

# Planning Commission

## Regular Meeting Agenda

Tuesday, November 1, 2022  
7:00 P.M., Historic Bowne Township Hall



1. Call to Order
2. Roll Call
3. Approval of Agenda - MOTION
4. Approval of Meeting Minutes
  - a. Regular Meeting Minutes:
    - i. October 4, 2022 – MOTION
5. Acknowledgment of Visitors
6. Public Comment and Correspondence Concerning Items Not on the Agenda
7. Commissioner Comments
8. Public Hearings:
  - a. None
9. General Business:
  - a. Solar Energy Ordinance - DISCUSSION
10. New Business:
  - a. R-1 & R-2 Districts Lot Area - DISCUSSION
11. Public Comments
12. Adjournment

Respectfully Submitted,  
Bradley S. Kotrba, AICP

1 BOWNE TOWNSHIP PLANNING COMMISSION  
2 DRAFT MINUTES  
3 REGULAR MONTHLY MEETING  
4 TUESDAY, OCTOBER 4, 2022, 7:00 PM  
5

6 The regular monthly meeting of the Bowne Township Planning Commission was held in the Historic  
7 Township Hall located at 8240 Alden Nash Avenue SE., Alto, Michigan, Kent County.

8 **1. CALL TO ORDER:**

9 The meeting was called to order by Member Oosting at 7:00 PM.

10 **2. ROLL CALL:**

11 MEMBERS PRESENT: JAMES OOSTING – CHAIRMAN

12 SHAWN WENGER

13 FRED OESCH

14 LARRY WINGEIER – VICE CHAIRMAN

15 JAY BARNHART

16 ROGER GRAHAM

17  
18 NOT PRESENT: SARAH LARSON – SECRETARY

19 DAVID FUSS – TWP. BOARD REPRESENTATIVE

20 DAVE HOEKSTRA

21  
22 OTHERS PRESENT: BRADLEY KOTRBA – TOWNSHIP PLANNER, WILLIAMS & WORKS, INC.

23 CLIFFORD BLOOM – TOWNSHIP ATTORNEY, BLOOM SLUGGETT, PC.

24 RANDY WILCOX, TOWNSHIP SUPERVISOR

25 BONNIE LENT-DAVIS, 12340 84<sup>th</sup> STREET SE

26 TOM YONKER

27 KIM YONKER

28 ASHLEY ROH

29 ALLI VENSLEDRIGHT

30 MEGAN RYTECKI, CONSUMERS ENERGY CORPORATION

31 LEIGH CHICK

32 DONNA OESCH

33 KEVIN DIELEMEN  
34  
35  
36  
37  
38

39 **3. AGENDA: MOTION**

40 Chairman Oosting inquired from the Commission if any changes to tonight's agenda were required,  
41 and hearing none, Chairman Oosting motioned to accept the agenda submitted for the October 4,  
42 2022, regular meeting, seconded by Barnhart. Motion carried.

43 **4. MINUTES: MOTION**

44 Chairman Oosting asked if there were any changes, additions, or corrections to the September 6,  
45 2022, DRAFT MEETING MINUTES. There were none. Chairman Oosting asked for a motion to accept  
46 the draft regular meeting minutes from the September 6, 2022, regular Planning Commission  
47 meeting. As presented, Oosting motioned to accept the July 12, 2022, meeting minutes, and Oesch  
48 seconded. Motion carried.

49 **5. INTERESTED CITIZENS IN THE AUDIENCE COMMENTING ON ITEMS NOT ON THE AGENDA:**

50 Chairman Oosting asked the public members if anyone would like to comment on any item that is  
51 not on tonight's agenda that they would have three minutes to speak and please step forward and  
52 state their name and address. A member of the audience (name not given or address) commented  
53 that they were upset that there was not an item on the agenda for public comment at both the  
54 beginning and the end of the agenda. They said there used to be and that it no longer is there, and  
55 they would like their comments to be heard. Chairman Oosting stated that this agenda item is the  
56 first opportunity for the general public in attendance to speak on things that are not on the agenda.  
57 He then said that even though each agenda item does not mention a formal public comments  
58 session after each item, the Planning Commission chooses to ask for public comment after each  
59 agenda item and that tonight's agenda does contain a general public comment period at the end of  
60 the meeting which is agenda item number 11. With no further comments, Chairman Oosting moved  
61 to open the unfinished business on the agenda.

62 **UNFINISHED BUSINESS:**

63 6. There was no unfinished business on the agenda for this evening. Chairman Oosting then moved to  
64 open new business.

65 **NEW BUSINESS:**

66 **7. Consumers Energy Biodigesters Presentation:**

67 Megan Rytecki of Consumers Energy opened the presentation with her and two of her colleagues to  
68 present the overall design and operation of the biodigester proposed in Bowne Township. They  
69 explained that this presentation was not intended to be a formal question and answer session for  
70 the general public because a public meeting was held before this Planning Commission meeting.  
71 Instead, this presentation intends to discuss the proposed project and provide a summary of the  
72 technology, the facility's operation, and how the development of an ordinance is essential for

73 implementation. They intend to receive comments and feedback from the Planning Commission this  
74 evening. Miss Rytecki stated that CMS Energy partnered with Swiss Lane Farms about a year and a  
75 half ago to incorporate a biodigester into their daily operations on the farm. Consumers Energy's  
76 role would be to build and operate the digester to gain the natural gas produced naturally from the  
77 manure waste on the farm. This partnership with Consumers is the company's growing inventory of  
78 renewable energy resources. Consumers have designed this biodigester specifically for Swiss Lane  
79 Farms. This means that the digester will only accept manure from that farm and that the digester is  
80 engineered to process the farm's specific type of manure, feed used, and other natural chemical and  
81 microbial conditions found in this manure farm only. No outside manure or other organic products  
82 will be used in this system. From Consumers standpoint, this is crucial because it maintains the  
83 digester's highest quality and harvesting capability. When mixed feedstock and other supplies are  
84 used, it negatively affects the performance of the digester and will cause byproducts, such as odor,  
85 which can be witnessed from other digesters in the region.

