

HOUSE BILL 1007

C5, M5

1r1460
CF 1r2451

By: **Delegate Charkoudian**

Introduced and read first time: February 5, 2021

Assigned to: Economic Matters

A BILL ENTITLED

1 AN ACT concerning

2 **Renewable Energy Portfolio Standard and Geothermal Heating and Cooling**
3 **Systems**

4 FOR the purpose of altering the renewable energy portfolio standard in certain years to
5 require a certain percentage of energy from Tier 1 renewable sources each year to be
6 derived from certain geothermal heating and cooling systems; requiring a certain
7 percentage of energy required to be derived from certain geothermal heating and
8 cooling systems to be from systems installed on certain property; clarifying that
9 energy from certain geothermal heating and cooling systems is eligible for inclusion
10 in meeting the renewable energy portfolio standard; specifying that certain
11 geothermal heating and cooling systems are eligible for inclusion in meeting the
12 renewable energy portfolio standard if the company installing the system meets
13 certain requirements; requiring the Public Service Commission to adopt certain
14 regulations; requiring certain electricity suppliers to pay certain compliance fees into
15 the Maryland Strategic Energy Investment Fund under certain circumstances;
16 requiring certain money in the Fund to be used only in a certain manner; requiring
17 the Commission to report to the General Assembly on or before certain dates on the
18 status of the implementation of geothermal heating and cooling systems in the State;
19 requiring the Maryland Energy Administration to conduct a certain study on
20 geothermal heating and cooling systems; providing for the content of the study;
21 authorizing the Administration to contract with a third party to conduct the study;
22 requiring the Administration to submit the results of the study to the Geothermal
23 Energy Workgroup on or before a certain date; establishing the Workgroup;
24 providing for the composition, chair, and staffing of the Workgroup; prohibiting a
25 member of the Workgroup from receiving certain compensation, but authorizing the
26 reimbursement of certain expenses; requiring the Workgroup to study and make
27 recommendations regarding certain matters; requiring the Administration, in
28 consultation with the Workgroup, to develop recommendations for a certain
29 incentive structure; requiring the Director of the Administration, or the Director's
30 designee, to report certain results, findings, and recommendations to the General
31 Assembly on or before a certain date; defining certain terms; and generally relating

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.



1 to the renewable energy portfolio standard and geothermal heating and cooling
2 systems.

3 BY repealing and reenacting, without amendments,
4 Article – Public Utilities
5 Section 7–701(a) through (c) and (s)
6 Annotated Code of Maryland
7 (2020 Replacement Volume and 2020 Supplement)

8 BY repealing and reenacting, with amendments,
9 Article – Public Utilities
10 Section 7–701(d), 7–703(b), 7–704(h), 7–705(b), and 7–712
11 Annotated Code of Maryland
12 (2020 Replacement Volume and 2020 Supplement)

13 BY adding to
14 Article – Public Utilities
15 Section 7–701(e–1) and (i–1), 7–703(f), and 7–705(b–1)
16 Annotated Code of Maryland
17 (2020 Replacement Volume and 2020 Supplement)

18 BY repealing and reenacting, without amendments,
19 Article – State Government
20 Section 9–20B–05(a) and (b)
21 Annotated Code of Maryland
22 (2014 Replacement Volume and 2020 Supplement)

23 BY adding to
24 Article – State Government
25 Section 9–20B–05(i–1)
26 Annotated Code of Maryland
27 (2014 Replacement Volume and 2020 Supplement)

28 SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,
29 That the Laws of Maryland read as follows:

30 **Article – Public Utilities**

31 7–701.

32 (a) In this subtitle the following words have the meanings indicated.

33 (b) “Administration” means the Maryland Energy Administration.

34 (c) “Fund” means the Maryland Strategic Energy Investment Fund established
35 under § 9–20B–05 of the State Government Article.

