

DATE: November 17, 2022

TO: Krysti Barksdale-Noble  
Community Development  
**United City of Yorkville**  
800 Game Farm Road  
Yorkville, IL 60560

RE: Project Narrative  
Beecher Solar 1, LLC  
Proposed Ground-Mounted Solar Farm  
Beecher Road, Kendall County  
PIN# 02-18-400-005, 02-18-400-006,  
02-17-300-002

## PROJECT NARRATIVE

New Leaf Energy, Inc. (New Leaf) is requesting a Special Use Permit to allow for development of a 5 MW AC community solar farm facility on an approximately 18.44-acre portion of existing farmland located at 02-18-400-005, 02-18-400-006, and 02-17-300-002, east of Beecher Road in Yorkville, IL. The property is approximately 48.74 acres in size and is zoned A-1 (Agriculture). The site is currently being used for agricultural purposes and the residual parcel acreage will be maintained by the property owner and may continue to be farmed if the property owner chooses to do so. New Leaf Energy, Inc. is requesting a Special Use Permit to allow for the Solar Farm Use.

To assist in your review of this Special Use Permit request, a Site Use Plan Set has been provided which illustrates the proposed solar farm use and site improvements. The project proposed uses and improvements include:

- PV solar panel arrays at maximum 8 ft. in height with trackers/racking/string inverters. Please see sample photo on the last page of this narrative. Racking system to be installed via posts or augured screws. Post depth is anticipated to be 12 to 14 feet below grade - to be determined once geotechnical investigation is completed.
- Concrete pad-mounted transformers/switch gear, located central to the system.
- Data Acquisition System (DAS) for remote 24/7 monitoring.

- DC coupled Powin 20Mwh energy storage facility
- Equipment poles and riser poles with overhead power lines for interconnection point on Beecher Road. On-site power lines will be placed underground to the maximum extent possible until ComEd’s point of connection. This scope of work is per ComEd’s requirements; thus, the final design is pending a utility study.
- Underground trenching/cabling.
- Perimeter security fencing at 7 ft. height as required per National Electric Code (NEC). The fenced area of each proposed 5 MW AC project is approximately 18.44 acres and will include a gated main entry with a total of ten (10) 4-foot gates and one (1) 20-foot gate for vehicle access. A Knox box and keys will be provided as required by the County. The proposed fencing will secure all four sides of the array field.
- Location of proposed array field meets or exceeds County setback requirements:

Road	Required Centerline	Proposed Centerline
Beecher Road	150 ft.	150 ft.

Property Line	Required Side Yard	Proposed Side Yard
Northern	50 ft.	50 ft.
Southern	50 ft.	50 ft.
Eastern	10 ft.	10 ft.

Property Line	Required Rear Yard	Proposed Rear Yard
Western	100 ft.	150 ft.

- The proposed site access is via a new driveway proposed along Beecher Road. A 20-ft. wide gravel drive will be extended from this point to provide access to equipment as well as on-site vehicle maneuvering. Layout and configuration are depicted in the plans.
  - No formal parking stalls are provided as post-construction, there will be no buildings and no employees on-site other than occasional visits for mowing and/or maintenance, likely 3 to 4 times per year.
- Drainage flow through the property will be maintained, both at the surface and below grade via drain tiles, and there will be very little grading necessary for development of this project.
- Post-construction site area will be seeded with a low-mow seed mix and a weed/grass control plan has been detailed in the plans.

- Noise levels measured at the property line will not exceed fifty (50) decibels.
- One motion-sensor security light will be provided at each of the transformer areas and will comply with requirements of the County Lighting Ordinance – see plan detail sheet.
- Appropriate NEC safety signage will be provided along the perimeter of the project.
- Decommissioning of the project upon completion of the lease term has been contemplated by the lease agreement. Additionally, we have included with our submission a decommissioning plan sheet and a decommissioning plan estimate that includes information regarding salvage value.

