#### C5

#### By: **Delegates Stein, Rudolph, Cane, and Beitzel** Introduced and read first time: February 8, 2013

Assigned to: Economic Matters

Committee Report: Favorable with amendments House action: Adopted Read second time: March 16, 2013

# CHAPTER \_\_\_\_\_

1 AN ACT concerning

# 2 Renewable Energy Portfolio Standard - Wood- and Plant-Derived Biomass 3 Systems

4

### <u>Thermal Energy – Task Force and Regulations</u>

 $\mathbf{5}$ FOR the purpose of providing that energy from a certain wood- and plant-derived 6 biomass system is eligible for inclusion in meeting the renewable energy 7 portfolio standard; providing that a person that owns a wood- and plant-derived biomass system shall receive a certain renewable energy credit 8 9 calculated in a certain manner; requiring the Public Service Commission to 10 adopt certain regulations for the metering, verification, and reporting of energy output from wood- and plant-derived biomass systems: providing that energy 11 produced by a wood- and plant-derived biomass system shall be eligible for 12inclusion in meeting the renewable energy portfolio standard for certain 13 compliance years; defining certain terms; altering certain definitions; providing 14 15for the effective date of this Act; and generally relating to the renewable energy portfolio standard and wood- and plant-derived biomass systems establishing 16 17the Maryland Thermal Renewable Energy Credit Task Force; providing for the 18 composition, chair, and staffing of the Task Force; prohibiting a member of the Task Force from receiving certain compensation, but authorizing the 1920reimbursement of certain expenses; requiring the Task Force to analyze how to restructure the renewable energy portfolio standard to incorporate certain 2122thermal energy sources; requiring the Task Force to make certain 23determinations and consider the impact of certain changes; requiring the Task 24Force to report its findings and recommendations to the Governor and the

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.

<u>Underlining</u> indicates amendments to bill.

Strike out indicates matter stricken from the bill by amendment or deleted from the law by amendment.



1	General Assembly on or before a certain date; providing for the termination of
2	the Task Force; requiring the Department of the Environment to publish certain
3	regulations to facilitate the commissioning of certain solid fuel boilers in th
4	State under certain circumstances; and generally relating to the establishmen
<b>5</b>	of the Maryland Thermal Renewable Energy Credit Task Force and th
6	regulation of thermal energy.
7	BY repealing and reenacting, with amendments,
8	Article – Public Utilities
9	Section 7–701
10	Annotated Code of Maryland
11	(2010 Replacement Volume and 2012 Supplement)
12	BY adding to
13	<u>Article – Public Utilities</u>
14	Section 7-704(j)
15	Annotated Code of Maryland
16	(2010 Replacement Volume and 2012 Supplement)
17	Preamble
18	WHEREAS, The General Assembly recognizes the importance of supportin
19	Maryland's efforts to produce energy, to the extent practicable, from in-Stat
20	resources in order to help meet the State's clean, renewable energy goals; and
21	WHEREAS, The General Assembly is committed to the promotion of th
22	<del>creation of green energy jobs in Maryland; and</del>
23	WHEREAS, The General Assembly also encourages the Department of Genera
24	Services to consider the use of renewable energy, including the use of biomass system
25	using wood- and plant-derived biomass sources, when developing procuremen
26	guidelines; now, therefore,
27	SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY O
28	MARYLAND, That:
29	(a) <u>There is a Maryland Thermal Renewable Energy Credit Task Force.</u>
30	(b) <u>The Task Force consists of the following 14 members:</u>
$\frac{31}{32}$	(1) one member of the Senate of Maryland, appointed by the Presiden of the Senate:
$\frac{33}{34}$	(2) <u>one member of the House of Delegates, appointed by the Speaker of the House;</u>
35	(3) the Director of the Maryland Energy Administration;