1 (d) “Geothermal heating and cooling system” means a system that:

2 (1) exchanges thermal energy from groundwater or a shallow ground
3 source to generate thermal energy through a geothermal heat pump or a system of
4 geothermal heat pumps interconnected with any geothermal extraction facility that is:

5 (i) a closed loop or a series of closed loop systems in which fluid is
6 permanently confined within a pipe or tubing and does not come in contact with the outside
7 environment; or

8 (ii) an open loop system in which ground or surface water is
9 circulated in an environmentally safe manner directly into the facility and returned to the
10 same aquifer or surface water source;

11 (2) meets or exceeds the current federal Energy Star product specification
12 standards;

13 (3) [replaces or displaces inefficient space or water heating systems whose
14 primary fuel is electricity or a nonnatural gas fuel source;

15 (4) replaces or displaces inefficient space cooling systems that do not meet
16 federal Energy Star product specification standards;

17 (5)] is manufactured, installed, and operated in accordance with applicable
18 government and industry standards; and

19 [(6)] (4) does not feed electricity back to the grid.

20 **(E-1) “LEGACY GEOTHERMAL SYSTEM” MEANS A GEOTHERMAL HEATING AND**
21 **COOLING SYSTEM THAT WAS PLACED IN SERVICE ON OR BEFORE DECEMBER 31,**
22 **2021.**

23 **(I-1) “POST-2021 GEOTHERMAL SYSTEM” MEANS A GEOTHERMAL HEATING**
24 **AND COOLING SYSTEM THAT IS PLACED IN SERVICE ON OR AFTER JANUARY 1, 2022.**

25 (s) “Tier 1 renewable source” means one or more of the following types of energy
26 sources:

27 (1) solar energy, including energy from photovoltaic technologies and solar
28 water heating systems;

29 (2) wind;

30 (3) qualifying biomass;

1 (4) methane from the anaerobic decomposition of organic materials in a
2 landfill or wastewater treatment plant;

3 (5) geothermal, including energy generated through geothermal exchange
4 from or thermal energy avoided by, groundwater or a shallow ground source;

5 (6) ocean, including energy from waves, tides, currents, and thermal
6 differences;

7 (7) a fuel cell that produces electricity from a Tier 1 renewable source
8 under item (3) or (4) of this subsection;

9 (8) a small hydroelectric power plant of less than 30 megawatts in capacity
10 that is licensed or exempt from licensing by the Federal Energy Regulatory Commission;

11 (9) poultry litter-to-energy;

12 (10) waste-to-energy;

13 (11) refuse-derived fuel; and

14 (12) thermal energy from a thermal biomass system.

15 7-703.

16 (b) Except as provided in [subsection (e)] **SUBSECTIONS (E) AND (F)** of this
17 section, the renewable energy portfolio standard shall be as follows:

18 (1) in 2006, 1% from Tier 1 renewable sources and 2.5% from Tier 2
19 renewable sources;

20 (2) in 2007, 1% from Tier 1 renewable sources and 2.5% from Tier 2
21 renewable sources;

22 (3) in 2008, 2.005% from Tier 1 renewable sources, including at least
23 0.005% derived from solar energy, and 2.5% from Tier 2 renewable sources;

24 (4) in 2009, 2.01% from Tier 1 renewable sources, including at least 0.01%
25 derived from solar energy, and 2.5% from Tier 2 renewable sources;

26 (5) in 2010, 3.025% from Tier 1 renewable sources, including at least
27 0.025% derived from solar energy, and 2.5% from Tier 2 renewable sources;

28 (6) in 2011, 5.0% from Tier 1 renewable sources, including at least 0.05%
29 derived from solar energy, and 2.5% from Tier 2 renewable sources;

1 (7) in 2012, 6.5% from Tier 1 renewable sources, including at least 0.1%
2 derived from solar energy, and 2.5% from Tier 2 renewable sources;

3 (8) in 2013, 8.2% from Tier 1 renewable sources, including at least 0.25%
4 derived from solar energy, and 2.5% from Tier 2 renewable sources;

