Michigan Renewable Energy Sources Act (or the Act Granting Priority to Renewable Energy Sources)[1]

Section 1
Act on granting priority to renewable energy sources
(Michigan Renewable Energy Sources Act)
Article 1
Purpose

(1) The purpose of this act is to enable the rapid and sustainable development of Michigan's abundant renewable energy resources for the clean generation of electricity.
(2) This act provides numerous benefits from the rapid development of renewable resources of electricity generation for Michigan citizens of today and those of tomorrow. These benefits include, but are not limited to

(a) Protecting Michigan's atmosphere from air pollution,
(b) Protecting Michigan's climate from global warming,
(c) Protecting Michigan's natural resources,
(d) Opening electricity generation from renewable resources to all citizens,
(e) Providing equitable opportunity for all citizens to help meet the state's renewable energy targets,
(f) Reducing the volatility of future electricity prices,
(g) Reducing the long-term costs of electricity,
(h) Placing Michigan at the forefront of North America's renewable energy revolution,
(i) Stimulating the development of new technologies and industry in Michigan, and
(j) Creating a Michigan marketplace for the development of renewable energy.

(3) This act is further intended to contribute to the increase in the percentage of renewable energy sources in electricity supply to at least 5 per cent by 2010, at least 15% by 2015 and to at least 20 per cent by 2020. These are minimum targets and may be exceeded under this act.
(4) This act is further intended to simplify the awarding of contracts for the generation of electricity with renewable resources and by doing so increase the transparency and equity of the electricity generation system.

Article 2
Scope of application

(1) This act regulates
1. the priority of connections to the electricity grid of plants generating electricity from

[1] Draft by Paul Gipe, March 17, 2007. Adapted from the English language version of the "Act on granting priority to renewable energy sources (Renewable Energy Sources Act)", passed by the German parliament, 21 July 2004, http://www.bmu.de/files/pdfs/allgemein/application/pdf/eeg_en.pdf.

renewable energy sources, and

2. the priority purchase and transmission of, and payment for, such electricity by the grid operator or electricity market regulator, and

3. a state-wide equalization system for distributing the cost of electricity purchased by and paid for under the act among all electricity consumers.

Article 3
Definitions
(1) Renewable energy sources shall mean hydropower, wind energy, solar radiation, geothermal energy, energy from biomass including biogas, landfill gas, and sewage treatment plant gas as well as the biodegradable fraction of municipal and industrial waste.

(2) Plant shall mean any independent technical facility generating electricity from renewable energy sources. Several plants generating electricity from equivalent renewable energy sources, if constructed within the application of this act and directly attached to building structures and commonly used installations technically required for operation shall be considered as one plant. This includes inverters, access ways, grid connections as well as measuring, administrative and control facilities in particular that are not technically required for such operation.

(3) Plant operator shall mean anyone who, notwithstanding the issue of ownership, uses the plant for the purpose of generating electricity from renewable energy sources.

(4) Commissioning shall mean the first time a plant is put into operation, following establishment of operational readiness or its modernization, if modernization costs amount to at least 50 per cent of the investment costs required to build a completely new plant including all building structures and installations technically required for its operation.

(5) Capacity of a plant shall mean the effective electrical capacity that the plant may technically produce without time restrictions during regular operation irrespective of short-term deviations. When the relevant capacity is determined to calculate the tariffs paid uner the act, the standby capacity shall not be considered.

(6) Grid system shall mean all the interconnected facilities used for the transmission and distribution of electricity for general supply.

(7) Grid system operators shall mean the operators of all types of voltage systems for general electricity supply.

Article 4
Obligation to purchase and transmit electricity
(1) Grid system operators shall immediately and as a priority connect plants generating

electricity from renewable energy sources to their systems and guarantee priority purchase and transmission of all electricity from renewable energy sources supplied by such plants. After establishment of a register of installations pursuant to Article 15(3), such obligation for the purchase pursuant to the first sentence above shall apply only if the plant operator has submitted an application for entry into the register. Notwithstanding Article 12(1), plant operators and grid system operators may agree by contract to digress from the priority of purchase, if the plant can thus be better integrated into the grid system. When determining the charges for use of the grid, grid system operators may add any costs incurred in accordance with a contractual agreement pursuant to the third sentence above, provided that such costs are substantiated.

