SENATE BILL 810

C5, M5 1lr2451
CF HB 1007

By: **Senator Feldman**
Introduced and read first time: February 9, 2021
Assigned to: Finance

A BILL ENTITLED

AN ACT concerning

Renewable Energy Portfolio Standard and Geothermal Heating and Cooling Systems

FOR the purpose of altering the renewable energy portfolio standard in certain years to require a certain percentage of energy from Tier 1 renewable sources each year to be derived from certain geothermal heating and cooling systems; requiring a certain percentage of energy required to be derived from certain geothermal heating and cooling systems to be from systems installed on certain property; clarifying that energy from certain geothermal heating and cooling systems is eligible for inclusion in meeting the renewable energy portfolio standard; specifying that certain geothermal heating and cooling systems are eligible for inclusion in meeting the renewable energy portfolio standard if the company installing the system meets certain requirements; requiring the Public Service Commission to adopt certain regulations; requiring certain electricity suppliers to pay certain compliance fees into the Maryland Strategic Energy Investment Fund under certain circumstances; requiring certain money in the Fund to be used only in a certain manner; requiring the Commission to report to the General Assembly on or before certain dates on the status of the implementation of geothermal heating and cooling systems in the State; requiring the Maryland Energy Administration to conduct a certain study on geothermal heating and cooling systems; providing for the content of the study; authorizing the Administration to contract with a third party to conduct the study; requiring the Administration to submit the results of the study to the Geothermal Energy Workgroup on or before a certain date; establishing the Workgroup; providing for the composition, chair, and staffing of the Workgroup; prohibiting a member of the Workgroup from receiving certain compensation, but authorizing the reimbursement of certain expenses; requiring the Workgroup to study and make recommendations regarding certain matters; requiring the Administration, in consultation with the Workgroup, to develop recommendations for a certain incentive structure; requiring the Director of the Administration, or the Director's designee, to report certain results, findings, and recommendations to the General 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.

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

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

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

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

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

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

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

Article – Public Utilities

7–701.

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

(b) "Administration" means the Maryland Energy Administration.

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

(d) "Geothermal heating and cooling system" means a system that:

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

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

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

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

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

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

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

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

(E–1) "LEGACY GEOTHERMAL SYSTEM" MEANS A GEOTHERMAL HEATING AND COOLING SYSTEM THAT WAS PLACED IN SERVICE ON OR BEFORE DECEMBER 31, 2021.

(I–1) "POST–2021 GEOTHERMAL SYSTEM" MEANS A GEOTHERMAL HEATING AND COOLING SYSTEM THAT IS PLACED IN SERVICE ON OR AFTER JANUARY 1, 2022.

(s) "Tier 1 renewable source" means one or more of the following types of energy sources:

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

(2) wind;

(3) qualifying biomass;

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

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

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

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

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

(9) poultry litter–to–energy;

(10) waste–to–energy;

(11) refuse–derived fuel; and

(12) thermal energy from a thermal biomass system.

7–703.

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

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

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

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

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

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

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

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

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

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

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

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

(12) in 2017:

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

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

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

(ii) 2.5% from Tier 2 renewable sources;

(13) in 2018:

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

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

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

(ii) 2.5% from Tier 2 renewable sources;

(14) in 2019:

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

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

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

(ii) 2.5% from Tier 2 renewable sources;

(15) in 2020:

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

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

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

(ii) 2.5% from Tier 2 renewable sources;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(III) AT LEAST 0.50% DERIVED FROM POST–2021 GEOTHERMAL SYSTEMS;

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

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

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

(III) AT LEAST 0.75% DERIVED FROM POST–2021 GEOTHERMAL SYSTEMS;

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

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

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

(III) AT LEAST 1% DERIVED FROM POST–2021 GEOTHERMAL SYSTEMS;

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

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

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

(III) AT LEAST 1% DERIVED FROM POST–2021 GEOTHERMAL SYSTEMS;

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

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

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

(III) AT LEAST 1% DERIVED FROM POST–2021 GEOTHERMAL SYSTEMS;

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

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

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

(III) AT LEAST 1% DERIVED FROM POST–2021 GEOTHERMAL SYSTEMS; AND

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

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

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

(III) AT LEAST 1% DERIVED FROM POST–2021 GEOTHERMAL SYSTEMS.