5 (9) in 2014, 10.3% from Tier 1 renewable sources, including at least 0.35%
6 derived from solar energy, and 2.5% from Tier 2 renewable sources;

7 (10) in 2015, 10.5% from Tier 1 renewable sources, including at least 0.5%
8 derived from solar energy, and 2.5% from Tier 2 renewable sources;

9 (11) in 2016, 12.7% from Tier 1 renewable sources, including at least 0.7%
10 derived from solar energy, and 2.5% from Tier 2 renewable sources;

11 (12) in 2017:

12 (i) 13.1% from Tier 1 renewable sources, including:

13 1. at least 1.15% derived from solar energy; and

14 2. an amount set by the Commission under § 7-704.2(a) of
15 this subtitle, not to exceed 2.5%, derived from offshore wind energy; and

16 (ii) 2.5% from Tier 2 renewable sources;

17 (13) in 2018:

18 (i) 15.8% from Tier 1 renewable sources, including:

19 1. at least 1.5% derived from solar energy; and

20 2. an amount set by the Commission under § 7-704.2(a) of
21 this subtitle, not to exceed 2.5%, derived from offshore wind energy; and

22 (ii) 2.5% from Tier 2 renewable sources;

23 (14) in 2019:

24 (i) 20.7% from Tier 1 renewable sources, including:

25 1. at least 5.5% derived from solar energy; and

26 2. an amount set by the Commission under § 7-704.2(a) of
27 this subtitle, not to exceed 2.5%, derived from offshore wind energy; and

28 (ii) 2.5% from Tier 2 renewable sources;

1 (15) in 2020:

2 (i) 28% from Tier 1 renewable sources, including:

3 1. at least 6% derived from solar energy; and

4 2. an amount set by the Commission under § 7–704.2(a) of
5 this subtitle, not to exceed 2.5%, derived from offshore wind energy; and

6 (ii) 2.5% from Tier 2 renewable sources;

7 (16) in 2021, 30.8% from Tier 1 renewable sources, including:

8 (i) at least 7.5% derived from solar energy; and

9 (ii) an amount set by the Commission under § 7–704.2(a) of this
10 subtitle derived from offshore wind energy;

11 (17) in 2022, 33.1% from Tier 1 renewable sources, including:

12 (i) at least 8.5% derived from solar energy; [and]

13 (ii) an amount set by the Commission under § 7–704.2(a) of this
14 subtitle derived from offshore wind energy; AND

15 **(III) AT LEAST 0.15% DERIVED FROM POST–2021 GEOTHERMAL**
16 **SYSTEMS;**

17 (18) in 2023, 35.4% from Tier 1 renewable sources, including:

18 (i) at least 9.5% derived from solar energy; [and]

19 (ii) an amount set by the Commission under § 7–704.2(a) of this
20 subtitle derived from offshore wind energy; AND

21 **(III) AT LEAST 0.25% DERIVED FROM POST–2021 GEOTHERMAL**
22 **SYSTEMS;**

23 (19) in 2024, 37.7% from Tier 1 renewable sources, including:

24 (i) at least 10.5% derived from solar energy; [and]

25 (ii) an amount set by the Commission under § 7–704.2(a) of this
26 subtitle derived from offshore wind energy; AND

1 **(III) AT LEAST 0.50% DERIVED FROM POST-2021 GEOTHERMAL**
2 **SYSTEMS;**

3 (20) in 2025, 40% from Tier 1 renewable sources, including:

4 (i) at least 11.5% derived from solar energy; [and]

5 (ii) an amount set by the Commission under § 7-704.2(a) of this
6 subtitle, not to exceed 10%, derived from offshore wind energy; **AND**

7 **(III) AT LEAST 0.75% DERIVED FROM POST-2021 GEOTHERMAL**
8 **SYSTEMS;**

9 (21) in 2026, 42.5% from Tier 1 renewable sources, including:

