

ELECTRICITY GENERATION AND DISTRIBUTION

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House Bill 5861 as introduced
Sponsor: Rep. Gary Glenn

Analysis available at
<http://www.legislature.mi.gov>

House Bill 5862 as introduced
Sponsor: Rep. Scott Dianda

House Bill 5864 as introduced
Sponsor: Rep. Tom Barrett

House Bill 5863 as introduced
Sponsor: Rep. Yousef Rabhi

House Bill 5865 as introduced
Sponsor: Rep. Steven Johnson

Committee: Energy Policy
Complete to 5-15-18

SUMMARY:

The five-bill package would amend laws relating to the regulation, generation, and distribution of electricity, focusing on distributed generation. House Bills 5861, 5862, 5863, and 5864 would amend the Clean and Renewable Energy and Energy Waste Reduction Act, and House Bill 5865 would amend Public Act 3 of 1939 (the Michigan Public Service Commission enabling act). House Bills 5862 and 5863 are tie-barred to one another, which means neither can take effect unless both are enacted. A detailed description of each bill follows.

House Bill 5861 would add Part 8 (Community Renewable Energy Gardens) to the Clean and Renewable Energy and Energy Waste Reduction Act, to allow communities to create a ***community renewable energy garden***, which would mean a renewable energy electric generation system located on a single parcel of land that is connected to the state's electric distribution grid and has a generating capacity of 5 megawatts or less and 10 or more subscribers. At least 40% of the system's ***subscriptions*** would have to be for 25 kilowatts or less, and no subscriber could hold more than a 40% proportional interest in the output of the system.

Subscription

Under the bill, ***subscription*** would mean a contract between a garden owner and a retail customer of an electric provider assigning the customer a proportional interest in the beneficial use of the renewable energy produced by a garden, for the purpose of reducing the customer's retail electricity bill for premises in the same electric provider service territory as the garden.

A subscription would be sized to represent at least 100 watts of the community renewable energy garden's generating capacity and to supply not more than 120% of the average consumption of electricity provided from the distribution grid to the subscriber at the premises to which the subscription is attributed. A subscription could be transferred or assigned as specified in the subscription contract to a ***cooperative subscriber organization***

or to any other person that qualifies to be a subscriber. **Subscriber** would mean a person that is a retail customer of an electric provider and is a party to one or more subscriptions to a community renewable energy garden. **Cooperative subscriber organization** would mean a group of subscribers organized under the Consumer Cooperative Act, Chapter 11 of the Nonprofit Corporation Act (MCL 450.3100 to 450.3192), for the purposes of owning or creating a community renewable energy garden.

Garden owner

The bill would define **garden owner** as a cooperative subscriber organization or other person that owns the community renewable energy garden.

Under the bill, a garden owner could buy back a subscription from a subscriber as specified in the subscription. The proportional interest of a subscription would become unsubscribed when sold back to the owner. A garden owner also could hold more than 40% of the proportional interest in the garden's output as an unsubscribed portion. An **unsubscribed portion** would mean the beneficial use of the renewable energy produced by a garden in excess of that assigned to subscribers.

Additionally, a garden owner could contract with another person to administer or operate the garden. A garden owner and the operator and subscribers of a community renewable energy garden would not be public utilities subject to regulation by the Michigan Public Service Commission (PSC) solely as a result of their interest in the garden. Prices paid for subscriptions in community renewable energy gardens also would not be subject to regulation by the PSC.

The owner of a community renewable energy garden would sell the electrical output from the garden only to an electric provider serving the geographic area where the garden is located. After a community renewable energy garden is part of an electric provider's renewable energy plan (described below), the electric provider would purchase all of the electricity generated by the garden and the associated renewable energy credits. The amount of electricity and renewable energy credits generated by each community renewable energy garden would be determined by a production meter installed by the electric provider or third-party system owner and paid for by the owner of the garden.

