

# SENATE BILL No. 329

April 14, 2011, Introduced by Senator SCHUITMAKER and referred to the Committee on Energy and Technology.

A bill to amend 2002 PA 593, entitled  
"Michigan next energy authority act,"  
by amending section 2 (MCL 207.822), as amended by 2006 PA 632.

**THE PEOPLE OF THE STATE OF MICHIGAN ENACT:**

1       Sec. 2. As used in this act:

2       (a) "Advanced battery cell" means a rechargeable battery cell  
3 with a specific energy of not less than 80 watt hours per kilogram.

4       (b) "Alternative energy marine propulsion system" means an  
5 onboard propulsion system or detachable outboard propulsion system  
6 for a watercraft that is powered by an alternative energy system  
7 and that is the singular propulsion system for the watercraft.  
8 Alternative energy marine propulsion system does not include  
9 battery powered motors designed to assist in the propulsion of the  
10 watercraft during fishing or other recreational use.

1 (c) "Alternative energy system" means the small-scale  
2 generation or release of energy from 1 or any combination of the  
3 following types of energy systems:

- 4 (i) A fuel cell energy system.
- 5 (ii) A photovoltaic energy system.
- 6 (iii) A solar-thermal energy system.
- 7 (iv) A wind energy system.
- 8 (v) A CHP energy system.
- 9 (vi) A microturbine energy system.
- 10 (vii) A miniturbine energy system.
- 11 (viii) A Stirling cycle energy system.
- 12 (ix) A battery cell energy system.
- 13 (x) A clean fuel energy system.
- 14 (xi) An electricity storage system.
- 15 (xii) A biomass energy system.
- 16 (xiii) A thermoelectric energy system.

17 (d) "Alternative energy technology" means equipment, component  
18 parts, materials, electronic devices, testing equipment, and  
19 related systems that are specifically designed, specifically  
20 fabricated, and used primarily for 1 or more of the following:

21 (i) The storage, generation, reformation, or distribution of  
22 clean fuels integrated within an alternative energy system or  
23 alternative energy vehicle, not including an anaerobic digester  
24 energy system or a hydroelectric energy system, for use within the  
25 alternative energy system or alternative energy vehicle.

26 (ii) The process of generating and putting into a usable form  
27 the energy generated by an alternative energy system. Alternative

1 energy technology does not include those component parts of an  
2 alternative energy system that are required regardless of the  
3 energy source.

4 (iii) A microgrid. As used in this subparagraph, "microgrid"  
5 means the lines, wires, fuel lines and fuel reformers, and controls  
6 to connect 2 or more alternative energy systems.

7 (iv) Research and development of an alternative energy vehicle.

8 (v) Research, development, and manufacturing of an alternative  
9 energy system.

10 (vi) Research, development, and manufacturing of an anaerobic  
11 digester energy system.

12 (vii) Research, development, and manufacturing of a  
13 hydroelectric energy system.

14 (e) "Alternative energy technology business" means a business  
15 engaged solely in the research, development, or manufacturing of  
16 alternative energy technology.

17 (f) "Alternative energy vehicle" means a motor vehicle  
18 manufactured by an original equipment manufacturer that fully  
19 warrants and certifies that the motor vehicle meets federal motor  
20 vehicle safety standards for its class of vehicles as defined by  
21 the Michigan vehicle code, 1949 PA 300, MCL 257.1 to 257.923, and  
22 certifies that the motor vehicle meets local emissions standards,  
23 that is propelled by an alternative energy system. Alternative  
24 energy vehicle includes the following:

25 (i) An alternative fueled vehicle. As used in this  
26 subparagraph, "alternative fueled vehicle" means a motor vehicle  
27 that can only be powered by a clean fuel energy system and can only

1 be fueled by a clean fuel.

2 (ii) A fuel cell vehicle. As used in this subparagraph, "fuel  
3 cell vehicle" means a motor vehicle powered solely by a fuel cell  
4 energy system.

5 (iii) An electric vehicle. As used in this subparagraph,  
6 "electric vehicle" means a motor vehicle powered solely by a  
7 battery cell energy system.

8 (iv) A hybrid vehicle. As used in this subparagraph, "hybrid  
9 vehicle" means a motor vehicle that can only be powered by an  
10 internal combustion engine and 1 or more alternative energy  
11 systems.

12 (v) A solar vehicle. As used in this subparagraph, "solar  
13 vehicle" means a motor vehicle powered solely by a photovoltaic  
14 energy system.