10 (i) at least 12.5% derived from solar energy; [and]

11 (ii) an amount set by the Commission under § 7-704.2(a) of this
12 subtitle derived from offshore wind energy, including at least 400 megawatts of Round 2
13 offshore wind projects; **AND**

14 **(III) AT LEAST 1% DERIVED FROM POST-2021 GEOTHERMAL**
15 **SYSTEMS;**

16 (22) in 2027, 45.5% from Tier 1 renewable sources, including:

17 (i) at least 13.5% derived from solar energy; [and]

18 (ii) an amount set by the Commission under § 7-704.2(a) of this
19 subtitle derived from offshore wind energy, including at least 400 megawatts of Round 2
20 offshore wind projects; **AND**

21 **(III) AT LEAST 1% DERIVED FROM POST-2021 GEOTHERMAL**
22 **SYSTEMS;**

23 (23) in 2028, 47.5% from Tier 1 renewable sources, including:

24 (i) at least 14.5% derived from solar energy; [and]

25 (ii) an amount set by the Commission under § 7-704.2(a) of this
26 subtitle derived from offshore wind energy, including at least 800 megawatts of Round 2
27 offshore wind projects; **AND**

28 **(III) AT LEAST 1% DERIVED FROM POST-2021 GEOTHERMAL**
29 **SYSTEMS;**

1 (24) in 2029, 49.5% from Tier 1 renewable sources, including:

2 (i) at least 14.5% derived from solar energy; [and]

3 (ii) an amount set by the Commission under § 7-704.2(a) of this
4 subtitle derived from offshore wind energy, including at least 800 megawatts of Round 2
5 offshore wind projects; and

6 **(III) AT LEAST 1% DERIVED FROM POST-2021 GEOTHERMAL**
7 **SYSTEMS; AND**

8 (25) in 2030 and later, 50% from Tier 1 renewable sources, including:

9 (i) at least 14.5% derived from solar energy; [and]

10 (ii) an amount set by the Commission under § 7-704.2(a) of this
11 subtitle derived from offshore wind energy, including at least 1,200 megawatts of Round 2
12 offshore wind projects; AND

13 **(III) AT LEAST 1% DERIVED FROM POST-2021 GEOTHERMAL**
14 **SYSTEMS.**

15 **(F) (1) (I) IN THIS SUBSECTION THE FOLLOWING WORDS HAVE THE**
16 **MEANINGS INDICATED.**

17 **(II) "AREA MEDIAN INCOME" HAS THE MEANING STATED IN**
18 **§ 4-1801 OF THE HOUSING AND COMMUNITY DEVELOPMENT ARTICLE.**

19 **(III) "LOW OR MODERATE INCOME HOUSING" MEANS HOUSING**
20 **THAT IS AFFORDABLE FOR A HOUSEHOLD WITH AN AGGREGATE ANNUAL INCOME**
21 **THAT IS BELOW 120% OF THE AREA MEDIAN INCOME.**

22 **(2) AT LEAST 25% OF THE REQUIRED PERCENTAGE OF THE**
23 **RENEWABLE ENERGY PORTFOLIO FOR EACH YEAR AS SET FORTH IN SUBSECTION (B)**
24 **OF THIS SECTION DERIVED FROM POST-2021 GEOTHERMAL SYSTEMS SHALL BE**
25 **DERIVED FROM SYSTEMS THAT WERE INSTALLED:**

26 **(I) AT SINGLE OR MULTIFAMILY HOUSING UNITS THAT**
27 **QUALIFIED AS LOW OR MODERATE INCOME HOUSING ON THE DATE THE SYSTEM WAS**
28 **INSTALLED ON THE PROPERTY; OR**