The PSC would be charged with creating uniform standards and procedures for interconnection of a community renewable energy garden to the distribution grid.

Renewable energy plan

The PSC would have to ensure that each electric provider purchases annual amounts of electricity and renewable energy credits from community renewable energy gardens in proportion to that provider's 2018 peak demand. Each renewable energy plan would also have to provide for the purchase of electricity generated by community renewable energy gardens and associated renewable energy credits over the period covered by the plan.

Within one year after the bill's effective date, the PSC would have to review each electric provider's renewable energy plan in the manner provided in Section 22(3) of the Act.

Every two years after the adoption of an amended plan, each electric provider would be required to amend its plan in the manner provided in Section 22(4) of the Act. The amended plan would have to specify the minimum purchases, as determined by the PSC, of electricity that the electric provider would make from community renewable energy gardens in excess of purchases in the prior plan period. Additionally, as necessary, the PSC would have to formulate and implement policies consistent with the proposed Part 8 that *encourage* all of the following:

- Customer subscriptions in community renewable energy gardens and of other forms of distributed generation, to the extent that the PSC finds there is customer demand for those subscriptions.
- Subscriptions by residential customers, including *low-income customers* (individuals or families whose income does not exceed the eligibility threshold set by the Low-Income Home Energy Assistance Act of 1981), agricultural producers, and *low-income service organizations* (nonprofit organizations or governmental agencies providing services to individuals or families whose eligibility for services is contingent on having an income below a certain threshold) that are retail customers, to the extent that the PSC finds there is demand for those subscriptions.
- Ownership of community renewable energy gardens by cooperative subscriber organizations, low-income service organizations, and nonprofit entities.
- Development of community renewable energy gardens with attributes that the PSC finds result in lower overall total costs for the electric provider's customers.
- Creation, financing, and operation of community renewable energy gardens owned by cooperative subscriber organizations.
- Affordability of subscriptions for all retail customers, including those receiving energy assistance through the Michigan Low Income Home Energy Assistance Program, subject to the requirement that prices paid for subscriptions in community renewable energy gardens not be subject to regulation by the PSC.
- Development of mechanisms, incentives, and financing options to provide economic benefits to low-income communities through community renewable energy gardens, including siting gardens in low-income communities, creating employment programs to build and administer gardens, fostering the ownership of gardens by institutions and cooperative subscriber organizations located in low-income communities, and coordinating with appropriate governmental agencies, community stakeholders, and low-income service organizations.
- The achievement of at least 250 megawatts in total community renewable energy garden generation by 2025.

Net metering credit

An electric provider would purchase the output of a community renewable energy garden by applying a net metering credit against each subscriber's electric bill for the premises designated against each subscriber's subscription contract. The net metering credit would be calculated by taking the subscriber's share of the electricity production from the garden and multiplying it by the electric provider's total aggregate retail rate as charged to the subscriber. A reasonable charge, determined by the PSC under Section 22 of the Act, would be subtracted from the credit, to cover specific provider distribution, interconnection, and administration costs. The PSC would ensure that this charge not reflect costs that are

already recovered by the provider from the subscriber through other charges. If a subscriber's net metering credit exceeded the subscriber's electric bill in any billing period, the net metering credit would be carried forward and applied against future bills.

The owner of the community renewable energy garden would provide real-time generation data to the electric provider to facilitate the grant of net metering credits as well as the incorporation of the garden into the electric provider's operations.

The owner also would have to notify the electric provider of the current proportional interest of each subscriber for use in determining the net metering credit owed to each subscriber. The information would be provided in an electronic format approved by the PSC on at least a monthly basis and within a reasonable time period set by the PSC so that subscriber bills can be credited (described below).

Electric providers

The electric provider would credit subscribers' bills for the billing cycle immediately following the cycle during which the energy was generated by the community renewable energy garden. The electric provider also would add, remove, or change the proportional interest of a subscriber within one month after receiving notice from the garden owner of a change. The customer's bill for the immediately following month would reflect the updated information.

