



TESTIMONY OF WILLIAM REES, PRESIDENT

GREEN POWER SOLUTIONS, INC.

before the

ENERGY & TECHNOLOGY COMMITTEE

SENATE.BILL 1138: AN ACT CONCERNING CONNECTICUT'S CLEAN ENERGY GOALS.

Senator Duff, Representative Reed, Senator Chapin, Representative Hoydick and Members of the Energy & Technology Committee:

My name is William Rees and I am President of Green Power Solutions, Inc.(GPS), a developer of renewable energy projects with a focus on the market economics of biomass. GPS, a CT Corporation, is working with Connecticut farmers in the construction of anaerobic digestion (AD) facilities for the processing of organic wastes into electricity, heat, and fertilizer. GPS is focused on developing energy solutions for the management of manures, food wastes, and other biomass sources that are prevalent here in Connecticut.

I am testifying in opposition to HB 6532. As proponent of in-state renewable energy generation and Connecticut Farmers, I would like to see energy legislation focused on the creation of energy solutions and ultimately jobs here in the state. As I discussed in my testimony in opposition to HB 6532, this bill similarly has the potential to have widespread implications to the REC markets and future renewable projects here in Connecticut.

In-state renewable projects are growing and less assistance will be required in the form of government sponsored and regulated REC markets and financing in the future. But this time has not yet arrived. Renewable developers, businesses and homeowners still need incentives to develop needed renewable infrastructure, whether it is in the form of valuable RECs or funding to the CEFIA.

More Specifically, I would like to offer some changes and/or clarification in the language:

- 1) Section 1-A (line 6); (IV) methane gas, [from landfills,]
 - a. The elimination of the [from landfills,] creates a scenario that would indicate that pipeline quality Natural Gas (NG) a methane gas is a Class I Renewable.
 - b. I would like the following language inserted as a replacement:
 - i. [methane gas from landfills, anaerobic digestion of organic waste,](#)
 - c. I would also like to add the following language to the end of the section:

- i. [, or \(C\) useful thermal energy derived from a Class I renewable energy source under subparagraph \(A\) of this subdivision, cogeneration technology, methane gas from anaerobic digesters, geothermal or air source heating and cooling equipment or biodiesel or renewable diesel blend;](#)
- 2) Section 3-45 (line63), "Sustainable biomass fuel" does not means;
 - a. organic refuse fuel derived separately from municipal solid waste,
 - b. I would also like to have the following phrase follow to further define the phrase above.
 - i. [except where used for the purposes of anaerobic digestion facilities on farmlands](#)
- 3) Virtual Net Metering for Agricultural Producers
 - a. As seen in the HOUSE BILL 6360:
 - b. With the following changes: Section 7-d
 - i. [The agricultural customer host shall not designate more than ten beneficial accounts each of which shall use electricity for the purpose of agriculture, as defined in subsection \(q\) of section 1-1, or to serve municipal or state accounts.](#)

Thank you for the opportunity to send in this testimony and more importantly the reading of this testimony. I understand that the state has renewable goals and this is one way to quickly reach them. I am asking for your group to look closely at the effects this change will have for the future of in-state renewable energy.

In addition, I would like to include legislative changes to both HB 6535 and HB 6360 that I have referenced above. I am happy to discuss any questions you might have on my responses above.

Regards,

William Rees
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House bill 6535 AN ACT REDEFINING CLASS I RENEWABLE ENERGY SOURCES.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Subdivision (26) of subsection (a) of section 16-1 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(26) "Class I renewable energy source" means (A) energy derived from solar power, wind power, a fuel cell, methane gas from landfills, [anaerobic digestion of organic waste](#), ocean thermal power, wave or tidal power, low emission advanced renewable energy conversion technologies, a run-of-the-river hydropower facility provided such facility has a generating capacity of not more than five megawatts, does not cause an appreciable change in the river flow, and began operation after July 1, 2003, or a sustainable biomass facility with an average emission rate of equal to or less than .075 pounds of nitrogen oxides per million BTU of heat input for the previous calendar quarter, except that energy derived from a sustainable biomass facility with a capacity of less than five hundred kilowatts that began construction before July 1, 2003, may be considered a Class I renewable energy source, [or] (B) any electrical generation, including distributed generation, generated from a Class I renewable energy source, [or](#) (C) [useful thermal energy derived from a Class I renewable energy source under subparagraph \(A\) of this subdivision, cogeneration technology, methane gas from anaerobic digesters, geothermal or air source heating and cooling equipment or biodiesel or renewable diesel blend;](#)