86 Consumers, therefore, suggest that feed source materials be a condition in the ordinance to  
87 regulate manure stock from only Swiss Lane Farm can be used for this digester. The presenter also  
88 spoke about another reason for this condition: from an odor monitoring standpoint, the odor will be  
89 less intrusive if it is sourced from one product only, which would have the beneficial effect of  
90 lessening or removing the conditional requirements of odor monitoring. One concern about odor  
91 monitoring at an active facility in this location is the facility's proximity to the farm barns with all the  
92 cattle. How would an observer or even a quantitative device be able to tell the difference if the odor  
93 was coming from the facility or the barn immediately next door? This may be a difficult variable to  
94 monitor.

95 Consumers brought in a preliminary design concept that had not been released to the community at  
96 the public open house. It will not be the final design; however, it provides a direction for what the  
97 overall site may look like if constructed.

98 Barnhart asked how long does the process take to move the manure through the digester and turn  
99 the waste into gas? The presenter stated that it takes about four to six weeks for the whole process  
100 of it being piped in from the dairy barns into the facility, time for microbial digestion, gas capture  
101 and scrubbing, and then inert byproduct pumped out and back into the farm lagoons. Barnhart then  
102 asked if any other gas byproducts would be emitted from this digester. The representative  
103 confirmed this and stated that it would be all the same gasses emitted from the current lagoon that  
104 the farm maintains.

105 Oosting asked a question about the material byproduct used as bedding. He wondered if that had  
106 any nutritional value. The representative stated that the fiber byproduct does not have any  
107 nutritional or organic value and is done intentionally. That what leaves the digester is separated into  
108 a liquid and a solid composed of the fiber feed that the dairy cattle eat. The solids will be dried and  
109 re-used in a continuous cycle in the barns as bedding for the cattle. The liquids that remain from the  
110 digester, minus the methane, contain all the nutrients that the farm would use to fertilize the fields

111 as they do now, but without the smell from the methane gas that will be removed during the  
112 digestion process.

113 Oosting asked about the training of the operators of the facility. The representative stated that they  
114 intend to have hired third-party professionals to operate the facility for at least the first year. This is  
115 because CMS does not have experience operating a digester from start to finish, and this is also new  
116 for them. From there, they plan to partner with Michigan State University to train staff for the  
117 digester operation because MSU has been operating digesters for decades and has years of  
118 experience with these systems. Currently, CMS does not have an engineering firm hired yet as an  
119 operating partner, but the system will operate with trained professionals with prior experience  
120 when this facility comes online. Oosting asked if there is formal licensure or certification for  
121 operators with on-site, accredited staff. The representative stated that the American Biogas Council  
122 operates a certification program. However, the state does not have a certification or licensure  
123 program for managing a digester and has not had one for many years.

124 Barnhart asked, what if Swiss Lane Farms left were no longer in operation? What would happen at  
125 this point? The representative stated that the contract that CMS and Swiss Lane hold has a  
126 contractual obligation that if Swiss Lane shut down operations, they would have to locate a suitable  
127 manure source replacement for the digester so it could maintain its functional operation. Oosting  
128 asked what the life expectancy is for a system of this design. CMS responded that this is a 25-year  
129 asset and that the whole facility is designed around the tanks engineered for a 25-year life span. The  
130 remaining components of the system have a lesser life span but are easily replaceable, and this  
131 facility has been designed to keep the system operating at its full potential for as long as the system  
132 is designed.

133 Attorney Bloom asked if the produced gas was ready to be placed into the pipeline on this site. He  
134 confirmed that the gas is not taken off-site to be processed at a different location. He asked if any  
135 other types of gases or materials needed to be brought on-site to process this methane. CMS  
136 confirmed this is negative; no other products are required to produce the gas on site. The Planning  
137 Commission or staff present asked for no further comments. Chairman Oosting then opened the  
138 floor up to comments from the general public. One resident asked if the bedding leaving the facility  
139 would be stored on the five acres that CMS owns or if it would be stored at the farm.

140 The representative stated that all the byproduct materials (liquid and solid) are sent back to the  
141 farm through the pipeline and are not retained on the biodigester property. CMS responded that  
142 Swiss Lane is responsible for all material coming into the site and are contracted to maintain a  
143 certain level of material quality, and Swiss Lane is responsible for all product leaving the site, minus  
144 the methane gas. Bloom stated that the township tax assessor should be consulted about any  
145 revenue generated from this project. The township treasurer noted that the Freeport biodigester  
146 that presently exists on the southern edge of the Township has a tax exemption status that no  
147 revenue is generated from that facility. The treasurer then asked the representative if they would be  
148 receiving any federal or state tax exemptions or other tax relief program funding. The representative

149 noted that no exemption would be obtained from the state. She mentioned that there would be a  
150 possibility for a federal tax exemption because of the new inflation reduction act that was recently  
151 passed, but the CMS team is still researching this information. The treasurer then asked if CMS had  
152 received its approval from the Michigan Public Services Commission. The representative responded  
153 that they have not and that Consumers has submitted the application on the part of the rate-based  
154 regulated asset, which means that the cost of this facility will be paid for by all the customers that  
155 utilize the natural gas network throughout the State of Michigan. They stated that the Michigan PSC  
156 did not approve that approach and that now it is being built partially funded by volunteers (those  
157 gas users in their customer base that have identified they would like to use more renewable gas  
158 energy sources), which primarily are large user groups such as corporations and other entities that  
159 have approached Consumers and requested that they would like to support renewable gas energy  
160 production. So, this project is not being funded by the broad customer base throughout Michigan.  
161 The new application will be submitted to the Michigan Public Services Commission as part of the  
162 voluntary green pricing program and will be submitted in the first quarter of 2023.

163 Another concerned citizen had questions about the facility harming the market value of the homes  
164 in the area. The Consumers Representative answered this concern by stating that the Consumers  
165 Real Estate Department reviewed this proposal and determined that the use would be no more  
166 impactful on the surrounding area than the existing farms for decades. Therefore, it should be  
167 almost unnoticeable once the operation begins and, thus, should have little to no impact on the  
168 area's home values. However, because the real estate market is so volatile, it is challenging to say  
169 that the effects may or may not happen.