 $\mathbf{2}$ 

1		<u>(4)</u>	<u>the S</u>	ecretary of Natural Resources, or the Secretary's designee;
2		<u>(5)</u>	<u>the S</u>	ecretary of the Environment, or the Secretary's designee;
3		<u>(6)</u>	<u>the S</u>	ecretary of Agriculture, or the Secretary's designee;
45	Public Servi	<u>(7)</u> ce Con		Executive Director of the Technical Staff of the Maryland on, or the Executive Director's designee; and
6		<u>(8)</u>	<u>the fo</u>	llowing seven members, appointed by the Governor:
7			<u>(i)</u>	one representative of the solar industry;
8			<u>(ii)</u>	one representative of the animal–waste bioenergy industry;
9			<u>(iii)</u>	one representative of the geothermal industry;
10			<u>(iv)</u>	one representative of the forest products industry;
11			<u>(v)</u>	one representative from the Sustainable Forestry Council;
12 13	and		<u>(vi)</u>	one representative of the biomass thermal energy industry;
14			<u>(vii)</u>	one representative of the environmental community.
$\begin{array}{c} 15\\ 16\end{array}$	<u>(c)</u> the Task For		Directo	r of the Maryland Energy Administration shall be the chair of
17 18	<u>(d)</u> <u>Force.</u>	<u>The</u> I	Maryla	and Energy Administration shall provide staff for the Task
19	<u>(e)</u>	<u>A me</u>	<u>mber c</u>	of the Task Force:
20		<u>(1)</u>	<u>may </u>	not receive compensation as a member of the Task Force; but
$\begin{array}{c} 21 \\ 22 \end{array}$	<u>State Travel</u>	<u>(2)</u> Regu		titled to reimbursement for expenses under the Standard s, as provided in the State budget.
23	<u>(f)</u>	<u>In acc</u>	cordan	ce with subsection (g) of this section, the Task Force shall:
$24 \\ 25 \\ 26$			tle 7, 8	<u>vze how to restructure the renewable energy portfolio</u> Subtitle 7 of the Public Utilities Article to incorporate thermal g energy derived from wood–derived biomass;

	4 HOUSE BILL 1084
$\frac{1}{2}$	(2) <u>determine whether it is appropriate to create a separate</u> <u>compliance tier for thermal energy sources;</u>
$3 \\ 4 \\ 5$	(3) determine an appropriate method of awarding renewable energy credits for thermal energy sources, including energy derived from wood-derived biomass; and
$egin{array}{c} 6 \ 7 \ 8 \end{array}$	(4) <u>determine any other changes to State law that the Task Force</u> <u>deems appropriate to incorporate thermal energy sources in the renewable energy</u> <u>portfolio standard.</u>
9 10	(g) In conducting the analysis and determinations required under subsection (f) of this section, the Task Force shall consider the impact of any proposed changes on:
11	(1) the State's ability to:
12 13	(i) <u>meet the greenhouse gas reduction goal under § 2–1204 of</u> the Environment Article;
$\begin{array}{c} 14 \\ 15 \end{array}$	(ii) <u>achieve the goals set forth in the State's renewable energy</u> portfolio standards under § 7–703 of the Public Utilities Article; and
$\begin{array}{c} 16 \\ 17 \end{array}$	(iii) <u>utilize wood–derived biomass to help meet the State's</u> renewable energy goals, consistent with § 5–102 of the Natural Resources Article; and
18	(2) any other factor the Task Force deems appropriate.
19 20 21	(h) On or before December 31, 2013, the Task Force shall report its findings and recommendations to the Governor and, in accordance with § 2–1246 of the State Government Article, the General Assembly.
22 23 24 25 26	SECTION 2. AND BE IT FURTHER ENACTED, That the Department of the Environment shall publish by October 1, 2013, a proposed regulation revising COMAR 26.11.09.04 to facilitate the commissioning of small– to medium–scale solid fuel boilers in the State that meet environmental standards that the Department of the Environment deems appropriate.
$\begin{array}{c} 27\\ 28 \end{array}$	SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That the Laws of Maryland read as follows:
29	Article – Public Utilities
30	<del>7-701.</del>
31	(a) In this subtitle the following words have the meanings indicated.
32	(b) "Administration" means the Maryland Energy Administration.

1	<del>(c) "Fund" means the Maryland Strategic Energy Investment Fur</del>	<del>1d</del>
2	established under § 9–20B–05 of the State Government Article.	
3	(c-1) "Geothermal heating and cooling system" means a system that:	
4	(1) exchanges thermal energy from groundwater or a shallow ground	
<b>5</b>	source to generate thermal energy through a geothermal heat pump or a system	
6	geothermal heat pumps interconnected with any geothermal extraction facility that i	<del>8:</del>
7	(i) a closed loop or a series of closed loop systems in which flu	
8	is permanently confined within a pipe or tubing and does not come in contact with the	<del>ne</del>
9	outside environment; or	
10	(ii) an open loop system in which ground or surface water	
11	circulated in an environmentally safe manner directly into the facility and returned	ŧo
12	the same aquifer or surface water source;	
13	(2) meets or exceeds the current federal Energy Star produ	et
14	specification standards;	
15	(3) replaces or displaces inefficient space or water heating system	<del>ns</del>
16	whose primary fuel is electricity or a nonnatural gas fuel source;	
17	(4) replaces or displaces inefficient space cooling systems that do n	<del>.ot</del>
18	meet federal Energy Star product specification standards;	
19	(5) is manufactured, installed, and operated in accordance wi	th
20	applicable government and industry standards; and	
21	(6) does not feed electricity back to the grid.	
22	(d) "Industrial process load" means the consumption of electricity by	
23	manufacturing process at an establishment classified in the manufacturing sect	<del>or</del>
24	under the North American Industry Classification System, Codes 31 through 33.	
25	(e) "Old growth timber" means timber from a forest:	
26	(1) at least 5 acres in size with a preponderance of old trees, of which	
27	the oldest exceed at least half the projected maximum attainable age for the specie	<del>)8;</del>
28	and	
29	(2) that exhibits several of the following characteristics:	
30	(i) shade-tolerant species are present in all age and si	78
31	classes;	
	,	