(2) The obligation under paragraph (1) first sentence above shall apply to the grid system operator or load serving entity that is most closely located to the plant site and is in possession of a grid technically suitable to receive electricity if there is no other grid with a technically and economically more suitable grid connection point. A grid shall be deemed to be technically suitable even if– notwithstanding the priority established under paragraph (1) first sentence above – feeding in the electricity requires the grid system operator to upgrade its grid at a reasonable expense; in this case, the grid system operator shall upgrade its grid without undue delay, if so requested by a party interested in feeding in electricity. If the plant must be licensed in accordance with any other legal provisions, the obligation to upgrade the grid in accordance with the second sentence above shall only apply if the plant operator submits either a license, a partial license or a preliminary decision. The obligation to upgrade the grid shall apply to all technical that or passed into the ownership of the grid system operator.

(3) The obligation for priority connection to the grid system pursuant to paragraph (1) first sentence above shall apply even if the capacity of the grid system or the area serviced by the grid system operator is temporarily entirely taken up by electricity produced from renewable energy sources, unless the plant does not have a technical facility for reducing the feed-in in the event of grid overload. The obligation pursuant to paragraph (1) first sentence above for priority purchase of the electricity produced in these plants shall apply only if the capacity of the grid system or the area serviced by the grid system operator is not already used up by electricity produced in other plants generating electricity from renewable energy sources which were connected prior to these plants; the obligation to upgrade the grid system without undue delay pursuant to paragraph (2) second sentence above shall remain unaffected. In the event of non-purchase of such electricity, the grid system operator shall, if so requested by the plant operator, provide proof of fulfillment of the conditions set out in the second sentence above in writing within four weeks and produce verifiable calculations.

(4) The relevant data on the grid system and on the electricity generation plants, which are required to test and verify the grid compatibility, shall be presented upon request within eight weeks where this is necessary for the grid system operator or the party interested in feeding in electricity to do their planning and to determine the technical suitability of the grid.

(5) The obligation for priority purchase and transmission of electricity in accordance with paragraph (1) first sentence above shall also be applied, if the plant is connected to the grid of a plant operator or a third party who is not a grid system operator within the meaning of Article 3(7) and if the electricity is offered to a grid system in accordance with Article 3(6) via a merely budgeted transit through this grid system.

(6) The upstream transmission system operator shall guarantee priority purchase and transmission of the quantity of energy purchased by the grid system operator in accordance with paragraph (1) or (5) above.

Article 5
Obligation to pay advanced renewable energy tariffs
(1) Pursuant to Articles 6 to 12, the grid system operators shall pay tariffs for electricity generated in plants exclusively using renewable energy sources and purchased in accordance with Article 4(1) or (5) and transmitted through the grid operators system. The obligation in accordance with the first sentence above shall apply to all plants producing electricity or those plants producing hot water used to offset electrically heated water.

(2) Pursuant to Articles 6 to 12, the upstream transmission system operator shall pay for the quantity of energy that the grid system operator has purchased in accordance with Article 4(6) and paid for in accordance with paragraph (1) above.

Article 6
Tariffs paid for electricity produced from hydropower
(1) The tariffs paid for electricity generated by run-of-the-river hydroelectric power plants shall be based on the price needed for development plus a reasonable profit, differentiated by project size, and no less than that below.
<500 kW, $0.10/kWh,
500 kW to 10 MW, $0.085/kWh, and
10 MW to 20 MW, $0.065/kWh.

Article 7
Tariffs paid for electricity produced from landfill gas, sewage treatment plant gas
(1) The tariffs paid for electricity from landfill gas, sewage treatment plant gas shall be based on the price needed for development plus a reasonable profit, differentiated by project size, and no less than that below.
<500 kW, $0.10/kWh, and
>500 kW, $0.85/kWh.

Article 8
Tariffs paid for electricity produced from biogas
(2) The tariffs paid for electricity produced from biogas gas shall be based on the price needed for development plus a reasonable profit, differentiated by project size, and no less than that below.