170 Attorney Bloom stated that in situations like this proposal, requiring a bond or multiple bonds that  
171 will remain for the facility's life is very common. For example, one bond may be for  
172 decommissioning, and another may be for compliance. However, there will always be some  
173 mandatory liability insurance policy requirements that CMS would have to provide if there is an  
174 amendment that these items would be included in that ordinance. A resident raised a question  
175 about the North Country Trail (a regional non-motorized trail network traversing north and south in  
176 west Michigan) that runs along Wingeier Road, and she is concerned that traffic and other  
177 unintended results will happen if this facility is installed. She also commented on how the facility will  
178 look. She would like to ensure that it blends seamlessly into the agricultural surroundings and that  
179 things such as lighting and signage do not intrude or are objectionable to surrounding neighbors.  
180 Finally, questions were raised about power loss; how the facility will have backup power, and the  
181 representative answered that they are considering two options presently. One option would be to  
182 install a more significant generator to keep the whole site operational. The second option would be  
183 a smaller generator to keep the digester operational during power outages.

184 Attorney Bloom then walked the Planning Commission through a draft list of items they may  
185 consider for creating an ordinance. Chairman Oosting asked if the Commission must make a motion  
186 to proceed with drafting an ordinance. Bloom stated that there are a couple of options, one is to  
187 update the list of conditions the ordinance needs to cover, another is to direct staff to begin drafting

188 an actual ordinance, or the Commission could instruct staff not to proceed further. Next, bloom  
189 asked the Consumers Energy representatives if their competitors own and/or operate similar  
190 facilities. They answered that DTE Energy has been operating biodigesters for decades on the east  
191 side of Michigan. They (DTE Biomass) operate their units in the unregulated utility environment  
192 because when they first invested in this technology and brought their units online, it was new  
193 technology and therefore was an unregulated utility. They stated that as a regulated utility, it would  
194 be the first regulated asset of this type in the State of Michigan. Barnhart presented a motion to  
195 begin drafting an ordinance to regulate biodigesters in the No further questions were given.

196 Chairman Oosting then moved to the next agenda item of business.

197 **8. Solar Energy Systems Ordinance Discussion:**

198 The Chairman asked if the Township Planner would briefly skim the surface of the proposed solar  
199 ordinance outline in the agenda packet but that, due to time, they would not be addressing this  
200 topic fully until next month. Kotrba touched on why the Township has requested the drafting of new  
201 ordinance amendments for solar and wind energy. He briefly covered the three primary types of  
202 solar energy and how, even though the ordinance that has been drafted covers private systems, the  
203 principal concern is to regulate utility-scale systems. He then walked them through very briefly and  
204 covered some of the main sections of the solar ordinance. Oosting asked why we are writing  
205 ordinance provisions for small scale solar projects and not just focusing on utility-scale. Bloom  
206 answered that it is written in a way that will allow small scale by right on private property, whether  
207 it is structure mounted or ground mounted. It is more important to regulate the large acreage  
208 projects that sell energy off-site. Oosting asked if we are biting off too much to do the digesters and  
209 solar simultaneously. Bloom answered no, the solar ordinance is broadly drafted, and small-scale  
210 solar power projects have been increasing in the Township. Graham motioned for the Planning  
211 Commission to continue further discussing and pursuing the solar energy ordinance. Oesch  
212 supported, motion passed.

213 **9. Wind Energy Systems Ordinance Discussion**

214 The Commission motioned to postpone the Wind Energy Ordinance discussion until a later meeting.

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216 **10. Minimum Lot Area Requirements**

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218 This item was postponed for later review at a future Planning Commission meeting.

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220 **11. Public Comments**

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222 Chairman Oosting inquired from the public if there were anyone that wished to provide any  
223 further comments. There were no comments.

224

225 **12. Commissioner Comments**

226

227 No commissioner comments.

228

229 **13. Adjourn**

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231 Oosting asked for a motion to adjourn. Graham motioned to adjourn the regular Planning  
232 Commission meeting, and Wenger supported it. Motion carried. The meeting was adjourned at  
233 8:08 PM.

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Bradley Kotrba  
Recording Secretary



# Bowne Township Planning Commission

## STAFF REPORT

### AGENDA ITEM 9 SOLAR ENERGY ORDINANCE AMENDMENT



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#### Introduction

At a recent Bowne Township Board meeting, the board members requested that the Planning Commission research the need to draft new ordinances concerning the community's renewable energy resources. At the September 2022 Planning Commission meeting, it was mentioned that staff would begin preparing ordinance information for the following meeting. On October 4, 2022, the Planning Commission briefly discussed this solar energy draft ordinance at the meeting but postponed further discussion.

#### Background

This request was driven by the growing number of requests for small-scale renewable energy systems installed on private property to the likelihood of large-scale utility-grade renewable energy resource facilities. Concerning existing regulations and ordinances in the Township, the Zoning Ordinance speaks very little to these growing forms of land use. Townships all over Michigan are being approached by large-scale utility providers to either purchase or develop, primarily farmland, to create these facilities. Solar energy is one land use that has increased steadily across Michigan in the last several years. The Bowne Township Zoning Ordinance section regulating solar energy consists of one sentence that defines freestanding solar energy structures as accessory uses and, therefore, shall meet the front, side, and rear yard setback requirements for accessory structures in the Township (Section 3.28). Solar energy is not spoken of anywhere else in the ordinance.