If electricity generated by a garden is not fully subscribed, then the electric provider would have to purchase the unsubscribed renewable energy and the renewable energy credits from the garden owner at the rate determined under Section 6v of Public Act 3 of 1939 (MCL 460.6v) and Section 210 of Title II of the federal Public Utilities Regulatory Policies Act (16 USC 824a-3).

Each electric provider would provide for the inclusion of low-income customers as subscribers to a community renewable energy garden in its renewable energy plan. The electric provider could give preference to gardens that have low-income subscribers and to gardens owned by low-income service organizers.

An electric provider would be eligible for the incentives and subject to any ownership limitations set forth in the proposed Part 8 for investments in community renewable energy gardens and could recover through rates a margin, determined by the PSC, on purchases of energy generated by gardens and associated renewable energy credits. These incentive payments would be excluded from the cost calculations for the life-cycle cost of renewable energy under the Act.

The bill would take effect 90 days after enactment.

MCL 460.1022 and proposed MCL 460.1231 et seq.

House Bill 5862 would amend the Clean and Renewable Energy and Energy Waste Reduction Act to revise requirements regarding distributed generation.

Distributed generation program

Currently, the PSC is charged with establishing a distributed generation program and may develop rules to implement the program. The program currently applies to electric utilities whose rates are regulated by the PSC and to alternative electric suppliers (AES) in the state.

The bill would remove the provision of program applicability and add that, under the program, any customer of an electric utility or AES may generate electricity using an **eligible electric generator** interconnected with the local electric utility and operated parallel to the distribution system. The value of the electricity generated by the customer would be credited to the customer pursuant to a fair value tariff, a standard-offer contract, or **net metering**. However, an electric utility or AES would be required to participate only in the net metering component of the customer generation program.

Eligible electric generator would mean a customer's renewable energy system, cogeneration facility fueled by natural gas or biogas, or waste heat recovery system that is both located in Michigan *and* has a generation capacity that is consistent with the safety and reliability requirements of the customer's interconnection.

Net metering would mean a utility billing method that applies the full retail rate to the net of the bidirectional flow of kilowatt hours across the customer interconnection with the utility distribution system, during a billing period for time-of-use pricing period. A negative net metered quantity would reflect net excess generation for which the customer would be entitled to receive credit under Section 177(4) of the Act.

The law currently requires the program to be designed for a period of at least 10 years. The bill would instead mandate that the distributed generation program must be designed for a period not less than **20** years.

The bill would also remove the provision that an electric utility or AES is not required to allow for a distributed generation program that is greater than 1% of its average in-state peak load for the preceding five calendar years (and that the electric utility or AES notify the PSC if its program reaches the 1% threshold).

Further, the law currently states that selection of customers for participation in the distributed generation program is based on the order in which applications for participation are received by the electric utility or AES. Under the bill, selection for participation would be based solely on meeting the interconnection and equipment requirements for participation. An electric utility or AES would not be able to restrict the number of participants in the customer generation program unless it demonstrated to the satisfaction of the PSC in a contested case hearing that the restriction is necessary to protect public health and safety or the integrity of the distribution system.

The bill would mandate that an eligible electric generator installation at the customer's site must meet the "IEEE 1547 standards for interconnecting distributed resources with electric power systems," a PSC-approved update to IEEE 1547, or standards approved by the PSC that enable operation in *island mode*.

Island mode would mean that a generation system is in a status in which loads and energy resources are able to operate on-site or within a local microgrid but power is not exchanged with the utility-owned transmission or distribution network.

Microgrid would mean a group of interconnected loads and distributed energy resources with clearly defined electrical boundaries that acts as a single controllable entity with respect to the macrogrid and that connects and disconnects from the macrogrid to enable it to operate in grid-connected or island mode.