15 (vi) A hybrid electric vehicle. As used in this subparagraph,  
16 "hybrid electric vehicle" means a motor vehicle powered by an  
17 integrated propulsion system consisting of an electric motor and  
18 combustion engine. Hybrid electric vehicle does not include a  
19 retrofitted conventional diesel or gasoline engine. A hybrid  
20 electric vehicle obtains the power necessary to propel the motor  
21 vehicle from a combustion engine and 1 of the following:

22 (A) A battery cell energy system.

23 (B) A fuel cell energy system.

24 (C) A photovoltaic energy system.

25 (vii) A hydraulic hybrid vehicle. As used in this subparagraph,  
26 "hydraulic hybrid vehicle" means a motor vehicle powered by a  
27 regenerative hydraulic drive system or powered by an internal

1 combustion engine assisted by a regenerative hydraulic drive  
2 system.

3 (g) "Alternative energy zone" means a renaissance zone  
4 designated as an alternative energy zone by the board of the  
5 Michigan strategic fund under section 8a of the Michigan  
6 renaissance zone act, 1996 PA 376, MCL 125.2688a.

7 (h) "Anaerobic digester energy system" means a device or  
8 system of devices for optimizing the anaerobic digestion of biomass  
9 for the purpose of recovering biofuel for energy production.

10 (i) "Authority" means the Michigan next energy authority  
11 created under section 3.

12 (j) "Battery cell" means a closed electrochemical system that  
13 converts chemical energy from oxidation and reduction reactions  
14 directly into electric energy without combustion and without  
15 external fuel and consists of an anode, a cathode, and an  
16 electrolyte.

17 (k) "Battery cell energy system" means 1 or more battery cells  
18 and an inverter or other power conditioning unit used to perform 1  
19 or more of the following functions:

20 (i) Propel a motor vehicle or an alternative energy marine  
21 propulsion system.

22 (ii) Provide electricity that is distributed within a dwelling  
23 or other structure.

24 (iii) Provide electricity to operate a portable electronic  
25 device including, but not limited to, a laptop computer, a personal  
26 digital assistant, or a cell phone. For purposes of this  
27 subparagraph only, a battery cell energy system shall only use

1 advanced battery cells.

2 (l) "Biomass energy system" means a system that generates  
3 energy from a process using residues from wood and paper products  
4 industries, food production and processing, trees and grasses grown  
5 specifically to be used as energy crops, and gaseous fuels produced  
6 from solid biomass, animal waste, municipal wastes, or landfills.

7 (m) "Board" means the governing body of an authority under  
8 section 4.

9 (n) "CHP energy system" means an integrated unit that  
10 generates power and either cools, heats, or controls humidity in a  
11 building or provides heating, drying, or chilling for an industrial  
12 process that includes and is limited to both of the following:

13 (i) An absorption chiller, a desiccant dehumidifier, or heat  
14 recovery equipment.

15 (ii) One of the following:

16 (A) An internal combustion engine, an external combustion  
17 engine, a microturbine, or a miniturbine, fueled solely by a clean  
18 fuel.

19 (B) A fuel cell energy system.

20 (o) "Clean fuel" means 1 or more of the following:

21 (i) Methane.

22 (ii) Natural gas.

23 (iii) Methanol neat or methanol blends containing at least 85%  
24 methanol.

25 (iv) Denatured ethanol neat or ethanol blends containing at  
26 least 85% ethanol.

27 (v) Compressed natural gas.

1 (vi) Liquefied natural gas.

2 (vii) Liquefied petroleum gas.

3 (viii) Hydrogen.

4 (ix) Renewable fuels.

5 (p) "Clean fuel energy system" means a device that is designed  
6 and used solely for the purpose of generating power from a clean  
7 fuel. Clean fuel energy system does not include a conventional  
8 gasoline or diesel fuel engine or a retrofitted conventional diesel  
9 or gasoline engine.

10 (q) "Department" means the department of **TECHNOLOGY,**  
11 management, and budget.

12 (r) "Electricity storage device" means a device, including a  
13 capacitor, that directly stores electrical energy without  
14 conversion to an intermediary medium.

15 (s) "Electricity storage system" means 1 or more electricity  
16 storage devices and inverters or other power conditioning  
17 equipment.

18 (t) "Fuel cell energy system" means 1 or more fuel cells or  
19 fuel cell stacks and an inverter or other power conditioning unit.  
20 A fuel cell energy system may also include a fuel processor. As  
21 used in this subdivision:

22 (i) "Fuel cell" means an electrochemical device that uses an  
23 external fuel and continuously converts the energy released from  
24 the oxidation of fuel by oxygen directly into electricity without  
25 combustion and consists of an anode, a cathode, and an electrolyte.

26 (ii) "Fuel cell stack" means an assembly of fuel cells.

