) OF

15 THIS SECTION TO THE WORK GROUP. IF, BASED ON THE REPORT, THE WORK

16 GROUP DETERMINES THAT A PILOT PROGRAM TO STUDY THE USE OF

17 BIOCHAR IN THE PLUGGING OF OIL AND GAS WELLS WOULD HAVE A

18 POSITIVE IMPACT ON THE HEALTH, SAFETY, AND WELFARE OF THE STATE

19 AND WOULD BE CONSISTENT WITH THE STATE'S SHORT-TERM AND

20 LONG-TERM GREENHOUSE GAS AND POLLUTION REDUCTION GOALS, AS SET

21 FORTH IN SECTION 25-7-102 (2)(g), THE WORK GROUP SHALL, NO LATER

22 THAN AUGUST 1, 2024, DIRECT THE UNIVERSITY TO MAKE

23 RECOMMENDATIONS REGARDING THE DEVELOPMENT OF THE PILOT

24 PROGRAM.

25 (c) THE RECOMMENDATIONS PURSUANT TO SUBSECTION (4)(b) OF

26 THIS SECTION MUST INCLUDE RECOMMENDATIONS REGARDING A PLAN TO:

27 (I) DEVELOP STANDARDS FOR:

28 (A) USING BIOCHAR IN THE PLUGGING OF THE SELECTED OIL AND

29 GAS WELLS; AND

30 (B) MONITORING THE EMISSIONS OF THE SELECTED OIL AND GAS

31 WELLS;

32 (II) SELECT OIL AND GAS WELLS WHERE AN OPERATOR OR OTHER

33 PERSON PLUGGING AN OIL AND GAS WELL WILL USE BIOCHAR WHEN

34 PLUGGING THE WELL IN ACCORDANCE WITH THE STANDARDS DEVELOPED

35 PURSUANT TO SUBSECTION (4)(c)(I)(A) OF THIS SECTION; AND

36 (III) CONTINUE, AFTER THE SELECTED OIL AND GAS WELLS ARE

37 PLUGGED, TO:

38 (A) MONITOR EMISSIONS FROM THE SELECTED OIL AND GAS WELLS

39 IN ACCORDANCE WITH THE STANDARDS DEVELOPED PURSUANT TO

40 SUBSECTION (4)(c)(I)(B) OF THIS SECTION;

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

42 AND

43 (C) CONDUCT LABORATORY TESTING ON THE SELECTED OIL AND

1 GAS WELLS TO DETERMINE THE ABILITY OF BIOCHAR TO ABSORB OR
2 ADSORB METHANE AND OTHER CHEMICALS FOUND IN A PLUGGED OIL AND
3 GAS WELL AND TO DETERMINE THE BEST ESTIMATE OF THE LONG-TERM
4 DURABILITY OF BIOCHAR WHEN USED IN THE PLUGGING OF AN OIL AND GAS
5 WELL.

6 (d) THE RECOMMENDATIONS PURSUANT TO SUBSECTION (4)(b) OF
7 THIS SECTION MUST INCLUDE, AT A MINIMUM, RECOMMENDATIONS
8 REGARDING:

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

10 (II) THE DURATION OF THE PILOT PROGRAM;

11 (III) A DETAILED PLAN FOR THE IMPLEMENTATION OF THE PILOT
12 PROGRAM, INCLUDING RECOMMENDATIONS REGARDING A STATE AGENCY
13 TO ADMINISTER THE PILOT PROGRAM;

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

17 (V) A PROCESS FOR REPORTING THE FINDINGS OF THE PILOT
18 PROGRAM.

19 (5) NO LATER THAN DECEMBER 1, 2024, THE UNIVERSITY SHALL
20 SUBMIT A DRAFT REPORT DESCRIBING ITS RECOMMENDATIONS FOR THE
21 DEVELOPMENT OF A PILOT PROGRAM PURSUANT TO SUBSECTIONS (4)(b),
22 (4)(c), AND (4)(d) OF THIS SECTION TO THE WORK GROUP. NO LATER THAN
23 DECEMBER 15, 2024, THE UNIVERSITY SHALL:

24 (a) IN CONSULTATION WITH THE WORK GROUP, CREATE A FINAL
25 REPORT THAT INCORPORATES THE WORK GROUP'S COMMENTS REGARDING
26 THE DRAFT REPORT; AND

27 (b) PROVIDE A COPY OF THE FINAL REPORT TO THE DIRECTOR.

28 (6) THE DIRECTOR SHALL POST A COPY OF THE FINAL REPORT
29 DESCRIBED IN SUBSECTION (5)(b) OF THIS SECTION ON THE COMMISSION'S
30 WEBSITE.

31 (7) THIS SECTION IS REPEALED, EFFECTIVE SEPTEMBER 1, 2025.

32 **SECTION 3. Safety clause.** The general assembly hereby finds,
33 determines, and declares that this act is necessary for the immediate
34 preservation of the public peace, health, or safety."

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