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**HOUSE BILL NO. 1137**

Offered January 13, 2016

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*A BILL to amend and reenact § 56-594 of the Code of Virginia, relating to electric utilities; net energy metering programs; energy balancing devices; study and report.*

Patrons—Toscano and Plum

Referred to Committee on Commerce and Labor

**Be it enacted by the General Assembly of Virginia:****1. That § 56-594 of the Code of Virginia is amended and reenacted as follows:****§ 56-594. Net energy metering provisions.**

A. The Commission shall establish by regulation a ~~program~~ *programs* that affords eligible afford:

1. Eligible customer-generators the opportunity to participate in net energy metering, and a program, to begin no later than July 1, 2014, for customers of investor-owned utilities and no later than July 1, 2015, for customers of electric cooperatives, to afford eligible;

2. Eligible agricultural customer-generators the opportunity to participate in net energy metering, which program shall begin no later than July 1, 2014, for such customers of investor-owned utilities and no later than July 1, 2015, for such customers of electric cooperatives; and

3. Eligible energy balancing customers the opportunity to participate in net energy metering, which program shall begin no later than July 1, 2017, for such customers of investor-owned utilities and no later than July 1, 2018, for such customers of electric cooperatives, provided that the aggregate capacity of energy balancing devices deployed by all eligible energy balancing customers in the Commonwealth shall not exceed 25 megawatts.

The regulations may include, but need not be limited to, requirements for (i) ~~retail sellers electric utilities;~~ (ii) owners or operators of distribution or transmission facilities; (iii) ~~providers of default service;~~ (iv) eligible customer-generators; ~~(v)~~ (iv) eligible agricultural customer-generators; (v) *eligible energy balancing customers;* or (vi) any combination of the foregoing, as the Commission determines will facilitate the provision of net energy metering, provided that the Commission determines that such requirements do not adversely affect the public interest.

B. For the purpose of this section:

"Eligible agricultural customer-generator" means a customer that operates a renewable energy generating facility as part of an agricultural business, which generating facility (i) uses as its sole energy source solar power, wind power, or aerobic or anaerobic digester gas; (ii) does not have an aggregate generation capacity of more than 500 kilowatts; (iii) is located on land owned or controlled by the agricultural business; (iv) is connected to the customer's wiring on the customer's side of its interconnection with the ~~distributor~~ *electric utility*; (v) is interconnected and operated in parallel with an electric company's utility's transmission and distribution facilities; and (vi) is used primarily to provide energy to metered accounts of the agricultural business. An eligible agricultural customer-generator may be served by multiple meters that are located at separate but contiguous sites, such that the eligible agricultural customer-generator may aggregate in a single account the electricity consumption and generation measured by the meters, provided that the same utility serves all such meters. The aggregated load shall be served under the appropriate tariff.

"Eligible customer-generator" means a customer that owns and operates, or contracts with other persons to own, operate, or both, an electrical generating facility that (i) has a capacity of not more than 20 kilowatts for residential customers and not more than one megawatt for nonresidential customers on an electrical generating facility placed in service after July 1, 2015; (ii) uses as its total source of fuel renewable energy, as defined in § 56-576; (iii) is located on the customer's premises and is connected to the customer's wiring on the customer's side of its interconnection with the ~~distributor~~ *electric utility*; (iv) is interconnected and operated in parallel with an electric company's transmission and distribution facilities; and (v) is intended primarily to offset all or part of the customer's own electricity requirements. In addition to the electrical generating facility size limitations in clause (i), the capacity of any generating facility installed under this section after July 1, 2015, shall not exceed the expected annual energy consumption based on the previous 12 months of billing history or an annualized calculation of billing history if 12 months of billing history is not available.

"Eligible energy balancing customer" means a commercial or industrial customer that owns an energy balancing device that is (i) located on the customer's premises, (ii) connected to the customer's wiring on the customer's side of its interconnection with the electric utility, and (iii) interconnected and

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operated in parallel with an electric utility's transmission and distribution facilities. A customer shall not qualify as an eligible energy balancing customer unless (a) the operation of its energy balancing device provides a service of value to the electric utility or regional transmission entity, including spinning reserve, frequency regulation, distribution system support, reactive power, demand response, or other electric grid services; (b) discharge from the energy balancing device to the electric grid meets all requirements for safety, including anti-islanding, and power quality established pursuant to the IEEE 1547-2003 Standard for Interconnecting Distributed Resources with Electric Power Systems or SAE Standard J3072, or successor standards, approved by the Institute of Electrical and Electronics Engineers Standards Board or the Society of Automotive Engineers, as appropriate; (c) the electric utility and the customer have entered into an agreement pursuant to which the electric utility undertakes to credit the customer for electricity fed back to the electric grid by operation of the energy balancing device as provided in subsection G; and (d) the aggregate net energy flows from the customer's energy balancing device over any net metering period result in a net energy inflow to the customer's premises.