	6 HOUSE BILL 1084
1	(ii) randomly distributed canopy gaps are present;
$\frac{2}{3}$	<del>(iii)</del> <del>a high degree of structural diversity characterized by</del> multiple growth layers reflecting a broad spectrum of ages is present;
45	<del>(iv)</del> an accumulation of dead wood of varying sizes and stages of decomposition accompanied by decadence in live dominant trees is present; and
6	(v) pit and mound topography can be observed.
7 8	<del>(f) "PJM region" means the control area administered by the PJM</del> Interconnection, Inc., as the area may change from time to time.
9 10 11	<del>(g)</del> " <del>Poultry litter" means the fecal and urinary excretions of poultry,</del> including wood shavings, sawdust, straw, rice hulls, and other bedding material for the disposition of manure.
$\begin{array}{c} 12 \\ 13 \end{array}$	(h) (1) "Qualifying biomass" means a nonhazardous, organic material that is available on a renewable or recurring basis, and is:
$\begin{array}{c} 14 \\ 15 \end{array}$	<del>(i)</del> waste material that is segregated from inorganic waste material and is derived from sources including:
$\frac{16}{17}$	<del>1.</del> <del>except for old growth timber, any of the following</del> <del>forest-related resources:</del>
18	A. mill-residue, except sawdust and wood shavings;
19	B. precommercial soft wood thinning;
20	<del>C.</del> <del>slash;</del>
21	<del>D.</del> brush; or
22	<del>E.</del> <del>yard waste;</del>
23	<del>2.</del> <del>a pallet, crate, or dunnage;</del>
$\begin{array}{c} 24\\ 25\\ 26\end{array}$	<del>3.</del> agricultural and silvicultural sources, including tree crops, vineyard materials, grain, legumes, sugar, and other crop by–products or <del>residues; or</del>
$\begin{array}{c} 27\\ 28 \end{array}$	4. <del>gas produced from the anaerobic decomposition of</del> animal waste or poultry waste; or
29 30	(ii) a plant that is cultivated exclusively for purposes of being used at a Tier 1 renewable source or a Tier 2 renewable source to produce electricity.