There are dozens of small-scale solar energy systems (SES) throughout the Township. The actual number is unknown at this time, but we do know that the building inspector (PCI) has been getting many permit applications for installing these systems. In addition, because the utility sector has been shifting from more centralized power generation facilities, such as coal and natural gas plants, to a higher number of accessory or principal-use solar energy systems, local jurisdictions need to plan for this industry shift. For example, DTE Energy announced that by 2040 it anticipates having more than 10 million solar panels generating power for its customers. In addition, Consumers Energy announced recently that it plans to build approximately 8,000 mW of solar energy by 2040. A 2019 study of solar energy ordinances throughout the State of Michigan has found that fewer than 20% of all communities have zoning

regulations to address all scales of solar energy. In 2019 a significant change in the PA 116 policy for farmland development rights was amended to the legislation. The policy now allows farmers to put their PA 116 agreements on hold to pursue solar energy development options if specific conditions are met. Examples of these conditions include the developer working with the farmer to keep existing farming infrastructure in place. Conditions such as field tiles, planting a cover crop that includes a pollinator habitat, and posting a surety bond that the solar panels will be decommissioned and removed to transfer the land back to a condition that it can be farmed again in the future allow farmers to take advantages of the economic opportunities presented by large scale solar development.

#### ACCESSORY VERSUS PRINCIPAL USE

In the realm of SES, there are two distinctions to remember; accessory use structures and principal use structures. Similar to the other applications found in the zoning ordinance and accessory SES structure is an accessory to the main use. These accessory-use systems can range in size and configuration but are used to generate power or heat water for one or more buildings on a single parcel. These systems can be building-mounted (roof or wall) or ground-mounted (freestanding). These small-scale accessory uses are often regulated by size, location, and setbacks and even may be restricted further by deed restrictions, home-owners associations, condominium associations, or land use covenants.

Principal SES structures generate electricity to be distributed off-site through a grid, providing power to the wholesale utility market. These projects can occupy single or multiple large parcels of land and are primarily used on these parcels, which means that no other land use exists on the property. Basic information regarding the scale of utility solar energy systems and the average amounts of land necessary to generate power follows:

<b>Megawatts (MW)</b>	<b>Acres Needed</b>
<b>1 MW</b>	5 – 10 acres
<b>2 MW</b>	10 – 20 acres
<b>20 MW</b>	100 – 200 acres
<b>100 MW</b>	500 – 1,000 acres
<b>200 MW</b>	1,000 – 2,000 acres

The typical industry threshold between large-scale solar and small-scale solar energy systems is anything above 2 MW (or approximately 20 acres) is classified as a large-scale system. The most significant operating utility-grade solar energy system is located in Shiawassee County and generates around 230 megawatts. However, recently a Township in southcentral Michigan approved the development of a 1,000 MW system to be located on approximately 10,000 acres of land and had no zoning ordinance regulation, nor did they consult a planner or attorney before the deal was signed. In Bowne Township, the Planning Commission must focus on the two main types, accessory use and principal use systems. Therefore, our draft ordinance is written in this format and breaks down small private single-parcel and larger utility-grade systems. The industry is only growing larger, and the adage that Michigan is too far north to have efficient solar generation is outdated. If this argument were valid, no new solar systems

would be installed, and utility providers would not be investing billions of dollars in new infrastructure to develop this technology further.

### **Recommendation**

Staff recommends that the Planning Commission review the draft ordinance prepared by the Township Planner and Township Attorney. First, consider accessory use regulations for small property owners and then move to the larger utility-grade systems. Staff recommends this be discussed thoroughly, and if it needs to be continued at another meeting, choose to do so. However, if the Planning Commission feels that the draft ordinance satisfactorily covers all the regulations, consider setting a public hearing to begin the ordinance adoption process at a future meeting.

### **Support Material**

Draft Solar Energy Ordinance dated September 30, 2022

**BOWNE TOWNSHIP**  
**KENT COUNTY, MICHIGAN**  
**(Ordinance No. \_\_\_\_\_)**

At a regular meeting of the Bowne Township Board held at the Bowne Township Hall held on \_\_\_\_\_, 2022, beginning at 7:00 p.m., Township Board Member \_\_\_\_\_ made a motion to adopt this Ordinance/ordinance amendment, which motion was seconded by Township Board Member \_\_\_\_\_.

**AN ORDINANCE TO AMEND THE BOWNE TOWNSHIP ZONING ORDINANCE; TO AMEND ARTICLE 2 TO ADD A NEW SECTION 2.73 FOR DEFINITIONS RELATED TO SOLAR ENERGY SYSTEMS AND RENUMBER SUBSEQUENT DEFINITION SECTIONS ACCORDINGLY; TO AMEND CHAPTER 3 TO AMEND SECTION 3.28 TO RENAME TO "SOLAR ENERGY SYSTEMS, SMALL SCALE"; AND TO ADD A NEW SECTION 3.29 NAMED "SOLAR ENERGY SYSTEMS, UTILITY SCALE" AND RENUMBER SUBSEQUENT SECTIONS ACCORDINGLY.**

BOWNE TOWNSHIP (the "Township") HEREBY ORDAINS:

**Section 1. Amendment of Article 2.** Article 2 of the Bowne Township Zoning Ordinance is hereby amended to include the following new Section 2.73, which reads in its entirety as follows:

2.73. SOLAR ENERGY COLLECTOR OR SYSTEM: A system or facilities (including solar collector surfaces, panels, and/or ancillary solar equipment) either affixed to a permanent principal or accessory building or functioning as a freestanding structure that collects, stores, and/or distributes solar energy for heating or cooling, generating electricity, or heating water. Solar Energy Systems include, but are not limited to, photovoltaic (PV) power systems and solar thermal systems.

Ancillary Solar Equipment: Any accessory part or device of a solar energy system that does not require direct access to sunlight, such as batteries, electric meters, converters, or water heater tanks.

Property Owner or Lessor: Any person, agent, firm, corporation, limited liability company, or partnership that alone, jointly, or severally with others: (1) has legal or equitable ownership or title to any lot, premises, dwelling, or dwelling unit, with or without accompanying actual possession thereof; or (2) has charge, possession, care, or control of any premises, lot, dwelling or dwelling unit, as an agent of the owner or as executor, administrator, trustee, or guardian of the estate of the beneficial owner. The person shown

on the records of the Kent County Register of Deeds to be the owner of a particular property shall be presumed to be the person who owns or is in control of that property.