"Energy balancing device" means (i) a grid-integrated electric vehicle or (ii) an electric battery consisting of one or more electrochemical cells that convert stored chemical energy into electrical energy, that are located at a commercial or industrial site, and that absorb and return energy to the electric grid on either (a) a second-to-second response basis that provides frequency regulation or (b) a longer-term daily response basis that stores excess energy from the electric grid during periods of excess supply and then returns that energy to the electric grid during peak periods of demand.

"Grid-integrated electric vehicle" means a battery-run motor vehicle that has the ability for two-way power flow between the vehicle and the electric grid and the communications hardware and software that allow for the external control of battery charging and discharging by an electric utility, a regional transmission entity, or an aggregator.

"Net energy metering" means measuring the difference, over the net metering period, between (i) electricity supplied to an eligible customer-generator or eligible agricultural customer-generator a net metering customer from the electric grid and (ii) the electricity generated and fed back to the electric grid by the eligible customer-generator or eligible agricultural customer-generator net metering customer.

"Net metering customer" means any eligible customer-generator, eligible agricultural customer-generator, or eligible energy balancing customer.

"Net metering customer's system" means (i) with regard to an eligible customer-generator or eligible agricultural customer-generator, its electrical generating facility and appurtenant equipment and (ii) with regard to an eligible energy balancing customer, its energy balancing device and appurtenant equipment.

"Net metering period" means the 12-month period following the date of final interconnection of the eligible customer-generator's or eligible agricultural customer-generator's net metering customer's system with an electric service provider, and each 12-month period thereafter.

"Regional transmission entity" means the regional transmission entity of which an electric utility is a member pursuant to §§ 56-577 and 56-579.

C. The Commission's regulations shall ensure that (i) the metering equipment installed for net metering shall be capable of measuring the flow of electricity in two directions and (ii) any eligible customer-generator net metering customer seeking to participate in net energy metering shall notify its supplier electric distribution company and receive approval to interconnect prior to installation of an electrical generating facility. The electric distribution company shall have 30 days from the date of notification for residential facilities, and 60 days from the date of notification for nonresidential facilities, to determine whether the interconnection requirements have been met. Such regulations shall allocate fairly the cost of such equipment and any necessary interconnection. An eligible customer-generator's electrical generating system, and each electrical generating system of an eligible agricultural customer-generator, shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, the Society of Automotive Engineers, and accredited testing laboratories such as Underwriters Laboratories. Beyond the requirements set forth in this section and to ensure public safety, power quality, and reliability of the supplier's electric distribution system, an eligible customer-generator or eligible agricultural customer-generator a net metering customer whose electrical generating system meets those standards and rules shall bear all reasonable costs of equipment required for the interconnection to the supplier's electric distribution system, including costs, if any, to (i) install additional controls, (ii) perform or pay for additional tests, and (iii) purchase additional liability insurance.

D. The Commission shall establish minimum requirements for contracts to be entered into by the parties to net metering arrangements. Such requirements shall protect the eligible customer-generator or eligible agricultural customer-generator net metering customer against discrimination by virtue of its status as an eligible customer-generator or eligible agricultural customer-generator, a net metering customer and permit customers that are served on time-of-use tariffs that have electricity supply demand

charges contained within the electricity supply portion of the time-of-use tariffs to participate as an eligible customer-generator or eligible agricultural customer-generator *net metering customers*. Notwithstanding the cost allocation provisions of subsection C, ~~eligible customer-generators or eligible agricultural customer-generators~~ *net metering customers* served on demand charge-based time-of-use tariffs shall bear the incremental metering costs required to net meter such customers.