Sec. 2. Subdivision (45) of subsection (a) of section 16-1 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(45) "Sustainable biomass" means biomass that is cultivated and harvested in a sustainable manner. "Sustainable biomass" does not mean construction and demolition waste, as defined in section 22a-208x, finished biomass products from sawmills, paper mills or stud mills, organic refuse fuel derived separately from municipal solid waste [except where used for the purposes of anaerobic digestion facilities on farmlands](#), or biomass from old growth timber stands, except where (A) such biomass is used in a biomass gasification plant that received funding prior to May 1, 2006, from the Clean Energy Fund established pursuant to section 16-245n, or (B) the energy derived from such biomass is subject to a long-term power purchase contract pursuant to subdivision (2) of subsection (j) of section 16-244c entered into prior to May 1, 2006, (C) such biomass is used in a renewable energy facility [that is certified as a Class I renewable energy source by the authority until such time as the authority certifies that any biomass gasification plant, as defined in subparagraph (A) of this subdivision, is operational and accepting such biomass,] in an amount not to exceed one hundred forty thousand tons annually, [is used in a renewable energy facility] that was certified as a Class I renewable energy source by the authority prior to December 31, 2007, and uses biomass, including construction and demolition waste as defined in section 22a-208x, from a Connecticut-sited transfer station and volume-reduction facility that generated biomass

during calendar year 2007 that was used during calendar year 2007 to generate Class I renewable energy certificates, or (D) in the event there is no facility as described in subparagraph (A) or (C) of this subdivision accepting such biomass, in an amount not to exceed one hundred forty thousand tons annually, is used in one or more other renewable energy facilities certified either as a Class I or Class II renewable energy source by the authority, provided such facilities use biomass, including construction and demolition waste as defined in said section 22a-208x, from a Connecticut-sited transfer station and volume-reduction facility that generated biomass during calendar year 2007 that was used during calendar year 2007 to generate Class I renewable energy certificates. Notwithstanding the provisions of subparagraphs (C) and (D) of this subdivision, the amount of biomass specified in said subparagraphs shall not apply to a biomass gasification plant, as defined in subparagraph (A) of this subdivision;

Sec. 3. Subsection (a) of section 16-1 of the general statutes is amended by adding subdivision (53) as follows (*Effective from passage*):

(NEW) (53) "Useful thermal energy" means energy in the form of direct heat, steam, hot water or other thermal form that is used by a facility located in the state of Connecticut for heating, cooling, humidity control, process use or other valid thermal end use energy requirements, for which fuel or electricity would otherwise be consumed.

Sec. 4. Subsection (b) of section 16-245a of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(b) An electric supplier or electric distribution company may satisfy the requirements of this section (1) by purchasing certificates issued by the New England Power Pool Generation Information System, provided the certificates are for (A) energy produced by a generating unit using Class I or Class II renewable energy sources and the generating unit is located in the jurisdiction of the regional independent system operator, [or] (B) energy imported into the control area of the regional independent system operator pursuant to New England Power Pool Generation Information System Rule 2.7(c), as in effect on January 1, 2006, or (C) useful thermal energy that is metered and reported by an approved independent monitor; (2) for those renewable energy certificates under contract to serve end-use customers in the state on or before October 1, 2006, by participating in a renewable energy trading program within said jurisdictions as approved by the Public Utilities Regulatory Authority; or (3) by purchasing eligible renewable electricity and associated attributes from residential customers who are net producers.

Sec. 5. Section 16-245a of the general statutes is amended by adding subsection (h) as follows (*Effective from passage*):

(NEW) (h) On or before July 1, 2013, the authority shall initiate a contested case proceeding to determine the specific guidelines by which a facility utilizing useful thermal energy would qualify as a Class I renewable energy source. Such guidelines shall include: (1) Unit eligibility requirements, including emissions thresholds and

metering standards, (2) monitoring and verification standards, including the required qualifications to be certified as an independent monitor, and (3) calculation and creation of renewable energy certificates.

This act shall take effect as follows and shall amend the following sections:		
Section 1	<i>from passage</i>	16-1(a)(26)
Sec. 2	<i>from passage</i>	16-1(a)(45)
Sec. 3	<i>from passage</i>	16-1(a)
Sec. 4	<i>from passage</i>	16-245a(b)
Sec. 5	<i>from passage</i>	16-245a

Statement of Purpose:

To add anaerobic digestion of organic waste and useful thermal energy to the definition of Class I renewable energy source and to expand the definition of sustainable biomass.

[Proposed deletions are enclosed in brackets. Proposed additions are indicated by underline, except that when the entire text of a bill or resolution or a section of a bill or resolution is new, it is not underlined.]

House bill 6360 - AN ACT CONCERNING IMPLEMENTATION OF CONNECTICUT'S COMPREHENSIVE ENERGY STRATEGY.

Sec. 5. Section 16-244u of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2013*):

(a) As used in this section:

(1) "Beneficial account" means an in-state retail end user of an electric distribution company designated by a customer host or an agricultural customer host in such electric distribution company's service area to receive virtual net metering credits from a virtual net metering facility or agricultural virtual net metering facility;

(2) "Customer host" means an in-state retail end user of an electric distribution company that owns, leases or enters into a long-term contract for a virtual net metering facility and participates in virtual net metering;

(3) "Agricultural customer host" means an in-state retail end user of an electric distribution company that uses electricity for the purpose of agriculture, as defined in subsection (q) of section 1-1, owns an agricultural net metering facility and participates in agricultural virtual net metering;

~~[(3)]~~ (4) (A) "Unassigned virtual net metering credit" means, in any given electric distribution company monthly billing period, a virtual net metering credit that remains after both the customer host and its beneficial accounts have been billed for zero kilowatt hours related ~~[solely]~~ to the generation service charges and eighty per cent of the distribution and other service charges on such billings through virtual net metering;