Solar Collector Surface: Any part of a solar energy system that absorbs solar energy for use in the system's transformation process. The collector surface does not include frames, supports, and mounting hardware.

Solar Energy: Radiant energy received from the sun that can be collected in the form of heat or light by a solar energy system.

Building-Mounted Solar Energy Collector: A solar energy collector attached to the roof or wall of a building or which serves as the roof, wall, or other element in whole or in part of a building. This also includes building-integrated photovoltaic systems ("BIPV").

Ground-Mounted Solar Energy Collector: A solar energy collector that is not attached to and is separate from any building on the lot on which the solar energy collector is located.

Small-Scale Solar Energy System: A solar energy collector primarily intended to provide energy for on-site uses and to provide power for use by owners, lessees, tenants, residents, or other occupants of the lot on which it is located. It may be comprised of the following: building-integrated photovoltaic systems ("BIPV"), ground-mounted solar energy collectors, and/or building-mounted solar energy collectors.

Photovoltaic System: A collection of solar panels and related equipment and components used to convert light or heat into electrical power.

Utility Scale Solar Energy System: A solar energy system that meets one or more of the following:

- A. It is primarily used for generating electricity or heat for sale and/or distribution off-site to an authorized public utility or other firms for use in the electrical grid;
- B. The total surface area of all solar collector surfaces exceeds 1,500 square feet; and/or
- C. It is not considered an accessory use or structure by the Township Zoning Administrator.

**Section 2. Amendment of Article 3.** Article 3 of the Bowne Township Zoning Ordinance is hereby amended to include the following amended existing Section 3.28 and new Section 3.29, which read in their entirety as follows:

### 3.28. SOLAR ENERGY SYSTEMS, SMALL-SCALE

Applicability. This Section applies only to any system of small-scale solar energy systems. This Section does not apply to solar energy collectors mounted on fences, poles, or on the ground with collector surface areas less than five (5) square feet and mounted less than five (5) feet above the ground, nor does this Section apply to the larger utility-scale solar energy systems, which are regulated in Section 3.29. Nothing in this Section shall be construed to prevent the sale of limited excess power through a net billing or net-metering arrangement.

- a) **General requirements.**
- 1) **Permit Required.** No small-scale solar energy system shall be installed or operated except in compliance with this Section. A zoning permit shall be obtained from the Zoning Administrator prior to the installation of a small-scale solar energy system.
  - 2) **Applications.** In addition to all other required application contents as listed in Section 18.02, equipment and unit renderings, elevation drawings, and site plans depicting the location and distances from all lot lines and adjacent structures shall be submitted along with the zoning permit application for review by the Zoning Administrator in a hard copy and electronic form designated by the Township.
  - 3) **Glare and Reflection.** The exterior surfaces of solar energy collectors shall be generally neutral in color and substantially non-reflective of light. Such collectors shall not be installed or located so that sunlight or glare is reflected into neighboring dwellings or onto adjacent roads.
  - 4) **Installation.**
    - a. A small-scale solar energy system shall be permanently and safely attached to the ground, structure, or building. Solar energy collectors, and their installation and use, shall comply with all building codes and all other applicable Township and state requirements.
    - b. Small-scale solar energy systems shall be installed, maintained, and used only in accordance with the manufacturer's specifications. Upon request, a copy of such specifications shall be submitted to the Township prior to installation.
  - 5) **Power Lines.** On-site power lines between solar panels and inverters shall be installed and maintained underground pursuant to applicable building and electrical codes.
  - 6) **Abandonment and Removal.** A solar energy system that ceases to produce energy on a continuous basis for twelve (12) months or longer will be considered abandoned unless the responsible party with an ownership interest in the system provides substantial evidence to the Township every six (6) months (after the twelve (12) months of no energy production) of the intent to maintain and reinstate the operation of that system. The responsible party shall remove all equipment and facilities and restore the lot to its condition prior to the installation of the system within one (1) year of abandonment.
- b) **Building-Mounted Solar Energy Collectors.** These systems may be established as accessory uses to principal uses in all zoning districts subject to the following conditions.
- 1) **Maximum Height.** The maximum height permitted in the zoning district in which the building-mounted solar energy systems are located shall not be exceeded by more than three (3) feet by such collectors.
  - 2) **Obstruction.** Building-mounted solar energy collectors shall not obstruct or impede solar access to adjacent properties.

c) Ground-Mounted Solar Energy Collectors. These systems are permitted in all zoning districts subject to the following conditions.

1) Rear and Side Yards. The equipment and collectors may be located in the rear yard or the side yard but shall be subject to the setbacks for accessory structures.

2) Front Yard. The equipment and collectors may be located in the front yard only if located no less than one hundred (100) feet from the front lot line.

3) Obstruction. Ground-mounted solar energy collectors shall not obstruct or impede solar access to adjacent properties.

4) Vegetation. All vegetation underneath solar energy infrastructure shall be properly maintained not to block access to solar collectors.

5) Maximum Number.

a. Residential uses. There shall be no more than one (1) ground-mounted solar energy collector system per principal building on a lot.

b. Agricultural, Commercial, and Industrial uses. There is no limit to the number of ground-mounted solar energy collectors on a lot.

6) Maximum Size.

a. Residential uses. There shall be no more than one percent (1%) of the lot area, up to a maximum of one thousand five hundred (1,500) square feet, of collector panels on a ground-mounted solar energy system.

b. Agricultural, Commercial, and Industrial uses. There shall be no more than ten thousand (10,000) square feet of collector panels per lot on a ground-mounted solar energy system.

7) Maximum Height.

a. Residential uses. The maximum height shall be nine (9) feet, measured from the natural grade below the equipment or collector to the highest point at full tilt.

b. Agricultural, Commercial, and Industrial uses. The maximum height shall be sixteen (16) feet, measured from the natural grade below the equipment or collector to the highest point at full tilt.

8) Minimum Lot Area. One (1) acre shall be the minimum lot area required to establish a ground-mounted solar energy system.

9) Screening. Screening shall be required in cases where a ground-mounted solar energy collector impacts views from adjacent residential properties. Screening methods may include the use of material, colors, textures, screening walls, and landscaping that will blend the unit into the natural setting and existing environment.