27 (iii) "Fuel processor" means a device that converts a fuel,

1 including, but not limited to, methanol, natural gas, or gasoline,  
2 into a hydrogen rich gas, without combustion for use in a fuel  
3 cell.

4 (u) "Hydroelectric energy system" means a system related to  
5 the process of generating or putting into usable form the energy  
6 produced solely from flowing or falling water. The system may  
7 consist of a turbine, generator, alternator, electronic devices, or  
8 other directly related component parts.

9 (v) "Microturbine energy system" means a system that generates  
10 electricity, composed of a compressor, combustor, turbine, and  
11 generator, fueled solely by a clean fuel with a capacity of not  
12 more than 250 kilowatts. A microturbine energy system may include  
13 an alternator and shall include a recuperator if the use of the  
14 recuperator increases the efficiency of the energy system.

15 (w) "Miniturbine energy system" means a system that generates  
16 electricity, composed of a compressor, combustor, turbine, and  
17 generator, fueled solely by a clean fuel with a capacity of not  
18 more than 2 megawatts. A miniturbine energy system may also include  
19 an alternator and a recuperator.

20 (x) "Person" means an individual, partnership, corporation,  
21 limited liability company, association, governmental entity, or  
22 other legal entity.

23 (y) "Photovoltaic energy system" means a solar energy device  
24 composed of 1 or more photovoltaic cells or photovoltaic modules  
25 and an inverter or other power conditioning unit. A photovoltaic  
26 system may also include batteries for power storage or an  
27 electricity storage device. As used in this subdivision:



1           (i) "Photovoltaic cell" means an integrated device consisting  
2 of layers of semiconductor materials and electrical contacts  
3 capable of converting incident light directly into electricity.

4           (ii) "Photovoltaic module" means an assembly of photovoltaic  
5 cells.

6           (z) "Regenerative hydraulic drive system" means a system that  
7 captures energy from nonparasitic vehicle sources or energy wasted  
8 by a vehicle's brakes or suspension to be released to directly  
9 assist vehicle propulsion or directly propel the vehicle.

10          (aa) "Renewable fuels" means 1 or more of the following:

11           (i) Biodiesel or biodiesel blends containing at least 20%  
12 biodiesel. As used in this subparagraph, "biodiesel" means a diesel  
13 fuel substitute consisting of methyl or ethyl esters produced from  
14 the transesterification of animal or vegetable fats with methanol  
15 or ethanol.

16           (ii) Biomass. As used in this subparagraph, "biomass" means  
17 wood and paper products industries, food production and processing,  
18 trees and grasses grown specifically to be used as energy crops,  
19 and gaseous fuels produced from solid biomass, animal waste,  
20 municipal wastes, or landfills.

21          (bb) "Small-scale" means 1 or more of the following:

22           (i) A single energy system with a generating capacity of not  
23 more than 2 megawatts or an integrated energy system with a  
24 generating capacity of not more than 10 megawatts.

25           (ii) A single energy system or an integrated energy system with  
26 any generating capacity that is 1 or more of the following:

27           (A) A fuel cell energy system.

1 (B) A photovoltaic energy system.

2 (C) A wind energy system.

3 (cc) "Solar thermal energy system" means an integrated unit  
4 consisting of a sunlight collection device, a system containing a  
5 heat transfer fluid to receive the collected sunlight, and heat  
6 exchangers to transfer the solar energy to a thermal storage tank  
7 to heat or cool spaces or fluids or to generate electricity.

8 (dd) "Stirling cycle energy system" means a closed-cycle,  
9 regenerative heat engine that is fueled solely by a clean fuel and  
10 uses an external combustion process, heat exchangers, pistons, a  
11 regenerator, and a confined working gas, such as hydrogen or  
12 helium, to convert heat into mechanical energy. A Stirling cycle  
13 energy system may also include a generator to generate electricity.

14 (ee) "Thermoelectric energy system" means a system that  
15 generates energy by converting thermal energy into electrical  
16 energy using direct heat from a clean fuel energy system or waste  
17 heat from any source. A thermoelectric energy system also includes  
18 an energy system that utilizes alkali metal thermal-to-electric  
19 conversion technology.

20 (ff) "Wind energy system" means an integrated unit consisting  
21 of a wind turbine composed of a rotor, an electrical generator, a  
22 control system, an inverter or other power conditioning unit,  
23 **CONDUIT AND WIRING, COLLECTOR BOXES, WIRING PANELS, SWITCHING**  
24 **EQUIPMENT**, and a tower **INCLUDING THE NECESSARY FOUNDATION**, which  
25 uses moving air to produce power.