STAFF REPORT FOR A SPECIAL USE

McLean County Department of Building and Zoning

CASE NUMBER SU-18-05

1. REFERENCE:

a.	Hearing date:	February 6, 2018
b.	Applicant's name and address:	Moraine Solar, LLC by Cypress Creek Renewables, 5310 S. Alston, Ave., Durham, NC 27713
c.	Land owner's name and address:	Mary Trent, P.O. Box 227, Downs, IL 61736

2. LOCATION AND CURRENT/PROPOSED ZONING AND LAND USE:

a.	Property location:	Immediately west of 2200 East Rd. approximately 3/5 of a mile north of 600 North Rd.
b.	Township:	Downs Township
c.	Parcel Number:	29-10-200-005
d.	Existing zoning:	A-Agriculture District
e.	Applicant request:	For a special use to allow a Solar Power Generating Facility in the Agriculture District
f.	Existing land use:	Crop production

3. DIMENSIONS:

a.	Size of Parcel:	33 acres
b:	Road Frontage:	Approximately 467 feet

4. EXISTING LAND FEATURES:

a.	Topography:	Relatively flat
b.	Drainage:	To the northwest
c.	Vegetation:	Crop production
d.	Public Road:	Oil and chip 18 feet in width

5. SURROUNDING ZONING: A-Agriculture District on all sides

6. SURROUNDING LAND USE:

a. North: Crop production
b. South: A pond in part and Interstate I-74 in part
c. East: Crop production
d. West: Crop production

7. LAND EVALUATION SITE ASSESSMENT (LESA) REPORT:

McLean County Soil and Water Conservation District staff report on soil for subject site:

a. Soils -- Score of **95.5** points out of a maximum possible evaluation score of **100** points.

McLean County Building and Zoning Department staff report on site assessment for the subject site:

b. Site Assessment -- Score of **162** points out of a maximum possible evaluation score of **200** points.

c. Total LESA review score is **257.9 points** out of a maximum of **300** points.

EVALUATION RESULT:

The LESA Report indicates that a total score of **230 points and above** means that the property is of **high** value for agricultural land protection.

8. STAFF ANALYSIS: The analysis of the seven standards listed in Article VIII Section 350-56 of the McLean County Code (Standards for Special Use Permits) as they apply to this zoning request is as follows:

a. **The proposed special use will not be detrimental to or endanger the health, safety, morals, comfort, or welfare of the public**. This standard can be met. The applicant proposes to establish a 2-megawatt solar power generating facility on this property, which will meet all of the County setback requirements and use standards for a solar power generating facility, provided the front setback is at least 80 feet from the centerline of the township road.

The application indicates that this facility will contain rows of Photovoltaic (PV) cell panels mounted on posts set in the ground. These rows of panels are referred to as "solar arrays". Cypress Creek Renewables will mount the solar arrays in one of two ways: on a fixed tilt or on a tracking system, which allows them to follow the sun throughout the day. After site specifics and design components are more fully developed for this solar farm, Cypress Creek will determine which system is more appropriate for this site. The solar arrays will be designed with an anti-reflective coating.

The basic components of a solar energy facility include: PV panels, inverters, combiner boxes, transformers, wires and conductor cables, structural racking system for PV modules, and perimeter fencing. Solar electricity production includes the following five components:

1) *Electrical Power Generation*. Sunlight strikes the PV panel cells, which convert photons of light into electrons, producing low-voltage, Direct Current (DC) electricity.

2) *Combination Box*. The low-voltage, DC electricity is fed through cables from each PV panel to a combiner box.

3) *Inverter*. The low-voltage, DC electricity is fed through cables from the combiner box to an inverter, where it is converted to low-voltage, Alternating Current (AC) electricity.

4) *Transformer*. The transformer steps up the low-voltage, AC electricity to the appropriate voltage so that it can be fed into the electrical transmission system.