29 **(II) AT INSTITUTIONS THAT PRIMARILY SERVE LOW AND**
30 **MODERATE INCOME INDIVIDUALS AND FAMILIES, INCLUDING:**

1 **1. SCHOOLS WITH A MAJORITY OF STUDENTS WHO ARE**
2 **ELIGIBLE FOR FREE AND REDUCED PRICE MEALS;**

3 **2. HOSPITALS WITH A MAJORITY OF PATIENTS ELIGIBLE**
4 **FOR FINANCIAL ASSISTANCE OR WHO ARE ENROLLED IN MEDICAID; AND**

5 **3. OTHER INSTITUTIONS THAT SERVE INDIVIDUALS AND**
6 **FAMILIES WHERE THE MAJORITY OF THOSE SERVED ARE ELIGIBLE BASED ON**
7 **INCOME FOR FEDERAL OR STATE SAFETY NET PROGRAMS.**

8 7–704.

9 (h) (1) [Energy] **EXCEPT AS PROVIDED IN PARAGRAPH (6) OF THIS**
10 **SUBSECTION, ENERGY** from a geothermal heating and cooling system, **INCLUDING**
11 **ENERGY FROM A LEGACY GEOTHERMAL SYSTEM AND ENERGY FROM A POST–2021**
12 **GEOTHERMAL SYSTEM,** is eligible for inclusion in meeting the renewable energy portfolio
13 standard.

14 (2) A person shall receive a renewable energy credit equal to the amount of
15 energy, converted from BTUs to kilowatt–hours, that is generated by a geothermal heating
16 and cooling system for space heating and cooling or water heating if the person:

17 (i) owns and operates the system;

18 (ii) leases and operates the system; or

19 (iii) contracts with a third party who owns and operates the system.

20 (3) To determine the energy savings of a geothermal heating and cooling
21 system for a residence, the Commission shall:

22 (i) identify available Internet–based energy consumption
23 calculators developed by the geothermal heating and cooling industry;

24 (ii) collect the following data provided in the renewable energy credit
25 application that:

26 1. describes the name of the applicant and the address at
27 which the geothermal heating and cooling system is installed; and

28 2. provides the annual BTU energy savings attributable to
29 home heating, cooling, and water heating; and

1 (iii) in determining the annual amount of renewable energy credits
2 awarded for the geothermal heating and cooling system, convert the annual BTUs into
3 annual megawatt hours.

4 (4) To determine the energy savings of a nonresidential geothermal
5 heating and cooling system, the Commission shall:

6 (i) use the geothermal heating and cooling engineering technical
7 system designs provided with the renewable energy credit application; and

8 (ii) in determining the annual amount of renewable energy credits
9 awarded for the geothermal heating and cooling system, convert the annual BTUs into
10 annual megawatt hours.

11 (5) A geothermal heating and cooling system shall be installed in
12 accordance with applicable State well construction and local building code standards.

13 **(6) (I) A POST-2021 GEOTHERMAL SYSTEM WITH A 360,000 BTU**
14 **CAPACITY IS ELIGIBLE FOR INCLUSION IN MEETING THE RENEWABLE ENERGY**
15 **PORTFOLIO STANDARD ONLY IF, AT THE TIME OF INSTALLATION, THE COMPANY**
16 **INSTALLING THE SYSTEM IS CERTIFIED BY THE COMMISSION AS PROVIDING FOR ITS**
17 **EMPLOYEES:**

18 **1. FAMILY-SUSTAINING WAGES;**

19 **2. EMPLOYER-PROVIDED HEALTH CARE WITH**
20 **AFFORDABLE DEDUCTIBLES AND CO-PAYS;**

21 **3. CAREER ADVANCEMENT TRAINING, AS PROVIDED IN**
22 **SUBPARAGRAPH (II) OF THIS PARAGRAPH;**

23 **4. FAIR SCHEDULING;**

24 **5. EMPLOYER-PAID WORKERS' COMPENSATION AND**
25 **UNEMPLOYMENT INSURANCE;**

26 **6. A RETIREMENT PLAN;**

27 **7. PAID TIME OFF; AND**

28 **8. THE RIGHT TO BARGAIN COLLECTIVELY FOR WAGES**
29 **AND BENEFITS.**

30 **(II) AS PART OF THE CAREER ADVANCEMENT TRAINING THE**
31 **INSTALLATION COMPANY PROVIDES, THE COMPANY SHALL ENSURE THAT A**

1 MINIMUM OF 10% OF THE EMPLOYEES WORKING ON THE INSTALLATION ARE
2 ENROLLED IN AN APPRENTICESHIP PROGRAM APPROVED BY AND REGISTERED WITH
3 THE STATE OR THE FEDERAL GOVERNMENT.

