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Elkhart County Planning and Development
4230 Elkhart Rd
Goshen, IN 46526

STAFF EXHIBIT
1 FILE # Solar Ordinance
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Subject: Solar Zoning Ordinance Comments

To Whom It May Concern:

Savion applauds Elkhart County for taking steps to write an ordinance that allows large-scale solar to be built in the County. A lot of support for solar exists in Elkhart County, and there is significant demand for new power generation – particularly renewable power generation – in Elkhart County and the region. We believe the proposed guidelines protect the community while creating a path and standards that large-scale solar can meet. We also hope that the proposed guidelines can provide clarity to landowners and project proponents as to the various standards that must be met for reviewing and approving solar project applications.

The intent of zoning under Indiana law is to allow for land use restrictions that prevent the placement of incompatible land uses. Solar power projects with appropriate siting requirements are a compatible land use in an agricultural zoning district. Solar power projects utilize voluntary land leases from farmland owners and offer a significant financial opportunity for landowners to gain lease income from solar power generation while resting a portion of their farmland, all while producing renewable energy, which is a much-needed commodity in the region. Further, lease provisions with landowners and decommissioning requirements in the zoning ordinance can provide a mechanism to preserve future agricultural uses of the land and create a pathway to return solar project lands to traditional agricultural uses at the end of a solar project's useful life.

From the draft solar guidelines presented by the Elkhart County planning staff, we understand that solar projects will meet the same Class III buffering standards as a manufacturing facility under the zoning code, including setbacks and vegetative buffering. Some commenters in opposition to solar projects assert that solar should be treated as a manufacturing or industrial land use. It is important to note that solar is *not* a manufacturing use and does not have many of the undesirable characteristics that more intensive land uses would have as a neighbor to residences. Solar projects do not produce waste, odor, smoke, effluent runoff, or many of the other nuisance emissions such as dust, noise, light, or traffic that may be typical of other more intensive land uses like manufacturing. The zoning requirements for solar should set reasonable standards for siting solar, preserving setbacks, and maintaining a well-kept and vegetated solar site. We have included suggestions and responses to important solar zoning elements and key areas of concern below.

We have a few specific suggestions for how to improve the guidelines and the draft ordinance language from these guidelines. Firstly, we would strongly recommend that the zoning requirements

should not mandate earthen berms, walls, or vegetative barriers along significant portions of a project's perimeter. These requirements would make solar projects unfeasible. Berms create a significant change to the landscape that is not practical for a solar project to build and maintain, and is not necessary to prevent nuisance conditions given the passive nature of an operating solar project. Similarly, significant vegetative barriers are unnecessary along all roadways or around the entire perimeter of a large solar project where it may be adjacent to other Agricultural zoned land. While we understand that some neighbors prefer the view of their neighbor's agricultural field and do not want to see a nearby solar project, it is not reasonable for zoning to preserve that view into the future. We believe vegetative screening can be used in targeted areas near adjacent residences to disrupt direct views of a solar project from a residence. We would recommend incorporating more specific language to target buffers near adjacent land uses that are different from the agricultural land where the solar project would be located (e.g., residential, church, school).

Secondly, we have included some more detailed language that has been included in other solar zoning ordinances for the County to consider in the Elkhart zoning ordinance related to vegetative screening and management. We offer these suggestions to provide more clarity around requirements and expectations. The example of vegetative screening language provided below is detailed and precise. It spells out clearly where the vegetation would be needed, and what the planting and timing requirements would be.

All solar facilities that are located within 500 feet of any residential dwelling, church, school, child day care, bed and breakfast establishments, or places of business (excluding those located on Participating Parcels) shall be screened and buffered by installed vegetative plantings where existing natural vegetation does not provide screening, subject to the following requirements: The vegetative buffer shall be composed of native or evergreen trees that at planting shall be a minimum of four (4) feet in height and shrubs two (2) feet in height. The evergreen trees shall be spaced no more than fifteen (15) feet apart on center (from the central trunk of one plant to the central trunk of the next plant), native trees shall be placed no more than thirty (30) feet apart on center and shrubs shall be spaced no more than seven (7) feet apart on center. All unhealthy (sixty (60) percent dead or greater) and dead plant material shall be replaced by the Owner or operator within one (1) year, or the next appropriate planting period, whichever occurs first. Vegetative buffer plant material shall be initially installed between March 15 and November 15 and no later than the 1 year anniversary of the facility commencing operation.