<150 kW, $0.145/kWh
150 to 500 kW, $0.125/kWh,
500 kW to 5 MW, $0.115/kWh, and
5 MW to 20 MW, $0105/kWh.

Article 9
Tariffs paid for electricity produced from geothermal energy

(3) The tariffs paid for electricity generated in geothermal energy plants shall be based on the price needed for development plus a reasonable profit, differentiated by project size, and no less than that below.

<5MW, $0.19/kWh,
5 MW to 10 MW, $0.18/kWh,
10 MW to 20 MW, $0.115/kWh, and
>20 MW, $0.09/kWh.

Article 10
Tariffs paid for electricity produced from wind energy

(4) The tariffs paid for electricity generated by wind-powered plants gas shall be based on the price needed for development plus a reasonable profit, differentiated by average specific yield in kWh/m^2/year of rotor swept area as described below.

Prices or tariffs will be determined using a fixed price for all wind generation from year one through year five. Subsequent tariffs for years six through year 20 will be determined based on the average specific yield in kilowatt-hours per square meter of rotor area on a sliding scale, otherwise known as the ADEME (Agence de l'Environnement et de la Maitrise de l'Energie) model. The average specific yield will be the average of the sum of the first five years of production in kWh, less the year of maximum and the year of minimum production, divided by the rotor swept area.

All wind turbines will be paid a tariff of $0.105/kWh for generation in years one through five.

All wind turbines with an average specific yield less than 700 kWh/m^2/year will be paid a tariff of $0.105/kWh for years six through twenty.

All wind turbines with an average specific yield greater than 1,100 kWh/m^2/year will be paid a tariff of 0.08/kWh for years six through twenty.

All wind turbines with an average specific yield between 700 and 1,100 kWh/m^2/year will be paid a tariff that is a linear interpolation between the tariff at 700 kWh/m^2/year and that for 1,100 kWh/m^2/year.

Article 11
Tariffs paid for electricity produced from solar radiation

(1) The tariffs paid for electricity generated by plants using solar radiation shall be based on the price needed for development plus a reasonable profit, differentiated

by project size or location and no less than that below.

Freestanding or open field, $0.50/kWh,
<30 kW on roof tops, $0.65/kWh,
30 kW to 100 kW on roof tops, $0.62/kWh,
>100 kW on roof tops, $0.61/kWh,
<30 kW façade cladding, $0.71/kWh,
30 kW to 100 kW façade cladding, $0.68/kWh, and
>100 kW façade cladding, $0.67/kWh.

Article 12
Common provisions for purchase, transmission and payment of tariffs

(1) Grid system operators shall offer a Standard Contract to all qualified participants. The Standard Contracts shall be approved by the Michigan Public Service Commission for conciseness, clarity, ease of understanding, and transparency. The Standard Contracts must include the prices or tariffs paid for each kilowatt-hour generated, the duration of the contract, and any adjustments of the tariffs for inflation. The Michigan Public Service must provide grid system operators and load serving entities with standardized contracts within three months after passage of the act.

(2) Where Articles 6 to 11 provide for different minimum tariffs depending on the plant's capacity or average specific yield, the amount of the tariffs shall be determined according to the share of the plant's capacity in relation to the threshold value to be applied. For the purpose of attribution to the threshold values referred to in Articles 6 to 9 and notwithstanding Article 3(5), capacity within the meaning of the first sentence above shall be understood as meaning the ratio of the total kilowatt-hours to be purchased in the calendar year in question pursuant to Article 4(1) or (5) to the total number of full hours for that calendar year less the number of full hours prior to commissioning and after final decommissioning of the plant.

(3) The minimum tariffs shall be paid from the date of commissioning for a period of 20 calendar years as well as for the year of commissioning.

(4) The set-off of payment claims by the plant operator in accordance with Article 5 against a claim by the grid system operator shall only be permissible where the claim is undisputed or has been legally established.

(5) Upon request of the plant operator, the court responsible for the principal case may, at its own discretion and in consideration of the merits of the individual case, order the debtor of the claims referred to in Articles 4 and 5 by way of a preliminary injunction to connect the plant temporarily and purchase the electricity generated by it and make an advance payment of an equitable and fair amount of money.