### Supplemental Information:

- A wetland delineation investigation, as prepared by a County-certified wetland consultant, has been provided with this submission. There are no potential wetlands on the subject parcel.
- A formal EcoCAT/IDNR consult was initiated and terminated. See attached IDNR consult and termination letter.
- To address any potential concerns related to soil erosion, drainage and depressional storage we have included a Stormwater analysis memo with this submission which outlines our proposed assumptions and design approach. The stormwater analysis memo demonstrates that implementation of the project as proposed will have the net effect of decreasing CN and stormwater runoff.

The establishment, maintenance or operation of the special use shall not be detrimental to or endanger the public health, safety, morals, comfort or general welfare of the neighboring vicinity.

- This development as proposed will not impede the development of adjacent properties for uses already permitted in the adjacent A-1 Zoning Districts.
- The site is located in an area with very low population density and is not anticipated to affect the public's comfort or welfare.
- The project area will be secured with a 7-foot fence to provide safety and prevent unintended access.
- At minimum, benefits to the public from community solar include enhanced grid stability, increased tax base, lower energy costs, and an opportunity to contribute to reduced greenhouse gas emissions.
- The transformer is the greatest source of noise on the property. As proposed, the transformer is approximately 790 feet south of the nearest residence located on Beecher Road. At a distance of approximately 500 ft., the noise

generated by each transformer (21 dB) would be no greater than that of ambient noise, comparable to the sound of a whisper.

- County residents and the local region will benefit from this proposed solar farm development through receipt of increased tax revenues, local job opportunities, enhanced power grid stability, and the opportunity to reduce money on their electric bills should they choose to subscribe to the community solar program. In a broader sense, installation of renewable solar energy in the form of a community solar farm will reduce the amount of energy dependence on fossil fuels, which in turn reduces greenhouse gases.

The special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purpose already permitted, nor substantially diminish and impair property values within the neighborhood and will be located and operated to minimize incompatibility with the character of the surrounding area and to minimize the effect on the value of the surrounding property.

- The proposed community solar farm is a quiet neighbor and a low-impact use which once built, has no on-site employees and will not add to neighborhood traffic.

The adequate utilities, access roads, drainage and/or other necessary facilities have been or are being provided.

- The proposed solar development does not require access to traditional utilities such as natural gas, water or sanitary sewer. The routing of the electrical infrastructure required to connect to the ComEd electric system is shown on the enclosed plans.
- The proposed solar farm will not require additional public expense for fire protection, rescue or relief. Solar farm development does not present an increased or inherent risk from fire. Solar panels and components are not inherently flammable, nor do they present an increased risk from fire or other dangers.

The adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion and hazard on the public streets.

- During the initial construction timeframe of approximately four to six months, there will be a mix of trucks ranging from semis for panel and racking delivery, flatbed trucks for fencing, dump trucks for driveway gravel and various delivery type trucks, averaging 2-3 per day. Many of the major materials/suppliers travel

from all over the country and their arrival times are fluid. Based on much of what is described above and limited area on site for parking multiple trucks, along with the expected delivery times, we have developed temporary, on site locations for truck staging. Access to the site will be available each day during work hours 7:30am- 5:00pm. We will be able to accommodate as many as five (5) tractor-trailer trucks on site for deliveries. Any truck that will not be off-loaded will not be allowed to idle for more than five minutes. No idling sign(s) will be placed at appropriate locations. In addition to material and equipment deliveries, workers will be arriving to the site each weekday using personal vehicles. For similar projects of this scale, approximately 40 personal vehicles may be on site at one time. These vehicles will arrive each day in the morning and leave in the afternoon. The total number of vehicles on site will fluctuate depending on the phase of the project.

- Once construction is complete, there will be little to no traffic to/from the site other than for occasional maintenance visits 3 to 4 times per year.

The establishment of the special use will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.

- Once constructed, the solar farm will fit well within the surrounding low-density agricultural uses, and the property will not be occupied more than 3-4 times during the year for maintenance visits.
- The proposed location of the solar field is a significant distance from any existing residential uses.

Consideration is given to any special facilities such as churches, schools or hospitals located near the proposed special use.

- The proposed solar farm should not have any adverse impact to any special facility.

Thank you,

A handwritten signature in blue ink that reads "C. Dean Smith". The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

C. Dean Smith, PE  
Civil Engineering Lead