4 (III) THE COMMISSION SHALL ADOPT REGULATIONS PROVIDING
5 FOR THE CERTIFICATION OF INSTALLATION COMPANIES IN ACCORDANCE WITH THIS
6 PARAGRAPH.

7 7-705.

8 (b) (1) This subsection does not apply to a shortfall from the required Tier 1
9 renewable sources that is to be derived from:

10 (I) offshore wind energy; OR

11 (II) POST-2021 GEOTHERMAL SYSTEMS.

12 (2) If an electricity supplier fails to comply with the renewable energy
13 portfolio standard for the applicable year, the electricity supplier shall pay into the
14 Maryland Strategic Energy Investment Fund established under § 9-20B-05 of the State
15 Government Article:

16 (i) except as provided in item (ii) of this paragraph, a compliance fee
17 of:

18 1. the following amounts for each kilowatt-hour of shortfall
19 from required Tier 1 renewable sources other than the shortfall from the required Tier 1
20 renewable sources that is to be derived from solar energy:

21 A. 4 cents through 2016;

22 B. 3.75 cents in 2017 and 2018;

23 C. 3 cents in 2019 through 2023;

24 D. 2.75 cents in 2024;

25 E. 2.5 cents in 2025;

26 F. 2.475 cents in 2026;

27 G. 2.45 cents in 2027;

28 H. 2.25 cents in 2028 and 2029; and

29 I. 2.235 cents in 2030 and later;

- 1 C. 0.4 cents in 2011 and 2012;
- 2 D. 0.3 cents in 2013 and 2014;
- 3 E. 0.25 cents in 2015 and 2016; and
- 4 F. except as provided in paragraph (3) of this subsection, 0.2
5 cents in 2017 and later; and
- 6 2. nothing for any shortfall from required Tier 2 renewable
7 sources.

8 (3) For industrial process load, the compliance fee for each kilowatt-hour
9 of shortfall from required Tier 1 renewable sources is:

- 10 (i) 0.1 cents in any year during which suppliers are required to
11 purchase ORECs under § 7-704.2 of this subtitle; and
- 12 (ii) nothing for the year following any year during which, after final
13 calculations, the net rate impact per megawatt-hour from Round 1 offshore wind projects
14 exceeded \$1.65 in 2012 dollars.

15 **(B-1) IF AN ELECTRICITY SUPPLIER FAILS TO COMPLY WITH THE RENEWABLE**
16 **ENERGY PORTFOLIO STANDARD THAT IS REQUIRED TO BE DERIVED FROM**
17 **POST-2021 GEOTHERMAL SYSTEMS FOR THE APPLICABLE YEAR, THE ELECTRICITY**
18 **SUPPLIER SHALL PAY INTO THE MARYLAND STRATEGIC ENERGY INVESTMENT**
19 **FUND ESTABLISHED UNDER § 9-20B-05 OF THE STATE GOVERNMENT ARTICLE A**
20 **COMPLIANCE FEE OF:**

- 21 **(1) 10 CENTS IN 2022 AND 2023;**
- 22 **(2) 9 CENTS IN 2024;**
- 23 **(3) 8 CENTS IN 2025; AND**
- 24 **(4) 6.5 CENTS IN 2026 AND LATER.**

25 7-712.