$\frac{1}{2}$	<del>(2)</del> this subsection th	<u>"Qualifying biomass" includes biomass listed in paragraph (1) of</u> nat is used for co-firing, subject to § 7–704(d) of this subtitle.
3	<del>(3)</del>	"Qualifying biomass" does not include:
4		(i) unsegregated solid waste or postconsumer wastepaper; or
5		(ii) an invasive exotic plant species.
6	<del>(h-1)</del> "The	ermal biomass system" means a system that:
7	(1)	uses:
8 9	associated beddir	(i) primarily animal manure, including poultry litter, and ng to generate thermal energy; and
10 11	<del>feedstock;</del>	(ii) food waste or qualifying biomass for the remainder of the
12	$\frac{(2)}{(2)}$	<del>is used in the State; and</del>
13 14	<del>(3)</del> <del>regulations, as de</del>	complies with all applicable State and federal statutes and statutes and statutes and statutes and statutes and
15	<del>(i)</del> <del>"Rer</del>	newable energy credit" or "credit" means a credit equal to the
$\frac{15}{16}$		newable energy credit" or "credit" means a credit equal to the nutes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL
	generation attrib	outes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL ALENT that is derived from a Tier 1 renewable source or a Tier 2
$\begin{array}{c} 16 \\ 17 \end{array}$	<del>generation attrib</del> ENERGY EQUIV	outes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL ALENT that is derived from a Tier 1 renewable source or a Tier 2
16 17 18	generation attrib ENERCY EQUIV renewable source	outes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located:
16 17 18 19	generation attrib ENERGY EQUIVA renewable source (1) (2)	outes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or
16 17 18 19 20	generation attrib ENERGY EQUIVA renewable source (1) (2)	ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a
16 17 18 19 20 21	generation attrib ENERGY EQUIVA renewable source (1) (2) control area that PJM region. (j) "Rer	ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a is adjacent to the PJM region, if the electricity is delivered into the
<ol> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> <li>24</li> </ol>	generation attrib ENERGY EQUIV renewable source (1) (2) control area that PJM region. (j) "Ren percentage of ele	ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a is adjacent to the PJM region, if the electricity is delivered into the newable energy portfolio standard" or "standard" means the ctricity sales at retail in the State that is to be derived from Tier 1
<ol> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> <li>24</li> <li>25</li> </ol>	generation attrib ENERGY EQUIVA renewable source (1) (2) control area that PJM region. (j) "Ren percentage of ele renewable source	ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a is adjacent to the PJM region, if the electricity is delivered into the
<ol> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> <li>24</li> </ol>	generation attrib ENERGY EQUIV renewable source (1) (2) control area that PJM region. (j) "Ren percentage of ele	ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a is adjacent to the PJM region, if the electricity is delivered into the newable energy portfolio standard" or "standard" means the ctricity sales at retail in the State that is to be derived from Tier 1
$     \begin{array}{r}       16 \\       17 \\       18 \\       19 \\       20 \\       21 \\       22 \\       23 \\       24 \\       25 \\       26 \\       27 \\     \end{array} $	generation attrib ENERGY EQUIVA renewable source (1) (2) control area that PJM region. (j) "Ren percentage of ele renewable source subtitle.	outes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a is adjacent to the PJM region, if the electricity is delivered into the newable energy portfolio standard" or "standard" means the ctricity sales at retail in the State that is to be derived from Tier 1 as and Tier 2 renewable sources in accordance with § 7-703(b) of this newable on-site generator" means a person who generates electricity
<ol> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> <li>24</li> <li>25</li> <li>26</li> <li>27</li> <li>28</li> </ol>	generation attrib ENERGY EQUIVA renewable source (1) (2) control area that PJM region. (i) "Ren percentage of ele renewable source subtitle. (k) "Ren on site from a Ti	nutes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a is adjacent to the PJM region, if the electricity is delivered into the newable energy portfolio standard" or "standard" means the ctricity sales at retail in the State that is to be derived from Tier 1 as and Tier 2 renewable sources in accordance with § 7-703(b) of this
$     \begin{array}{r}       16\\       17\\       18\\       19\\       20\\       21\\       22\\       23\\       24\\       25\\       26\\       27\\       28\\       29\\       \end{array} $	generation attrib ENERGY EQUIVA renewable source (1) (2) control area that PJM region. (j) "Ren percentage of ele renewable source subtitle. (k) "Ren on site from a Ti own use.	nutes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL ALENT that is derived from a Tier 1 renewable source or a Tier 2 -that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a -is adjacent to the PJM region, if the electricity is delivered into the newable energy portfolio standard" or "standard" means the ctricity sales at retail in the State that is to be derived from Tier 1 as and Tier 2 renewable sources in accordance with § 7–703(b) of this newable on site generator" means a person who generates electricity for 1 renewable source or a Tier 2 renewable source for the person's
<ol> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> <li>24</li> <li>25</li> <li>26</li> <li>27</li> <li>28</li> </ol>	generation attrib ENERGY EQUIVA renewable source (1) (2) control area that PJM region. (j) "Rea percentage of ele renewable source subtitle. (k) "Rea on site from a Ti own use. (k-1) "Rea	outes of 1 megawatt-hour of electricity OR RENEWABLE THERMAL ALENT that is derived from a Tier 1 renewable source or a Tier 2 that is located: in the PJM region; or outside the area described in item (1) of this subsection but in a is adjacent to the PJM region, if the electricity is delivered into the newable energy portfolio standard" or "standard" means the ctricity sales at retail in the State that is to be derived from Tier 1 as and Tier 2 renewable sources in accordance with § 7-703(b) of this newable on-site generator" means a person who generates electricity