10) Limits. Applicants requesting ground-mounted solar energy systems shall demonstrate the system's projected electricity generation capability to the Township, and the system

shall not regularly exceed the power consumption demand of the principal, and accessory land uses on the lot. However, larger systems may be approved by the Planning Commission if greater electricity need is demonstrated to power on-site buildings and uses.

### 3.29. SOLAR ENERGY SYSTEMS, UTILITY-SCALE

Applicability. This Section applies to any system of utility-scale solar energy systems. This Section does not apply to solar energy collectors mounted on fences, poles, or on the ground with collector surface areas less than five (5) square feet and mounted less than five (5) feet above the ground, nor does this Section apply to the smaller scale solar energy systems, which are regulated in Section 3.28.

Section 3.29 is amended to include a new section, which reads as follows:

- a) Utility-scale solar energy systems, when authorized as a special land use by the Planning Commission, are subject to all of the following requirements:
  - 1) Site Plan Required. An application for special land use approval for a Utility-Scale Solar Energy System shall include a site plan in accordance with Article 14 – Special Land Uses. In addition to the information required for site plan approval in Section 18, all applications must also include all the following:
    - a. Equipment and unit renderings.
    - b. Elevation drawings.
    - c. Setbacks from all property lines and adjacent structures.
    - d. Notarized written permission from the property owner authorizing the Utility Scale Solar Energy System.
    - e. Access driveways within and to the LSES, together with a detailed narrative regarding each proposed driveway's dimensions, composition, and maintenance.
    - f. Planned security measures to prevent unauthorized trespass and access.
    - g. A written description of the maintenance program to be used for the utility-scale solar energy system and other components, including decommissioning and removal.
    - h. All additional plans and requirements set forth in this Section and any other information required by the Township.
  - 2) Special Land Use Approval; Permits. Utility-scale solar energy systems require special land use approval. In addition, no utility-scale solar energy system shall be constructed, installed, operated, maintained, or modified as provided in this Section without first obtaining all applicable approvals and permits. The construction, installation, operation, maintenance, or modification of all utility-scale solar energy systems shall be consistent with all applicable local, state, and federal requirements, and all buildings and structures that comprise a utility-scale solar energy systems shall be constructed,



installed, operated, and maintained in strict accordance with the Michigan Building Code and the National Electric Safety Code. Components of a solar energy system shall be approved by the Institute of Electrical and Electronics Engineers ("IEEE"), Solar Rating and Certification Corporation ("SRCC"), Electronic Testing Laboratories ("EIL"), or other similar certification organizations.

In addition to the other requirements and standards of Subsection \_\_\_\_\_, the Planning Commission shall not approve a special land use for a utility-scale solar energy system unless all of the standards for a special land use contained in Subsection \_\_\_\_ of this Ordinance are met and also that all of the following additional standards are also met.

- a. If there are existing or proposed utility-scale solar energy systems within 1 mile of another, the proposed new utility-scale solar energy system will not unreasonably visually dominate the area or horizon.
  - b. The presence of the proposed utility-scale solar energy system shall not substantially change the aesthetic views and visual horizons of the area.
  - c. The proposed utility-scale solar energy system will not substantially decrease the fair market value of any parcels or lots located within 2 miles of the location of the proposed utility-scale solar energy system. There is a presumption that this standard will not be met if the fair market value of any lot or parcel within 2 miles of the proposed utility-scale solar energy system (except for the lot or parcel of which the system will be located) would decrease in fair market value by more than 10% due to the presence of the utility-scale solar energy system.
  - d. The presence of the utility-scale solar energy system would not unreasonably distract drivers and vehicles traveling on adjacent or nearby roads.
  - e. The proposed utility-scale solar energy system will not change the essential character of the area or the neighborhood where the system would be located.
- 3) Lot Area. Utility-scale solar energy systems shall be located on a lot at least twenty (20) acres in size.
- 4) Setbacks. All Solar Panels, buildings, and structures are required to be located at least 125 feet from any occupied dwelling and its associated accessory structures and at least 75 feet from any other non-participating property line or right-of-way line of any highway, road, or street. All solar panels, buildings, and structures shall not be located within any established County drain or in any right-of-way or easement unless the Planning Commission formally agrees to special provisions and with the Drain Commissioner or other affected property owners so as not to impede/obstruct access along the County drain or right-of-way or easement. When the utility-scale solar energy system is proposed on multiple contiguous parcels, the setbacks shall be only required to be maintained along a property line where a participating parcel within the solar

energy system is located contiguous to a non-participating parcel. The Planning Commission may require greater setbacks if it is determined that greater separation would better protect adjacent residents and property owners.

- 5) Height. Utility-scale solar energy systems shall not exceed sixteen (16) feet in height, measured from the natural grade below the collector or equipment to the highest point at full tilt.
- 6) Noise. Noise emanating from the solar energy collector system shall not exceed 50 decibels (dBA) as measured from any property line.
- 7) Screening. The Planning Commission may require a utility-scale solar energy system to be screened from adjoining residential properties or public rights-of-way. Screening methods may include the use of material, colors, textures, screening walls, fencing, berms, landscaping, and/or natural vegetation that will blend the facility into the natural setting and existing environment.
- 8) Glare and Reflection. The exterior surfaces of utility-scale solar energy collectors shall be generally neutral in color and substantially non-reflective of light. A solar collector surface shall not be installed or located so that sunlight or glare is reflected into neighboring residences or adjacent streets.
- 9) Location. Solar energy systems shall be located in the area least visibly obtrusive to adjacent residential properties and roads while remaining functional.
- 10) Obstruction. Solar energy systems shall not obstruct or impede solar access to adjacent and neighboring properties.
- 11) Power lines. On-site power lines between all structures, ancillary equipment, and inverters shall be installed and maintained underground.
- 12) Fencing. For the purpose of restricting unauthorized access to the site, the Planning Commission may require that the perimeter of a utility-scale solar energy system be fenced in with at least a **six (6)** foot tall high fence.
- 13) Lighting. All lighting for parking lots, driveways, external illumination of buildings, or the illumination of signs shall be directed away from and be shielded from adjacent properties and shall be so arranged as not adversely to affect driver visibility on adjacent public roads.
- 14) Signs. Signs are required as part of the utility-scale solar energy system to provide the public with general information about the facility's knowledge and safety. The **Planning Commission shall determine the design, size, height, and location of said signs**. Such signs shall only contain emergency contact numbers and information related to the **utility-scale solar energy system, including the information required by section 18 below**. Other commercial speech is not permitted.
- 15) Roads. Any material damages to a public road located within the Township resulting from the construction, maintenance, or operation of an LSES shall be repaired at the