Currently under the program, customers with a system capable of generating 20 kilowatts or less qualify for true net metering, while those who are capable of generating more than 20 kilowatts qualify for modified net metering. The bill would remove these provisions.

The bill would require the distributed generation program to include uniform provisions under which an electric utility or AES could enter a standard-offer contract for electricity generated by customers with eligible electric generators with a capacity of 500 kilowatts or more. A standard-offer contract would have to be on a form approved by the PSC and would have to meet all of the following:

- Be economically equivalent to or larger than the compensation that would be expected under a fair value tariff (described below).
- Assign appropriate value to any reduced uncertainty about future power supply costs for the electric utility or AES and its other customers.
- Provide a fixed price schedule for power delivered from the eligible electric generator over the full term of the contract, subject to adjustment for inflation.
- Have a term of 20 years or more, unless a shorter term is requested by the customer and agreed to by the electric utility or AES.
- Provide a satisfactory basis for the customer to finance the eligible electric generator through a lending institution under normal commercial terms.
- Not establish the price or other terms based on whether or to whom the customer sells renewable energy credits owned by the customer.

Under the bill, the distributed generation program also would include net metering. An electric utility or AES would have to make net metering available to any customer that submits an application. However, the PSC could authorize an electric utility or AES to suspend receipt of applications to participate in net metering from customers with an eligible electric generator with a capacity exceeding 500 kilowatts when the utility or AES offers a fair value tariff (described below) or a standard-offer contract approved by the PSC for electricity from that type of eligible electric generator.

The PSC could waive the application, interconnection, and installation requirements under Part 5 of the Act (Distributed Generation) for customers participating in the net metering program under the PSC's March 29, 2005 order in Case Number U-14346.

Fair value tariff

Within one year after the effective date of the bill, the PSC would have to establish a statewide uniform methodology by which an electric utility or AES may establish a fair value tariff if approved by the PSC after a contested case hearing. A fair value tariff would have to do all of the following:

- Allow distributed generation for immediate self-service without any charge to the customer.
- Apply the same delivery and power supply charge for electricity delivered to a customer that participates in the distributed generation program as to a customer that is similarly situated but does not participate.
- Credit the customer for electricity generated by the customer that is delivered to the local utility's distribution system at a rate that meets both of the following:
 - Is not less than the full retail rate for a customer that is similarly situated but does not participate in the customer generation program at the time of excess generation, minus the delivery charge.
 - Includes the value of the costs and benefits that will accrue over a period of at least 20 years, including, among other factors, energy generated, voltage support and regulation, and reduced fuel price risk to utility customers.
- Not establish the rate or other terms based on consideration of whether or to whom the customer sells renewable energy credits owned by the customer.
- Require a utility to recalculate a fair value tariff, subject to PSC approval, in any proceeding that changes power supply tariffs.
- Not impose any additional charges on a customer for participation in the distributed generation program.

Additionally, a fair value tariff could do any of the following:

- If the tariff credits the customer for capacity without deducting for forced outages, deduct standby charges for an eligible electric generator with capacity in excess of 500 kilowatts based on the product of the utility's market cost of capacity and the average peak-coincident forced outage rate of customer generators using similar generation technology.
- Based on known and measurable evidence of the cost or benefit of the distributed generation program to the electric utility or alternative electric supplier, incorporate other values into the fair value tariff, including credit for an eligible electric generator that is installed at a high-value location on the distribution grid.

The bill would take effect 90 days after enactment.

MCL 460.1003 et al.

House Bill 5863 would add Sections 177a and 178 to the Clean and Renewable Energy and Energy Waste Reduction Act to provide distributed generation requirements, and provide for alternative rates, for customers operating a distributed generation device that is not capable of generating 500 kilowatts or more.

The bill would mandate that both of the following apply to distributed generation customers with eligible electric generators not capable of generating 500 kilowatts or more:

- The customers qualify for net metering under the Act.
- The credit per kilowatt hour for electricity delivered into the utility's distribution system shall be the customer's retail rate or, for net metering customers on a time-based rate schedule, the customer's retail rate during the time-of-use pricing period.