We support the setback guidelines proposed by the Elkhart County staff and believe they would create a reasonable and responsible set of siting parameters for solar projects. However, some comments provided to the County to date may intend to create exclusionary zoning that would make a large solar project all but impossible. We would caution the County to avoid including zoning provisions that have the intent of preventing solar development in the County. Other comments appear to be based on incomplete information or confusion with other power infrastructure. We have provided responses to key areas of concern in the following comments.

Exclusionary setbacks from residences or property lines. A recommendation for a 2,000 foot setback from neighboring residences would make the vast majority of the County unavailable for solar. A single neighboring house with a 2,000 ft setback applied would create an area of 288 acres that is unavailable for solar.

Property values. We have heard and seen comments to the County relating to property value concerns for properties adjacent to solar projects. There are numerous peer-reviewed studies that conduct project-specific paired-sales analysis to evaluate any effect that may occur on property sales before and after the presence of a solar project. We have provided to the County an example of a paired-sales analysis study for a Savion project in Mercer County Kentucky, as well as other resources related to property values. We would strongly encourage Elkhart County to seek out reliable resources on the topic of property values near solar projects, as the weight of evidence shows there are not measurable negative effects to adjacent property values that are sited in agricultural areas with reasonable setbacks and vegetative screening. We would welcome the opportunity to provide a similar paired-sales analysis for any proposed solar project in Elkhart County.

Solar PV environmental hazards and waste concerns. We have seen comments raising concerns about environmental hazards from the presence of solar panels. Numerous published studies have evaluated the environmental hazards from solar panels and found that solar equipment does not pose any significant health dangers to neighbors or the environment. We have provided under separate cover to the County, a study from the North Carolina Clean Energy Technology Center, which was published in partnership with North Carolina State University. The study provides a thorough review of various health and safety questions that have been asked by the public. In particular, the report concludes that PV panels do not pose a material threat to public health and safety. Solar panels are made primarily of common inert materials (aluminum and steel racking and frames, glass panels, plastic encapsulants, silica wafers, and wiring). The only aspect of the panels with potential toxicity concerns is the very small amounts of metals in some panels. However, any lead or other metals in a panel is well sealed from environmental exposure for the operating lifetime of the solar panel and thus not at risk of release into the environment.

Modern solar panels are tested using the EPA's testing standard, Toxicity Characteristic Leachate Procedure (TCLP) to determine if they would pose a risk to the environment if some of the components were disposed of as waste. These have been shown to be inert wastes which can be safely disposed of. There is a comprehensive and well-established regime of waste management laws from both the Federal and State government. The vast majority of solar panel materials are also recyclable, and we expect much of the materials in panels and racking to be recycled at the end of their useful life. We would encourage Elkhart County to rely on these environmental protections and not create new waste requirements or restrictions through their zoning ordinance, which would lead to environmental restrictions that are both unfounded based on the facts about solar panels and difficult for the County to implement in the future.

Fire Safety. The study from North Carolina State University also addresses fire safety concerns related to solar panels. The study concludes that:

“The possibility of fires resulting from or intensified by PV systems may trigger concern among the general public as well as among firefighters. However, concern over solar fire hazards should be limited because only a small portion of materials in the panels are flammable, and those components cannot self-support a significant fire. Flammable components of PV panels include the thin layers of polymer encapsulates surrounding the PV cells, polymer backsheets (framed panels only), plastic junction boxes on rear of panel, and insulation on wiring. The rest of the panel is composed of non-flammable components, notably including one or two layers of protective glass that make up over three quarters of the panel’s weight.”

Fires at solar projects are exceedingly rare, but if one were to occur it would be similar to other equipment fires that could be encountered at a house or farm building. Large solar projects are also monitored remotely and individual electrical circuits within the solar project can be instantly isolated and disconnected from the grid to protect the project and surrounding equipment from any effects of fire. The solar industry best practice is for each project to develop an emergency response plan in coordination with local emergency managers and local fire department responders. This plan would include provisions for training, site access, and road maintenance within the facility to ensure local responders know the proper procedures and have the access and information they need should a fire or other emergency occur on site.

Savion welcomes these solar ordinance efforts, which we believe can bring the economic and environmental benefits of solar energy to Elkhart County. Savion appreciates the opportunity to participate in public review of the proposed guidelines and looks forward to participating as this process moves forward where public participation is appropriate.

Sincerely,

Sara Mills

Sara Mills, Development Director
Savion, LLC