Landowner and the applicant's expense. In addition, the applicant shall submit to the appropriate County agency a description of the routes to be used by construction and delivery vehicles; any road improvements that will be necessary to accommodate construction vehicles, equipment, or other deliveries. Finally, the applicant shall abide by all County requirements regarding the use and/or repair of County Roads.

- 16) Inspection. The Township shall have the right at any reasonable time to provide a twenty-four (24) hour notice prior to the desired inspection to the applicant to inspect the premises on which any utility-scale solar energy system is located. The Township may hire one or more consultants, with approval from the applicant (which approval shall not be unreasonably withheld), to assist with inspections at the applicant's or project owner's expense. Inspections must be coordinated with and escorted by the applicant's operations staff at the utility scale solar energy system to ensure compliance with the Occupational Safety and Health Administration (OSHA), NESC, and all other applicable safety guidelines.
- 17) Operation and Maintenance Plan. The applicant shall submit a plan to the Township for the operation and maintenance of the utility-scale solar energy system, which shall include measures for maintaining safe access to the installation and stormwater controls, as well as general procedures of operational maintenance of the installation, as applicable.
- 18) Emergency Services. Upon request by the Township, the owner/operator of the utility-scale solar energy system shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar energy system shall be clearly marked on the plan. The owner/operator shall identify a current responsible person for public inquiries throughout the life of the installation. An information sign shall be posted and maintained at the entrance(s), which lists the operator's then-current name, phone number, and email address.
- 19) Maintenance. The utility-scale solar energy system owner/operator shall maintain the facility in good and safe condition at all times, including the screening vegetation, walls, fences, and ground cover. Maintenance shall also include, but not be limited to, structural repairs, safety-related upgrades, and integrity of security measures. **Any scrap material and/or junk storage shall not occur or be kept on the lot except during the construction or decommissioning process.** Site access roads or drives shall at all times be reasonably maintained and to a level acceptable to local emergency services personnel. The owner/operator shall be responsible for the cost of fully maintaining the solar photovoltaic installation and any access road(s).
- 20) Decommissioning.
  - a. A decommissioning plan shall be required and approved by the Planning Commission to ensure that the utility-scale solar energy system is properly removed after their useful life. Said plan must be filed with the Township Clerk prior to the commencement of construction of the LSES. The plan shall include provisions for

removal of all structures and foundations, restoration of soil to a depth of 36 inches and vegetation, the timeframe for completion of decommissioning activities, estimated costs, and a plan ensuring financial resources will be available to decommission the site fully.

- b. Any utility-scale solar energy system that has reached the end of its useful life or has not operated continuously for one (1) year or longer shall be fully removed. The parcel owners shall be required to restore the site to its prior state. The owner/operator shall physically remove the installation no more than one hundred and fifty (150) days after the date of discontinued operations.
  - c. The owner/operator shall notify the Township directly or by certified mail of the proposed date of discontinued operations and plans for removal.
  - d. If the owner/operator fails to remove the installation in accordance with the requirements of this Section within 150 days of abandonment or the proposed date of decommissioning, the Township may enter the property and physically remove all of the solar energy system and facilities and charge the cost back to the owner(s) of the lot.
  - e. Removal of the solar energy system and facilities shall consist of all of the following:
    - 1) Physical removal of all aboveground or underground utility-scale solar energy systems, structures, equipment, security barriers, and transmission lines from the site to a depth of at least 36 inches.
    - 2) Disposal off-site of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
    - 3) Restoration and stabilization or re-vegetation of the site as necessary to minimize erosion.
- 21) Financial Guarantee. The applicant for a utility-scale solar energy system shall provide to the Township a form of monetary surety or security through an escrow account, letter of credit, bond, or other instruments acceptable to the Township Attorney. The purpose of the surety or security is to cover the cost of removal of the utility-scale solar energy system in the event the owner/operator does not fully remove the solar energy system, and facilities or the Township must remove the same. The amount of the financial surety or security shall not exceed more than 125 percent of all costs of removal and compliance with the additional requirements set forth herein. The estimated costs of removal shall be submitted by the applicant to the Township and be prepared by a qualified engineer. The surety or security shall be subject to review and approval by the Planning Commission and the Township Attorney and shall be a condition of special land use approval. The amount of the surety or security shall increase by the Federal CPI every five years and shall remain in place for the length of the lease/contracts and until decommissioning is complete to the satisfaction of the

Township. If the Township is required to enforce the guarantee or otherwise take legal action to enforce compliance with this paragraph, then the Township shall be entitled to recovery of any and all costs and expenses, including attorney fees.

22) Responsibility. If the owner of the utility-scale solar energy system is different than the Landowner (s), then both such owner and the Landowner (s) shall be jointly and severally responsible for complying with all Ordinance requirements and special land use conditions.

**Section 4. Severability.**

Should any portion of this Ordinance/ordinance amendment be declared to be invalid or unconstitutional by a court of competent jurisdiction, that shall not affect any other portion or provision of this Ordinance/ordinance amendment, which shall remain valid and in full force and effect.

**Section 5. Effective Date.**

This Ordinance/ordinance amendment shall become effective upon the expiration of seven (7) days after this Ordinance/ordinance amendment adoption appears in the newspaper (or a summary thereof appears in the newspaper) as provided by law.