Alternative rate

Under the bill, an electric provider could apply for PSC approval for an alternative rate that compensates a customer through a bill credit for the value to the electric provider, its customers, and society for operating a distributed generation device that is not capable of generating 500 kilowatts or more and that is interconnected to the system and operated by the customer primarily for meeting the customer's own energy needs. If the PSC approved the rate, then it would apply to a customer interconnection occurring after the date of approval and would be in lieu of any other rate under Part 5 of the Act.

The PSC would conduct a contested case proceeding on the proposed alternative rate, and would approve the rate if it meets all of the following:

- Appropriately applies a methodology required to be established by the PSC no later than one year after the bill's effective date. The methodology would be developed in consultation with stakeholders and would have to include an analysis of costs and benefits to accrue over a period of at least 20 years.
- Charges the customer for all electricity delivered to the customer by the electric provider at the same retail rate paid by customers in the customer's rate class who are not participants in the distributed generation program.
- Credits the customer at the alternative rate established under this subsection for all electricity generated by the distributed generation device that is not utilized by the customer for self-service but delivered to the local utility's distribution system.
- Applies the charges and credits specified above to a monthly bill and applies the unused portion of the credit in any month or billing period to be carried forward and credited against all the electric provider's charges. If the customer has a positive balance after the 12-month cycle ending on the last day in January, the electric provider shall pay the credit balance to the customer at the alternative rate, and the 12-month credit cycle restarts with the next billing period.
- Complies with the interconnection requirements under Section 173.

The electric provider would recalculate the alternative rate every two years and file the new rate with the PSC for approval. However, the PSC could not authorize an electric provider to use an alternative rate that is lower than the electric provider's applicable retail rate until 3 years after the PSC approves an alternative rate for the electric provider.

An electric provider would have to enter into a contract with an owner of a distributed generation device receiving an alternative rate for a term of at least 20 years. However, a shorter term could be used requested by the customer and agreed to by the electric provider. A customer receiving an alternative rate would be paid the same rate per kilowatt hour generated each year for the term of the contract.

Renewable energy credits

The bill would amend the current provision regarding renewable energy credits and mandate that such credits could be owned as follows:

- By the customer, but only for the electricity utilized by the customer.
- By the electric provider, but only for the electricity delivered to the local utility's distribution system.

The bill would take effect 90 days after enactment.

MCL 460.1179 and proposed MCL 460.1177a and 460.1178

House Bill 5864 would amend Section 173 of the Clean and Renewable Energy and Energy Waste Reduction Act. Nearly all of its proposed changes to this section are also contained in House Bill 5862.

Currently, the distributed generation program established by the PSC under Section 173 must be designed for a period of at least 10 years; the bill would revise that time period to 20 years.

The bill would remove the provision that an electric utility or alternative electric supplier (AES) is not required to allow for a distributed generation program that is greater than 1% of its average in-state peak load for the preceding five calendar years (and that the electric utility or AES notify the PSC if its program reaches the 1% threshold).

Currently, participants in the distributed generation program are selected based on the order in which their applications are received. Under the bill, participants would be selected based solely on meeting the interconnection and equipment requirements for participation.

The bill would prohibit a utility or AES from restricting the number of participants in the net metering program unless it demonstrates to the PSC's satisfaction that the restriction is necessary to protect the public health and safety or the integrity of the distribution system.

Finally, the bill would remove the requirement that the distributed generation program provide that those distributed generation customers with a system capable of generating 20 kilowatts or less qualify for true net metering and those with a system capable of generating more than 20 kilowatts qualify for modified net metering.

The bill would take effect 90 days after enactment.

MCL 460.1173

House Bill 5865 would amend Public Act 3 of 1939, the Michigan Public Service Commission enabling act, to allow certain entities to establish *microgrids* in an effort to support *critical facilities*.