E. If electricity generated by an eligible customer-generator or eligible agricultural customer-generator over the net metering period exceeds the electricity consumed by the eligible customer-generator or eligible agricultural customer-generator, the *eligible* customer-generator or eligible agricultural customer-generator shall be compensated for the excess electricity if the ~~entity contracting to receive such electric energy~~ *electric utility* and the eligible customer-generator or eligible agricultural customer-generator enter into a power purchase agreement for such excess electricity. Upon the written request of the eligible customer-generator or eligible agricultural customer-generator, the ~~supplier that serves the eligible customer-generator or eligible agricultural customer-generator~~ *electric utility* shall enter into a power purchase agreement with the requesting eligible customer-generator or eligible agricultural customer-generator that is consistent with the minimum requirements for contracts established by the Commission pursuant to subsection D. The power purchase agreement shall obligate the ~~supplier~~ *electric utility* to purchase such excess electricity at the rate that is provided for such purchases in a net metering standard contract or tariff approved by the Commission, unless the parties agree to a higher rate. The eligible customer-generator or eligible agricultural customer-generator owns any renewable energy certificates associated with its electrical generating facility; however, at the time that the eligible customer-generator or eligible agricultural customer-generator enters into a power purchase agreement with its ~~supplier~~ *electric utility*, the eligible customer-generator or eligible agricultural customer-generator shall have a one-time option to sell the renewable energy certificates associated with such electrical generating facility to its ~~supplier~~ *electric utility* and be compensated at an amount that is established by the Commission to reflect the value of such renewable energy certificates. Nothing in this section shall prevent the eligible customer-generator or eligible agricultural customer-generator and the ~~supplier~~ *electric utility* from voluntarily entering into an agreement for the sale and purchase of excess electricity or renewable energy certificates at mutually-agreed upon prices if the eligible customer-generator or eligible agricultural customer-generator does not exercise its option to sell its renewable energy certificates to its ~~supplier~~ *electric utility* at Commission-approved prices at the time that the eligible customer-generator or eligible agricultural customer-generator enters into a power purchase agreement with its ~~supplier~~ *electric utility*. All costs incurred by the ~~supplier~~ *electric utility* to purchase excess electricity and renewable energy certificates from eligible customer-generators or eligible agricultural customer-generators shall be recoverable through its Renewable Energy Portfolio Standard (RPS) rate adjustment clause, if the ~~supplier~~ *electric utility* has a Commission-approved RPS plan. If not, then all costs shall be recoverable through the ~~supplier's~~ *electric utility's* fuel adjustment clause. For purposes of this ~~section~~ *subsection*, "all costs" shall be defined as means the rates paid to the eligible customer-generator or eligible agricultural customer-generator for the purchase of excess electricity and renewable energy certificates and any administrative costs incurred to manage the eligible customer-generator's or eligible agricultural customer-generator's power purchase arrangements. The net metering standard contract or tariff shall be available to eligible customer-generators or eligible agricultural customer-generators on a first-come, first-served basis in each electric distribution company's Virginia service area until the rated generating capacity owned and operated by eligible customer-generators or eligible agricultural customer-generators in the state reaches one percent of each electric distribution company's adjusted Virginia peak-load forecast for the previous year, and shall require the ~~supplier~~ *electric utility* to pay the eligible customer-generator or eligible agricultural customer-generator for such excess electricity in a timely manner at a rate to be established by the Commission.

F. Any residential eligible customer-generator or eligible agricultural customer-generator who owns and operates, or contracts with other persons to own, operate, or both, an electrical generating facility with a capacity that exceeds 10 kilowatts shall pay to its ~~supplier~~ *electric utility*, in addition to any other charges authorized by law, a monthly standby charge. The amount of the standby charge and the terms and conditions under which it is assessed shall be in accordance with a methodology developed by the ~~supplier~~ *electric utility* and approved by the Commission. The Commission shall approve a ~~supplier's~~ *an electric utility's* proposed standby charge methodology if it finds that the standby charges collected from all such eligible customer-generators and eligible agricultural customer-generators allow the ~~supplier~~ *electric utility* to recover only the portion of the ~~supplier's~~ *electric utility's* infrastructure costs that are properly associated with serving such eligible customer-generators or eligible agricultural customer-generators. Such an eligible customer-generator or eligible agricultural customer-generator shall not be liable for a standby charge until the date specified in an order of the Commission approving its ~~supplier's~~ *electric utility's* methodology.

182 G. Notwithstanding the definition of net energy metering in subsection B, the aggregate net energy  
183 flows from an eligible energy balancing customer's energy balancing device to the electric grid and  
184 from the grid to the customer over any net metering period shall result in net energy to the eligible  
185 energy balancing customer's premises. Therefore, the eligible energy balancing customer shall not be  
186 compensated for excess electricity over the net metering period. However, over shorter time intervals,  
187 the eligible energy balancing customer may return electric energy to the grid. Over time intervals  
188 shorter than the net metering period, the rate at which an eligible energy balancing customer shall be  
189 credited for electricity added to the grid from such customer's energy balancing device shall be the  
190 same as the rate charged to the eligible energy balancing customer for electricity provided by the  
191 electric utility to the eligible energy balancing customer for such customer's consumption at its premises  
192 pursuant to the applicable tariff. The requirements of subsection C shall apply to any energy balancing  
193 device deployed pursuant to this section.

194 H. An aggregator is explicitly permitted to combine two or more eligible energy balancing customers  
195 and sell energy balancing services; those services may be sold to a regional transmission entity, under  
196 wholesale rules and rates as regulated by the Federal Energy Regulatory Commission, or those services  
197 may be sold to an electric utility under rules and rates as regulated by the Commission.

198 **2. That the State Corporation Commission shall conduct a study of the effectiveness of, and**  
199 **benefits achieved from, the deployment of energy balancing devices pursuant to this act. The study**  
200 **shall (i) address the extent to which energy balancing devices are deployed, (ii) analyze the benefits**  
201 **to the electric grid that result from the deployment of energy balancing devices, and (iii)**  
202 **determine whether the incentives for the deployment of energy balancing devices provided by the**  
203 **provisions of this act are commensurate with the benefits provided by their deployment. The**  
204 **Commission shall report its findings and any recommendations to the Governor and General**  
205 **Assembly by December 1, 2018.**

206 **3. That the provisions of the first enactment of this act shall expire on July 1, 2019; however, any**  
207 **energy balancing device that commences operating prior to July 1, 2019, shall be permitted to**  
208 **continue operating pursuant to the provisions of this act for a period of 10 years following the**  
209 **date the energy balancing device commenced operating.**