(B) "Unassigned agricultural virtual net metering credit" means, in any given electric distribution company monthly billing period, an agricultural virtual net metering credit that remains after both the agricultural customer host and its beneficial accounts have been billed for zero kilowatt hours related to the generation service charges and eighty per cent of the distribution and other service charges on such billings through agricultural virtual net metering;

~~[(4)]~~ (5) "Virtual net metering" means the process of combining the electric meter readings and billings, including any virtual net metering credits, for a municipal, state or agricultural customer host and a beneficial account related to such customer host's account through an electric distribution company billing process related ~~[solely]~~ to the generation service charges and eighty per cent of the distribution and other service charges on such billings;

[(5)] (6) "Virtual net metering credit" means a credit equal to the retail cost per kilowatt hour the customer host may have otherwise been charged for each kilowatt hour produced by a virtual net metering facility that exceeds the total amount of kilowatt hours used during an electric distribution company monthly billing period; and

[(6)] (7) (A) "Virtual net metering facility" means a Class I renewable energy source or a Class III source that: [(A)] (i) Is served by an electric distribution company, owned, leased or subject to a long-term contract by a customer host and serves the electricity needs of the customer host and its beneficial accounts; [(B)] (ii) is within the same electric distribution company service territory as the customer host and its beneficial accounts; and [(C)] (iii) has a nameplate capacity rating of [~~two~~] three megawatts or less; and

(B) "Agricultural virtual net metering facility" means a Class I renewable energy source that is operated as part of an agricultural business, as defined in subsection (q) of section 1-1 that: (i) Is served by an electric distribution company on land owned or controlled by an agricultural customer host and serves the electricity needs of the agricultural customer host and its beneficial accounts; (ii) is within the same electric distribution company service territory as the agricultural customer host and its beneficial accounts; and (iii) has a nameplate capacity rating of three megawatts or less.

(b) Each electric distribution company shall provide virtual net metering to its municipal, [~~customers~~] state or agricultural customer hosts and shall make any necessary interconnections for a virtual net metering facility. Upon request by a municipal, state or agricultural customer host to implement the provisions of this section, an electric distribution company shall install metering equipment, if necessary. For each municipal customer host, such metering equipment shall (1) measure electricity consumed from the electric distribution company's facilities; (2) deduct the amount of electricity produced but not consumed; and (3) register, for each monthly billing period, the net amount of electricity produced and, if applicable, consumed. If, in a given monthly billing period, a municipal, state or agricultural customer host supplies more electricity to the electric distribution system than the electric distribution company delivers to the municipal, state or agricultural customer host, the electric distribution company shall bill the municipal, state or agricultural customer host for zero kilowatt hours of generation and assign a virtual net metering credit to the municipal, state or agricultural customer host's beneficial accounts for the next monthly billing period. Such credit shall be applied against the generation service component [of] and eighty per cent of the distribution and other service charges billed to the beneficial [account] accounts. Such credit shall be allocated among such accounts in proportion to their consumption for the previous twelve billing periods.

(c) An electric distribution company shall carry forward any unassigned virtual net metering generation credits earned by the municipal, [state or agricultural](#) customer host from one monthly billing period to the next until the end of the calendar year. At the end of each calendar year, the electric distribution company shall compensate the municipal, [state or agricultural](#) customer host for any unassigned virtual net metering generation credits at the rate the electric distribution company pays for power procured to supply standard service customers pursuant to section 16-244c, [and eighty per cent of the distribution and other service charges](#).

(d) At least sixty days before a municipal, [state or agricultural](#) customer host's virtual net metering facility becomes operational, the municipal, [state or agricultural](#) customer host shall provide written notice to the electric distribution company of its beneficial accounts. The municipal, [state or agricultural](#) customer host may change its list of beneficial accounts not more than once annually by providing another sixty days' written notice. The municipal [or state](#) customer host shall not designate more than five beneficial accounts, [except that for facility accounts connected to a microgrid, the municipal or state customer host may identify up to five additional nonstate or municipal critical facilities, as defined in subdivision \(2\) of subsection \(a\) of section 16-243y. The agricultural customer host shall not designate more than ten beneficial accounts each of which shall use electricity for the purpose of agriculture, as defined in subsection \(q\) of section 1-1, or to serve municipal or state accounts](#).

(e) On or before February 1, 2012, the [Department of Energy and Environmental Protection] [Public Utilities Regulatory Authority](#) shall conduct a proceeding to develop the administrative processes and program specifications, including, but not limited to, a cap of [one] [ten](#) million dollars per year apportioned to each electric distribution company based on consumer load for credits provided to beneficial accounts pursuant to subsection (c) of this section and payments made pursuant to subsection (d) of this section.

(f) On or before January 1, 2013, and annually thereafter, each electric distribution company shall report to the [department] [authority](#) on the cost of its virtual net metering program pursuant to this section and the [department] [authority](#) shall combine such information and report it annually, in accordance with the provisions of section 11-4a, to the joint standing committee of the General Assembly having cognizance of matters relating to energy.