8

$egin{array}{c} 1 \\ 2 \\ 3 \\ 4 \end{array}$	ENERGY CALCULATED BY DIVIDING THE HEAT CONTENT, MEASURED IN BTUS, OF THE RENEWABLE THERMAL ENERGY AT THE POINT OF TRANSFER TO A HEAT-DEPENDENT PROCESS BY THE STANDARD CONVERSION FACTOR OF 3.412 MILLION BTUS PER MEGAWATT HOUR.		
5	<del>(K-2)</del> (1)	"Solar water heating system" means a system that:	
6 7 8	<del>collectors as defi</del> <del>Certification Cor</del> j	(i) is comprised of glazed liquid-type flat-plate or tubular solar ned-and-certified to the OG-100 standard of the Solar Ratings and poration;	
9 10	heating water; ar	<del>(ii)</del> <del>generates energy using solar radiation for the purpose of</del> <del>id</del>	
11		(iii) does not feed electricity back to the electric grid.	
12 13		<u>"Solar water heating system" does not include a system that</u> using solar radiation for the sole purpose of heating a hot tub or	
14	<del>swimming pool.</del>		
15	<del>(1)</del> <u>"Tie</u>	r 1 renewable source" means one or more of the following types of	
16	energy sources:		
17	<del>(1)</del>	solar energy, including energy from photovoltaic technologies and	
18	<del>solar water heati</del>	n <del>g systems;</del>	
19	<del>(2)</del>	wind;	
20	<del>(3)</del>	<del>qualifying biomass;</del>	
21	(4)	methane from the anaerobic decomposition of organic materials in	
22	( )	ewater treatment plant;	
23	(5)	geothermal, including energy generated through geothermal	
24	exchange from or	thermal energy avoided by, groundwater or a shallow ground source;	
25	<del>(6)</del>	<del>ocean, including energy from waves, tides, currents, and thermal</del>	
26	differences;		
27	(7)	a fuel cell that produces electricity from a Tier 1 renewable source	
28		(4) of this subsection;	
29	<del>(8)</del>	<del>a small hydroelectric power plant of less than 30 megawatts in</del>	
30		icensed or exempt from licensing by the Federal Energy Regulatory	
31	Commission;		
32	<del>(9)</del>	<del>poultry litter-to-energy;</del>	

1	(10) waste-to-energy;
2	(11) refuse-derived fuel; [and]
3	(12) thermal energy from a thermal biomass system; AND
4	(13) ENERGY FROM A WOOD- AND PLANT-DERIVED BIOMASS
<b>5</b>	SYSTEM.
6	(m) "Tier 2 renewable source" means hydroelectric power other than pump
7	storage generation.
8	(n) (1) "Wood and plant-derived biomass system" means a
9	SYSTEM THAT:
10	<del>(i)</del> <del>except as provided in paragraph (2) of this</del>
11	SUBSECTION, USES QUALIFYING BIOMASS; AND
12	(II) PROVIDES ENERGY USED FOR:
13	1. SPACE OR WATER HEATING OR COOLING;
14	2. COMBINED HEAT AND POWER;
15	3. HUMIDITY CONTROL; OR
16	4. <del>THERMAL END USE FOR WHICH FUEL OR</del>
17	ELECTRICITY OTHERWISE WOULD BE CONSUMED.
18	(2) "Wood- and plant-derived biomass system" does not
19	INCLUDE A SYSTEM THAT USES GAS PRODUCED FROM THE ANAEROBIC
20	DECOMPOSITION OF ANIMAL WASTE OR POULTRY WASTE.
21	<del>7-701.</del>
22	(J) (1) Energy from a wood- and plant-derived biomass
23	SYSTEM COMMISSIONED ON OR AFTER JULY 1, 2013 IS ELIGIBLE FOR
24	INCLUSION IN MEETING THE RENEWABLE ENERGY PORTFOLIO STANDARD.
25	(2) A person that owns a wood- and plant-derived
26	BIOMASS SYSTEM SHALL RECEIVE A RENEWABLE ENERGY CREDIT FOR THE
27	RENEWABLE THERMAL ENERGY EQUIVALENT PRODUCED BY THE WOOD-AND
28	PLANT-DERIVED BIOMASS SYSTEM.

1	(3) The Commission shall adopt regulations for the
2	METERING, VERIFICATION, AND REPORTING OF THE ENERGY OUTPUT OF
3	WOOD-AND PLANT-DERIVED BIOMASS SYSTEMS.
4	SECTION 2. AND BE IT FURTHER ENACTED, That energy produced by a
<b>5</b>	wood- and plant-derived biomass system shall be eligible for inclusion in meeting the
6	renewable energy portfolio standard for compliance years starting with 2014.
$\overline{7}$	SECTION 3. AND BE IT FURTHER ENACTED, That this Act shall take effect
8	<del>January 1, 2014</del> <u>June 1, 2013</u> .

Approved:

Governor.

Speaker of the House of Delegates.

President of the Senate.