Microgrid would mean a group of interconnected loads and distributed energy resources with clearly defined electrical boundaries that acts as a single controllable entity with respect to the macrogrid and that connects and disconnects from the macrogrid to enable it to operate in grid-connected or *island mode*.

Critical facilities would be defined as including: hospitals or medical facilities that provide life support; police stations; fire stations; water or sewage treatment plants; public shelters; correctional facilities; emergency coordination centers; military sites; residential facilities for the elderly; or any other facility identified by the Michigan Public Service Commission (PSC) as critical.

Island mode would mean an instance in which a microgrid is in a status where loads and energy resources within the microgrid are able to operate but power is not exchanged with the utility-owned transmission or distribution network.

The bill would require the PSC, within 270 days of the date the bill takes effect, to issue orders allowing electric utilities, municipally owned electric utilities, and private entities to establish microgrids within this state. The order would have to do all of the following:

- Allow the establishment of microgrids to support one or more critical facilities.
- Ensure that interconnections are uniform across all electric utilities and that those interconnections follow the standards promulgated by the PSC, which must allow for microgrid operations consistent with the act.
- Allow for the operation of microgrids during an emergency.
- Allow microgrids to serve one or more facilities that are not critical facilities if those facilities are electrically contiguous to the critical facilities when the microgrid is in island mode.
- Prohibit electric utilities from charging standby rates to microgrids owned by a person other than that electric utility.
- Establish a process that allows an electric utility customer to request that a facility be designated a *critical facility* if the PSC determines that supplying electricity to that facility during an emergency is necessary for the public health, safety, and welfare.
- Require electric utilities to establish a microgrid for any facilities designated as critical unless a person other than that electric utility will establish the microgrid.
- Establish rates for microgrids established by electric utilities and private entities that reflect an equitable cost of service for utility revenue requirement and do not include standby charges.
- Adopt *standards for microgrids* established by electric utilities, municipally owned electric utilities, and private entities
- Require electric utilities and municipally owned electric utilities to allow any electric utility customer to use a microgrid that meets the adopted standards.

The bill would require the PSC to issue a *report that analyzes the reliability of the electric distribution systems in Michigan* to the governor and legislature by December 31, 2018. The report would have to include all of the following:

- The best technical, economic, and regulatory approach to ensure reliable electric service during and after natural disasters and other threats.
- The structural, regulatory, legal, or other barriers in Michigan preventing those best practices.
- The benefits and costs of those best practices.
- The opportunities and barriers to implementing innovative multitechnology approaches to improve the resilience, efficiency, functionality, and performance of the electric distribution systems in Michigan.
- Performance standards that could be adopted to improve the resilience, efficiency, functionality, and performance of the electric distribution systems in Michigan.

Under the bill, the PSC would have to convene an *advisory panel* to assist in preparing the report described above that consists of one individual representing each of the following constituencies: investor-owned electric utilities, local units of government, municipally owned electric utilities, cooperative electric utilities, a statewide environmental organization, electric consumers, the energy industry, and a statewide labor organization.

Finally, the bill would require the PSC to issue a *report evaluating the costs and benefits of using microgrids to provide electric service to critical facilities* to the legislature no later than July 1, 2019.

MCL 460.10a

FISCAL IMPACT:

House Bills 5861, 5862, 5863, 5864, and 5865 will likely increase costs for the Michigan Public Service Commission, housed within the Department of Licensing and Regulatory Affairs. The commission would be responsible for regulatory functions regarding various provisions contained within the bills, including: regulatory oversight, creating standards and procedures for interconnection of community renewable energy gardens and the distribution grid, and conducting contested cases, among various other responsibilities. It is not altogether clear whether the costs will be entirely covered by existing appropriations; any additional costs would be funded by additional public utility assessments.

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■ This analysis was prepared by nonpartisan House Fiscal Agency staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.