26 **(A)** Subject to § 2-1257 of the State Government Article, on or before December 1
27 of each year the Commission shall report to the General Assembly on the status of
28 implementation of this subtitle, including the availability of Tier 1 renewable sources,
29 projects supported by the Fund, and other pertinent information.

1 **(B) SUBJECT TO § 2–1257 OF THE STATE GOVERNMENT ARTICLE, ON OR**
2 **BEFORE DECEMBER 1, 2021, AND ON OR BEFORE DECEMBER 1, 2022, THE**
3 **COMMISSION SHALL REPORT TO THE GENERAL ASSEMBLY ON THE STATUS OF THE**
4 **IMPLEMENTATION OF GEOTHERMAL HEATING AND COOLING SYSTEMS IN THE**
5 **STATE, INCLUDING:**

6 **(1) THE NUMBER OF GEOTHERMAL HEATING AND COOLING SYSTEMS**
7 **CURRENTLY IN OPERATION;**

8 **(2) AN ANALYSIS OF THE COST AND FEASIBILITY OF INCREASING**
9 **STATE INCENTIVES TO PROMOTE THE USE OF GEOTHERMAL HEATING AND COOLING**
10 **SYSTEMS; AND**

11 **(3) AN ASSESSMENT OF BEST PRACTICES DESIGNED TO CREATE**
12 **INCENTIVES FOR THE USE OF GEOTHERMAL HEATING AND COOLING SYSTEMS.**

13 **Article – State Government**

14 9–20B–05.

15 (a) There is a Maryland Strategic Energy Investment Fund.

16 (b) The purpose of the Fund is to implement the Strategic Energy Investment
17 Program.

18 **(I–1) (1) (i) IN THIS SUBSECTION THE FOLLOWING WORDS HAVE THE**
19 **MEANINGS INDICATED.**

20 **(ii) “AREA MEDIAN INCOME” HAS THE MEANING STATED IN §**
21 **4–1801 OF THE HOUSING AND COMMUNITY DEVELOPMENT ARTICLE.**

22 **(iii) “LOW AND MODERATE INCOME” MEANS HAVING AN ANNUAL**
23 **HOUSEHOLD INCOME THAT IS AT OR BELOW 120% OF THE AREA MEDIAN INCOME.**

24 **(2) COMPLIANCE FEES PAID UNDER § 7–705(B–1) OF THE PUBLIC**
25 **UTILITIES ARTICLE SHALL BE ACCOUNTED FOR SEPARATELY WITHIN THE FUND**
26 **AND MAY BE USED ONLY TO MAKE LOANS AND GRANTS TO SUPPORT THE CREATION**
27 **OF NEW GEOTHERMAL HEATING AND COOLING SYSTEMS IN THE STATE THAT ARE**
28 **OWNED BY OR DIRECTLY BENEFIT LOW AND MODERATE INCOME RESIDENTS OF THE**
29 **STATE.**

30 SECTION 2. AND BE IT FURTHER ENACTED, That:

1 (a) (1) The Maryland Energy Administration shall conduct a comprehensive
2 technical study on:

3 (i) the status of geothermal heating and cooling systems in the
4 State; and

5 (ii) the potential impact of expanding and incentivizing the use of
6 geothermal heating and cooling systems in the State.

7 (2) The study shall include:

8 (i) the number of geothermal heating and cooling units currently
9 operating in the State;

10 (ii) the cost and feasibility of increasing the use of geothermal
11 heating and cooling systems in the State;

12 (iii) national and international best practices designed to incentivize
13 the use of geothermal heating and cooling systems;

14 (iv) the potential for geothermal heating and cooling systems to
15 reduce peak electricity demand;

16 (v) the potential reduction to all Maryland ratepayers in electricity
17 costs associated with the increased use of geothermal heating and cooling systems,
18 including savings from reduced peak electricity demand;

19 (vi) the economic benefits of increasing the use of geothermal heating
20 and cooling systems to the State;

21 (vii) the potential to aggregate geothermal renewable energy credits;

