

Act No. 632
Public Acts of 2006
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**STATE OF MICHIGAN
93RD LEGISLATURE
REGULAR SESSION OF 2006**

Introduced by Senators Allen, Olshove, Goschka, Barcia and Birkholz

ENROLLED SENATE BILL No. 583

AN ACT to amend 2002 PA 593, entitled "An act to create and provide for the operation of the Michigan next energy authority; to provide for the powers and duties of the authority; to promote alternative energy technology and economic growth; and to exempt property of an authority from tax," by amending section 2 (MCL 207.822).

The People of the State of Michigan enact:

Sec. 2. As used in this act:

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

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

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

- (i) A fuel cell energy system.
- (ii) A photovoltaic energy system.
- (iii) A solar-thermal energy system.
- (iv) A wind energy system.
- (v) A CHP energy system.
- (vi) A microturbine energy system.
- (vii) A miniturbine energy system.
- (viii) A Stirling cycle energy system.
- (ix) A battery cell energy system.
- (x) A clean fuel energy system.
- (xi) An electricity storage system.
- (xii) A biomass energy system.
- (xiii) A thermoelectric energy system.

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

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

(ii) The process of generating and putting into a usable form the energy generated by an alternative energy system. Alternative energy technology does not include those component parts of an alternative energy system that are required regardless of the energy source.

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

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

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

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

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

(e) “Alternative energy technology business” means a business engaged solely in the research, development, or manufacturing of alternative energy technology.

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

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

(ii) A fuel cell vehicle. As used in this subparagraph, “fuel cell vehicle” means a motor vehicle powered solely by a fuel cell energy system.

(iii) An electric vehicle. As used in this subparagraph, “electric vehicle” means a motor vehicle powered solely by a battery cell energy system.

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

(v) A solar vehicle. As used in this subparagraph, “solar vehicle” means a motor vehicle powered solely by a photovoltaic energy system.

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

(A) A battery cell energy system.

(B) A fuel cell energy system.

(C) A photovoltaic energy system.

(vii) A hydraulic hybrid vehicle. As used in this subparagraph, “hydraulic hybrid vehicle” means a motor vehicle powered by a regenerative hydraulic drive system or powered by an internal combustion engine assisted by a regenerative hydraulic drive system.

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

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

(i) “Authority” means the Michigan next energy authority created under section 3.

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

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

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

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

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

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

(m) “Board” means the governing body of an authority under section 4.

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

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

(ii) One of the following:

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

(B) A fuel cell energy system.

(o) “Clean fuel” means 1 or more of the following:

(i) Methane.

(ii) Natural gas.

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

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

(v) Compressed natural gas.

(vi) Liquefied natural gas.

(vii) Liquefied petroleum gas.

(viii) Hydrogen.

(ix) Renewable fuels.

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

(q) “Department” means the department of management and budget.

(r) “Electricity storage device” means a device, including a capacitor, that directly stores electrical energy without conversion to an intermediary medium.

(s) “Electricity storage system” means 1 or more electricity storage devices and inverters or other power conditioning equipment.

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

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

(ii) “Fuel cell stack” means an assembly of fuel cells.

(iii) “Fuel processor” means a device that converts a fuel, including, but not limited to, methanol, natural gas, or gasoline, into a hydrogen rich gas, without combustion for use in a fuel cell.

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

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

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

(x) “Person” means an individual, partnership, corporation, limited liability company, association, governmental entity, or other legal entity.

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

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

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

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

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

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

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

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

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

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

(A) A fuel cell energy system.

(B) A photovoltaic energy system.

(C) A wind energy system.

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

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

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

(ff) "Wind energy system" means an integrated unit consisting of a wind turbine composed of a rotor, an electrical generator, a control system, an inverter or other power conditioning unit, and a tower, which uses moving air to produce power.

This act is ordered to take immediate effect.

Carol Morey Viventi

Secretary of the Senate

Jay E. Randall

Clerk of the House of Representatives

Approved

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Governor