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

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

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

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

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

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

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

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

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

7–704.

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

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

(i) owns and operates the system;

(ii) leases and operates the system; or

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

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

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

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

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

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

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

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

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

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

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

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

1. FAMILY–SUSTAINING WAGES;

2. EMPLOYER–PROVIDED HEALTH CARE WITH AFFORDABLE DEDUCTIBLES AND CO–PAYS;

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

4. FAIR SCHEDULING;

5. EMPLOYER–PAID WORKERS' COMPENSATION AND UNEMPLOYMENT INSURANCE;

6. A RETIREMENT PLAN;

7. PAID TIME OFF; AND

8. THE RIGHT TO BARGAIN COLLECTIVELY FOR WAGES AND BENEFITS.

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

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

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

7–705.

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

(I) offshore wind energy**; OR**

(II) POST–2021 GEOTHERMAL SYSTEMS.

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

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

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

A. 4 cents through 2016;

B. 3.75 cents in 2017 and 2018;

C. 3 cents in 2019 through 2023;

D. 2.75 cents in 2024;

E. 2.5 cents in 2025;

F. 2.475 cents in 2026;

G. 2.45 cents in 2027;

H. 2.25 cents in 2028 and 2029; and

I. 2.235 cents in 2030 and later;

2. the following amounts for each kilowatt–hour of shortfall from required Tier 1 renewable sources that is to be derived from solar energy:

A. 45 cents in 2008;

B. 40 cents in 2009 through 2014;

C. 35 cents in 2015 and 2016;

D. 19.5 cents in 2017;

E. 17.5 cents in 2018;

F. 10 cents in 2019;

G. 10 cents in 2020;

H. 8 cents in 2021;

I. 6 cents in 2022;

J. 4.5 cents in 2023;

K. 4 cents in 2024;

L. 3.5 cents in 2025;

M. 3 cents in 2026;

N. 2.5 cents in 2027 and 2028;

O. 2.25 cents in 2029; and

P. 2.235 cents in 2030 and later; and

3. 1.5 cents for each kilowatt–hour of shortfall from required Tier 2 renewable sources; or

(ii) for industrial process load:

1. for each kilowatt–hour of shortfall from required Tier 1 renewable sources, a compliance fee of:

A. 0.8 cents in 2006, 2007, and 2008;

B. 0.5 cents in 2009 and 2010;

C. 0.4 cents in 2011 and 2012;

D. 0.3 cents in 2013 and 2014;

E. 0.25 cents in 2015 and 2016; and

F. except as provided in paragraph (3) of this subsection, 0.2 cents in 2017 and later; and

2. nothing for any shortfall from required Tier 2 renewable sources.

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

(i) 0.1 cents in any year during which suppliers are required to purchase ORECs under § 7–704.2 of this subtitle; and

(ii) nothing for the year following any year during which, after final calculations, the net rate impact per megawatt–hour from Round 1 offshore wind projects exceeded $1.65 in 2012 dollars.

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

(1) 10 CENTS IN 2022 AND 2023;

(2) 9 CENTS IN 2024;

(3) 8 CENTS IN 2025; AND

(4) 6.5 CENTS IN 2026 AND LATER.

7–712.

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

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

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

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

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

Article – State Government

9–20B–05.

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

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

(I–1) (1) (I) IN THIS SUBSECTION THE FOLLOWING WORDS HAVE THE MEANINGS INDICATED.

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

(III) "LOW AND MODERATE INCOME" MEANS HAVING AN ANNUAL HOUSEHOLD INCOME THAT IS AT OR BELOW 120% OF THE AREA MEDIAN INCOME.

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

SECTION 2. AND BE IT FURTHER ENACTED, That:

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

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

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

(2) The study shall include:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) The Workgroup consists of the following members:

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

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

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

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

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

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

3. at least one representative of the geothermal industry;

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

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

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

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

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

(5) A member of the Workgroup:

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

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

(6) The Workgroup shall:

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

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

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

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

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

(2) The incentives may include:

(i) grants;

(ii) loans;

(iii) EmPOWER Maryland rebates;

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

(v) tax credits.

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

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

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

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

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