(6) Electricity fed in from several plants may be billed via a shared metering device. In this case, the capacity of each individual plant shall be deemed relevant for calculating

the amount of differentiated minimum tariffs. If electricity generated by several wind-powered plants to which different rates of minimum tariffs are applicable is billed via a common metering device, the quantities of electricity are attributed to the wind-powered plants in proportion to their reference yields.

(7) The minimum tariffs in accordance with Articles 6 to 11 shall not be deemed to include sales tax.

(8) Tariffs paid for each kilowatt-hour generated by renewable resources and other terms of the act shall be reviewed two years after the first contracts are awarded under the act to determine the robustness of the act. Tariffs shall be determined by public consultation of a select Assembly committee made up of academic and engineering expertise, renewable energy stakeholders, select members of Michigan's Legislative Assembly and others by invitation. Tariffs will be determined on the price needed for profitable development. Profitable development will be defined as a Profitability Index of no less than 0.1 to ensure rapid deployment of renewable sources of generation, and no more than 0.3 to prevent excessive profits and unnecessary costs to ratepayers.

(8) Tariffs in Articles 6 to 11 will be indexed to 60% of inflation, that is tariffs will increase annually with 60% of inflation to protect long-lived capital investments such as renewable sources of electricity generation.

(9) Tariffs in Articles 6 to 11 apply to only those generators not applying for or receiving federal subsidies or federal tax credits or other federal incentive payments.

(10) Tariffs in Articles 6 to 11 may apply proportionally to those generators applying for or receiving federal subsidies or federal tax credits or other federal incentive payments as determined to deliver a Profitability Index of no less than 0.1 to ensure rapid deployment of renewable sources of generation, and no more than 0.3 to prevent excessive profits and unnecessary costs to ratepayers. A system of proportional tariffs will be determined by the Michigan Public Service Commission in a prompt, open, and transparent manner within three months of passage of the act.

Article 13
Grid costs

(1) The costs associated with connecting plants generating electricity from renewable energy sources to the technically and economically most suitable grid connection point and with installing the necessary measuring devices for recording the quantity of electrical energy transmitted and received shall be borne by the plant operator. In the case of one or several plants with a total capacity of up to 30 kilowatts located on a plot of land which already has a connection to the grid, this plot's grid connection point shall be deemed to be its most suitable connection point; if the grid system operator establishes a new connection point for the plants, he shall bear the resulting incremental cost. Implementation of this connection and the other installations required for the safety of the grid shall meet the plant operator's technical requirements in a given case. The plant operator may have the connection and the installation and

operation of measuring devices implemented either by the grid system operator or by a qualified third party.

(2) The costs associated with upgrading the grid in accordance with Article 4(2) that solely result from the need to accommodate new, reactivated, extended or otherwise modernized plants generating electricity from renewable energy sources for the purchase and transmission of electricity produced from renewable energy sources shall be borne by the grid system operator whose grid needs to be upgraded. He shall specify the required investment costs in detail. The grid system operator may add these costs when determining the charges for use of the grid.

Article 14
Statewide equalization of costs across all electricity consumers
(1) The transmission system operators shall record the different volumes of and periods of generation of energy paid for in accordance with Article 5(2) as well as the tariffs paid, and provisionally equalize such differences amongst themselves without undue delay and settle the accounts with regard to the quantities of energy and the tariffs paid pursuant to paragraph (2) below.

(2) By 30 September of each year, the transmission system operators shall determine the quantity of energy purchased and paid for in the previous calendar year in accordance with Article 5 and provisionally equalized in accordance with paragraph (1) above, and the percentage share of this quantity in relation to the total quantity of energy delivered to final consumers by the utility companies in the area served by the individual transmission system operator in the previous calendar year. If transmission system operators have purchased quantities of energy that are greater than this average share, they shall be entitled to sell energy to and receive tariffs from the other transmission system operators in accordance with Articles 6 to 12, until the other grid system operators have purchased a quantity of energy
equal to the average share.