5) *Utility Transmission*. Electricity is sent through the electrical transmission lines to utility distribution systems for delivery to ratepayers.

The applicant indicates that the solar arrays will be a maximum 12 feet in height but on average will be 8 – 9 feet in height.

The applicant submitted a communication from the Illinois Department of Natural Resources which states that the Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area

Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project, and that the consultation is terminated.

There has been no communication submitted from the Illinois Historical Preservation Agency (IHPA).

b. **The proposed special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for purposes already permitted or substantially diminish property values in the immediate area.** This standard is met. Nearby property that is currently in crop production will continue to be desirable for such use. A pond and recreation area is located immediately south of the subject property along Interstate I-74 that was originally built as a borrow pit for the construction of Interstate I-74 in the 1970s. This recreation area will not likely be negatively impacted by the proposed solar farm.

c. **The proposed special use will not impede the orderly development of the surrounding property for uses permitted in the district.** This standard is met. Nearby property that is currently in crop production will continue to be desirable for such use. A pond and recreation area is located immediately south of the subject property along Interstate I-74 that was originally built as a borrow pit for the construction of Interstate I-74 in the 1970s. This recreation area will not likely be negatively impacted by the proposed solar farm.

d. **Adequate utilities, access roads, drainage and/or other necessary facilities have been or will be provided.** This standard is met. The property has approximately 467 feet of frontage on the west side of 2200 East Road. The Downs Fire Protection District will provide fire protection for the subject property. Pre-development drainage patterns will be retained as much as possible. The applicant will provide certified plans for storm water detention/retention before a permit is issued for the proposed solar power generating facility. The applicant will need to have all field tile damaged in the construction process repaired by a competent contractor, with experience in such repair, during the life of the solar farm.

e. **Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.** This standard is met. It appears that safe site distance can be provided at the proposed entrance. The applicant will need to obtain an entrance permit from the Downs Township Road Commissioner.

f. **The establishment, maintenance and operation of the special use will be in conformance with the intent of the district in which the special use is proposed to be located.** This standard is met. The preamble states "Provide for the location and govern the establishment and operation of land uses which are compatible with agriculture and are such a nature that their location away from residential, commercial and industrial areas is most desirable".

g. **The proposed special use, in all other respects, conforms to the applicable regulations of the district in which it is located.** This standard is met. According to the Zoning Ordinance, "The Land Evaluation and Site Assessment (LESA) System has been designed to provide a rational process for assisting local officials in making

farmland conversion decisions through the local zoning process." Although this property has a high LESA score, the applicant indicates that native grasses will be grown and maintained on the site; and the prime soils will be preserved as long as the Solar Power Generating Facility is operational. After the subject property is returned to its original condition, as required by the Zoning Ordinance, the land can be returned to crop production. It was reported that up to 35% of corn grown in McLean County was used to make ethanol. Harvesting the wind and the sun to produce electricity in the Agriculture District with wind turbines and solar farms is similar, and another way to produce significant value from farmland in addition to producing crops.

9. CONCLUDING OPINION: Staff recommends that this application meets all of the standards set forth in Article VIII Section 350-56 (Standards for Special Use Permits), provided the following stipulations:

1) An entrance permit is obtained from the Downs Township Road Commissioner;

2) The applicant shall provide certified plans for storm water detention/retention before a permit is issued for the proposed solar power generating facility;

3) The applicant shall complete consultation with the Illinois Historical Preservation Agency (IHPA) before construction can begin;

4) The facility shall be set back 50 feet from the front property line or 80 feet from the centerline of the township road whichever is greater;

5) The applicant shall have all field tile damaged in the construction process repaired by a competent contractor, with experience in such repair, during the life of the solar farm; and

6) Development shall follow the plans and documents submitted with the application and with Zoning Regulations including Article VI Section 350-43.OO (3) (Use Standards for a solar power generating facility).

Respectfully submitted,

Philip Dick, AICP, Director

Attachment: Site Plan