The vote to approve and adopt this Ordinance/ordinance amendment was as follows:

YEAS: \_\_\_\_\_  
\_\_\_\_\_

NAYS: \_\_\_\_\_

ABSENT/ABSTAIN: \_\_\_\_\_

ORDINANCE/ORDINANCE AMENDMENT DECLARED ADOPTED.

**CERTIFICATION**

I hereby certify that the above is a true copy of the Ordinance/ordinance amendment adopted by the Township Board for Bowne Township as of the date, time, and place as specified above, pursuant to the required statutory procedures.

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Karen L. Hendrick  
Bowne Township Clerk

# Bowne Township Planning Commission

## STAFF REPORT

### AGENDA ITEM 10

#### R-1 and R-1 Zoning Districts Lot Area Requirements



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#### Introduction

It has been brought to the staff's attention that there has been a lot of small lot site condominium and land division over the last couple of years in the Township. Principally this land division has taken place in the R-1 Rural Residential and R-2 Low-Density Residential Districts. Therefore, the staff has asked to discuss the dimensional regulations within these two zoning districts.

#### Background

The Bowne Township Zoning Ordinance states in Sections 6.01 and 7.01 that the purpose of these two districts is to recognize that residential development will happen in the Township but that large lot and low-density development is appropriate here. One primary goal for creating these districts is not to impact the existing agricultural land, damage the unique rural character of these districts, and damage the natural environmental systems that have historically been found in these districts. One characteristic of these districts is that public utilities, such as water and sewer, are not available and intended to be developed, limiting the scale, and spread of development in these districts.

These districts are consistent with the country residential land use area and low-density residential land use area designations in the master plan.

The master plan defines County Residential as a transitional space for those areas that are heavily agricultural to those with a higher concentration of residential development. The Township envisioned this area as primarily agricultural, with broad open residential areas, gardens and greenhouses, and roadside stands. Other outdoor-centric land uses may be permitted via special use. The Low-Density Residential land use designation was envisioned to provide for areas with somewhat higher densities of single-family residential than in the Country Residential area. The master plan states that although more frequent land development has happened along this western border area of the Township and in adjoining Caledonia Township, the principal focus is preserving rural spaces. In addition to single-family residential and agricultural land uses, private gardens and greenhouses, and home occupations that do not offer items for sale to the public are intended for this area.

**Recommendation**

Staff recommends that the Planning Commission review the attached table of land use regulations from the Bowne Township Zoning Ordinance and discuss the necessity or urgency of amending the regulations for these two districts.

**Support Material**

Schedule of Zoning District Regulations



SCHEDULE OF DISTRICT REGULATIONS									
	AG	R-1	R-2	R-3	R-4 <sup>(12)</sup>	R-5	C-1	C-2	IND
Lot Area	minimum: 1 acre maximum: 5 acres <sup>(11)</sup>	minimum:2.5 acres	minimum:2 acres	minimum: 30,000 (Without Sewer) 10,000 (With Sewer)	N/A	N/A	N/A	minimum: 30,000 (Without Sewer) 10,000 (With Sewer)	min.: 40,000
Minimum Lot Width <sup>(7)</sup>	250 feet <sup>(9)</sup>	250 feet <sup>(9)</sup>	200 feet <sup>(9)</sup>	120 feet (Without Sewer) 70 feet (With Sewer)	300 feet	300 feet	90 feet (Without Sewer) 60 feet (With Sewer)	115 feet	130 feet
Maximum Lot Depth	<sup>(1)</sup>	<sup>(1)</sup>	—	—	—	—	—	—	—
Front Setback <sup>(10)</sup>	40 feet <sup>(2)</sup>	45 feet	30 feet	25 feet	45 feet	45 feet	N/A	30 feet <sup>(5)</sup>	50 feet
Side Setback <sup>(8)</sup> (Each side)	25 feet	15 feet <sup>(3)</sup>	10 feet <sup>(3)</sup>	10 feet <sup>(3)</sup>	15 feet <sup>(3)</sup>	15 feet <sup>(3)</sup>	N/A <sup>(6)</sup>	10 feet <sup>(6)</sup>	20 feet
Rear Setback	70 feet	70 feet	45 feet	30 feet	65 feet	65 feet	15 feet	20 feet	40 feet
Maximum Building Height	35 feet	35 feet <sup>(4)</sup>	35 feet <sup>(4)</sup>	35 feet <sup>(4)</sup>	35 feet <sup>(4)</sup>	35 feet <sup>(4)</sup>	30 feet	30 feet	40 feet

Footnotes are an integral component of this section and shall be in conjunction with the above table.

- (1) If the lot area is less than 40 acres in size, the depth of the parcel shall not be greater than three times its width.
- (2) Repealed effective October 2, 2019.
- (3) Repealed effective October 2, 2019.
- (4) Repealed effective October 2, 2019.
- (5) Where any existing commercial structures on adjacent parcels are closer than 50 feet to the street, a front setback equal to the average front setback of all commercial buildings within 400 feet on each side of the proposed building or between adjacent side streets, whichever is lesser, will be allowed.
- (6) Side setback is required as follows:
  - a. Where the zoning district abuts residential property on the side, a side setback of at least 25 feet shall be required.
  - b. In the C-2 District, a 25-foot side setback must be maintained on the street side of a corner lot.
- (7) Refer to "Access to a Street" in General Provisions section for road access requirements.
- (8) All side lot lines abutting on a street or road shall meet the front setback requirements for the zoning district in which it is located.
- (9) Lots on cul-de-sac turnarounds shall have a minimum lot width equal to at least one-half (1/2) of the required lot width for the District and shall have at least fifty (50) feet of frontage along the road right-of-way line. (Amended March 17, 2003)
- (10) Front setbacks shall be 50 feet from the right-of-way for all parcels with frontage on State Highway M-50.
- (11) The maximum lot area in the AG District for non-agricultural single-family residential dwellings shall not exceed five (5) acres, as provided in Section 5.05.
- (12) For non-residential uses allowed by this zoning district, the height, area, and dimension regulations of Section 8.05 herein shall apply.