(3) Utility companies which deliver electricity to final consumers shall purchase and pay for that share of the electricity which their regular transmission system operator purchased pursuant to the provisions of paragraphs (1) and (2) above in accordance with a profile made available in due time and approximated to the actually purchased quantity of electricity pursuant to Article 4 in conjunction with Article 5. The first sentence above shall not apply to utility companies which, of the total quantity of electricity supplied by them, supply at least 50 per cent in accordance with the provisions of Articles 6 to 11. The share of the electricity to be purchased by a utility company in accordance with the first sentence above shall be placed in relation to the quantity of electricity delivered by the utility company concerned and shall be determined in such a way that each utility company will receive a relatively equal share. The compulsory quantity to be purchased (share) shall be calculated as the ratio of the total quantity of electricity paid for in accordance with Article 5(2) to the total quantity of electricity sold to final consumers. The tariffs as specified in the first sentence above shall be calculated as the expected average tariffs per kilowatt-hour

paid by all grid system operators combined two quarters earlier in accordance with Article 5, less the charges for use of the grid avoided pursuant to Article 5(2) second sentence. The transmission system operators shall assert claims held against the utility companies in accordance with the first sentence above that arise from equalization in accordance with paragraph (2) above by 31 October of the year following the feeding-in of electricity. Equalization for the actual energy quantities purchased and the tariffs paid shall take place in monthly installments before 30 September of the following year. Electricity purchased in accordance with the first sentence above may not be sold below the tariffs paid in accordance with the fifth sentence above if it is marketed as electricity produced from renewable energy sources or as comparable electricity.

(4) If a valid court decision in the principal case issued after a billing statement pursuant to paragraph (2) first sentence or paragraph (3) above leads to any changes regarding the quantities of energy to be billed or the payments of tariffs due, such changes shall be taken into account in the next billing statement.

(5) Monthly installments shall be paid on the expected equalization payments.

(6) Grid system operators that are not transmission system operators and utility companies shall without undue delay make available the data required to perform the calculations referred to in paragraphs (1) to (5) above and present their final accounts for the previous year by 30 April. Grid system operators and utility companies may request that final accounts pursuant to the first sentence above be certified by 30 June and final accounts pursuant to paragraph (2) above by 31 October by a chartered or certified accountant. Plant operators shall make the data required for the final accounts of the previous year available by 28 February of the following year.

(7) Final consumers who purchase electricity not from a utility company but from a third party are placed on an equal footing with utility companies as defined in paragraphs (2) and (3) above.

(8) The Michigan Public Service Commission is authorized to issue a ruling setting out the provisions on

1. the organizational and temporal framework for equalization pursuant to paragraph (1) above, in particular with a view to determining the responsible party and ensuring optimum and equal forecasting options with regard to the quantities of energy to be equalized and burden trends;

2. determining or identifying a uniform profile in accordance with paragraph (3) above, on the question of when, including the run-up period, and how such a profile and the underlying data are made available and on

3. the specification of the data required in accordance with paragraph (6) above and how such data are to be made available.

Article 15
Transparency

(1) Grid system operators and utility companies, and any alliances formed by them, which deliver electricity to final consumers shall be entitled to give notice to any third parties of the difference between the tariffs paid in accordance with Article 14(3) first and fifth sentences and their own average purchase costs per kilowatt-hour or the average purchase costs per kilowatt-hour incurred by the utility companies connected to their grid system during the last closed financial year (differential cost), where they provide proof of this by presenting a certificate by a chartered or certified accountant which will be published. When giving notice of the differential cost, the number of kilowatt-hours of electricity produced from renewable energy sources and from mine gas on which the calculation pursuant to the first sentence above is based must also be stated. Costs that may be added to the charges for use of the grid shall not be shown separately.

(2) The grid system operators shall publish the data necessary to determine the energy quantities and the fee payments to be equalized in accordance with Article 14 by 30 September of the following year. Such data must show whether the grid system operators have purchased the energy quantities from a downstream grid and whether they have sold the electricity to final consumers, grid system operators or utility companies delivering electricity to final consumers or used it themselves. The Michigan Public Service Commission is authorized to regulate the details of the publication requirements in a ruling.