22 (viii) the potential greenhouse gas reductions resulting from the use of
23 geothermal heating and cooling systems;

24 (ix) the impact of geothermal heating and cooling systems on indoor
25 air quality and localized pollution;

26 (x) the life-cycle costs of public school buildings over a 50-year
27 period, including a comparison of the costs and energy efficiency associated with using
28 geothermal heating and cooling systems compared to traditional energy systems;

29 (xi) the potential for family-sustaining job creation resulting from
30 the expansion of geothermal heating and cooling systems in the State;

1 (xii) the potential to build neighborhood-scale district geothermal
2 systems or convert existing utility infrastructure so that it can provide geothermal heating
3 and cooling to an entire community; and

4 (xiii) any other factors related to expanding the use of geothermal
5 heating and cooling systems that the Maryland Energy Administration considers
6 necessary.

7 (3) The Maryland Energy Administration may contract with a third party
8 to conduct the study required under paragraph (1) of this subsection.

9 (4) The Maryland Energy Administration shall submit the results of the
10 study to the Geothermal Energy Workgroup on or before October 1, 2021.

11 (b) (1) There is a Geothermal Energy Workgroup.

12 (2) The Workgroup consists of the following members:

13 (i) at least one member of the Senate of Maryland, appointed by the
14 President of the Senate;

15 (ii) at least one member of the House of Delegates, appointed by the
16 Speaker of the House;

17 (iii) the Director of the Maryland Energy Administration, or the
18 Director's designee;

19 (iv) the following members, selected by the Maryland Energy
20 Administration:

21 1. at least one representative of an environmental advocacy
22 organization;

23 2. at least one representative of an environmental justice
24 organization;

25 3. at least one representative of the geothermal industry;

26 4. at least two representatives of labor organizations that
27 work or may work in the geothermal industry; and

28 5. at least one representative of a Maryland electric
29 company; and

30 (v) any other individuals considered necessary by the Maryland
31 Energy Administration.

1 (3) The Director of the Maryland Energy Administration, or the Director's
2 designee, shall chair the Workgroup.

3 (4) The Maryland Energy Administration shall provide staff for the
4 Workgroup.

5 (5) A member of the Workgroup:

6 (i) may not receive compensation as a member of the Workgroup;
7 but

8 (ii) is entitled to reimbursement for expenses under the Standard
9 State Travel Regulations, as provided in the State budget.

10 (6) The Workgroup shall:

11 (i) study the status and impact of increasing the use of geothermal
12 heating and cooling systems in the State;

13 (ii) examine methods for growing the geothermal industry in the
14 State, with a focus on increasing the use of geothermal heating and cooling systems in
15 environmental justice communities;

16 (iii) examine methods for ensuring that any jobs created in the
17 geothermal industry offer benefits and family-sustaining wages; and

18 (iv) develop recommendations for legislation that will encourage and
19 incentivize the use of geothermal heating and cooling systems in the State.

20 (c) (1) The Maryland Energy Administration, in consultation with the
21 Workgroup, shall develop recommendations for an incentive structure that will increase
22 the deployment of geothermal heating and cooling systems in Maryland.

23 (2) The incentives may include:

24 (i) grants;

25 (ii) loans;

26 (iii) EmPOWER Maryland rebates;

27 (iv) a carve-out in the State's renewable energy portfolio standard
28 for geothermal renewable energy credits; and

29 (v) tax credits.

1 (d) On or before December 1, 2021, the Director of the Maryland Energy
2 Administration, or the Director's designee, shall report to the General Assembly, in
3 accordance with § 2-1257 of the State Government Article, on:

4 (1) the results of the study under subsection (a) of this section;

5 (2) the Workgroup's findings and recommendations under subsection (b)(6)
6 of this section; and

7 (3) the incentive recommendations developed under subsection (c) of this
8 section.

9 SECTION 3. AND BE IT FURTHER ENACTED, That this Act shall take effect
10 October 1, 2021.