(3) For the purpose of increasing transparency and simplifying the statewide equalization mechanism, a public register may be established through a ruling pursuant to the third sentence below in which installations for the generation of electricity from renewable energy sources are to be registered (register of installations). Registration may be subject to a fee as defined in an ordinance pursuant to the third sentence below. The Michigan Public Service Commission is authorized to issue a ruling that entrusts a subordinate state authority or a legal person under private law with the keeping of the register of installations and to determine any details regarding the register, the information to be registered, the registration procedure, data protection requirements, publication of data and the charging and level of tariffs.

Article 16
Special provision for energy intensive industries

(1) It is the intention of this act that energy intensive industries buying electricity in the state of Michigan may be excused from paying the equalization surcharge if such industries can prove hardship.
(2) The Michigan Public Service Commission is authorized to begin a rule-making proceeding on the terms, transparency, and rationale for determining when an energy intensive industry has suffered hardship from the equalization surcharge upon passage of the act.
(3) The Michigan Public Service Commission is to weigh similar provisions in other jurisdictions in North America and worldwide to maintain Michigan’s competitive

position.
(4) The Michigan Public Service Commission is to weigh actual costs incurred and competitive positions eroded not to weigh proscriptive or future impacts.

Article 17
Guarantee of origin
(1) Plant operators may request a person or organization entitled to act as an environmental verifier or environmental verification organization in the field of electricity production in accordance with an Environmental Audit to issue a guarantee of origin for electricity produced from renewable energy sources.

(2) Such guarantee of origin must specify

1. the energy sources from which the electricity was produced, listed according to type and major components, including the information to what extent the electricity was produced from renewable energy sources

2. where biomass is used, whether it is exclusively biomass within the meaning of the ordinance pursuant to Article 8(7),

3. the name and address of the plant operator,

4. the quantity of electricity generated in the plant, the period in which it was produced and to what extent it was paid for in accordance with Articles 5 to 12 and

5. the place, the capacity and the date of commissioning of the plant.

(3) Such guarantees of origin shall only be used if the information required in paragraph (2) above is complete.

Article 18
Prohibition of multiple sale
(1) Electricity produced from renewable energy sources and from mine gas or landfill gas, sewage treatment gas, or gas from biomass fed into a gas network may not be sold or otherwise transferred more than once.

(2) Plant operators who received payment in accordance with Articles 5 to 12 shall not forward any guarantees for electricity produced from renewable energy sources. If a plant operator forwards such a guarantee for electricity produced from renewable energy sources, the electricity shall not be paid for in accordance with Articles 5 to 12.

Article 19
Clearing house
The Michigan Public Service Commission may establish a clearing house to settle any

disputes and issues of application arising under this act, which may involve the parties concerned.

Article 20
Progress report
(1) The Michigan Public Service Commission shall every four years report on the state of affairs with regard to the introduction to the market of plants generating electricity from renewable energy sources and from and the development of electricity production costs in such plants and shall if necessary propose an adjustment of the amount of the tariffs to be paid in accordance with Articles 6 to 12. The progress report shall also assess the storage technologies and the ecological effects of the use of renewable energy sources on nature and landscapes.

(2) For the purpose of spot checks of electricity production costs within the meaning of paragraph (1) above and in order to ensure the functioning of the equalization scheme pursuant to Article 14, plant operators whose plants were commissioned on or after 1 August 2006 and who have received payment of tariffs in accordance with Articles 5 to 12, and grid system operators shall, upon request, provide the Michigan Public Service Commission and its authorised representatives with truthful and accurate information about all facts that may be relevant for the assessment of electricity production costs and of equalised energy quantities and payments of tariffs in accordance with Article 14. If the plant operators and grid system operators are traders within the meaning of the Commercial Code, the account books shall in addition be disclosed upon request where they may give information about facts that may be relevant for assessing the electricity production costs and the equalized energy quantities and payments of tariffs. The principles of data protection shall be observed.

Section 2
Entry into Force, Expiry
This act shall enter into force on the day following the signature of the Governor of the State of Michigan.

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