

Findings of Fact Sheet - Map Amendment and/or Special Use

S Barnes Road / RPIL Solar 10, LLC  
Name of Development/Applicant

April 12, 2024  
Date

**1. How does your proposed use relate to the existing uses of property within the general area of the property in question?**

Community solar facilities are compatible with existing uses within the general area including but not limited to agriculture, open space, commercial, and existing electrical utilities such as ComED's double-hung 345 kV transmission lines paralleling the eastern boundary of the Project. The Project can be returned to an agricultural use, or as otherwise permitted, once the Project is decommissioned. The Project will directly benefit Illinoisans, the Barnes Forest Preserve, and Fox Valley Park District's Community Gardens on the west side of South Barnes Road as described in the following paragraph. This use would also be consistent with other commercial uses within the immediate area and would maintain the open space nature of the site.

The Project's transition from cropland to a low-growing vegetation comprised of native grasses and forbs, as well as evergreen/deciduous trees and shrubs will provide various benefits including, but not limited to, supporting the restoration of soil health, stormwater retention, erosion reduction, improvement of water quality, and creation of habitat and food sources for songbirds, other wildlife, and pollinators. Pollinators play an important role in agriculture and our daily lives. It is estimated that one in three bites of food are the result of pollinators' work, contributing to more than \$10 billion in economic activity annually. Pollinators have experienced significant declines, a trend expected to continue with increased urbanization. This will directly support pollination of the Fox Valley Community Gardens across the road. According to the Fox Valley Park District's Website, all available plots have been rented for the 2024 growing season. Furthermore, the Project will provide additional patches of habitat for wildlife connectivity to the Barnes Forest Preserve in accordance with ecologist Dr. Richard Forman's principles of "indispensable patterns". Lastly, stormwater improvements from this Project will provide benefits to the approximately 25,374 residents within the Blackberry Creek Watershed as the Project will provide additional infiltration and improved drainage.

**2. What are the zoning classifications of properties in the general area of the property in Question?**

Per the available zoning maps posted on Kane County's website, all properties surrounding the Project are generally zoned within the Farming District, as well as protected open space. The southern end of the Project is bounded by an active railroad right of way, with existing 345 kV transmission infrastructure immediately to the west.

**3. How does the suitability of the property in question relate to the uses permitted under the existing zoning classification?**

The property in question is currently utilized for agricultural production, is relatively flat, and sited adjacent to distribution infrastructure with available capacity. All factors that contribute to its overall suitability. In accordance with Section 25-4-8 of Kane County's Zoning Ordinance, Commercial Solar Energy Facilities may be allowed through the issuance of a special permit in the Farming District. The Project will be quietly operated and will not conflict with abutting uses permitted by right, or allowable through special permits within Kane County's Farming District or other jurisdictions. The Project would provide tangible benefits to abutting uses permitted under the existing zoning classification and abutting properties.

**4. What is the trend of development, if any, in the general area of the property in question?**

Development in the area generally is limited to agricultural activities, open space, religious, residential, and commercial uses. The Project's low impact use would not be inconsistent with, or injurious to current and/or projected land use trends across various jurisdictions.

**5. How does the projected use of the property, relate to the Kane County 2040 Land Use Plan?**

Kane County's 2040 Plan ("Plan") designates the property's land use as Resource Protection. Although the construction of the project may in the short-term lead to a temporary reduction in local agricultural production, the use of this land would ensure that following the Project's reclamation, agricultural production, or other resource protection mechanisms could quickly resume. Whereas other permanent uses of the site, such as residential or commercial would likely result in the permanent loss of agricultural land and/or opportunities for resource protection. The Project's temporary use of land would further support the County's ability to evaluate growth pressures against the optimal use of this land for future comprehensive plan updates, planning and/or zoning initiatives.

The Project directly contributes to and is consistent with the Plan's sustainability and energy goals related to: 1) Fostering public awareness, education, and support of sustainable practice through the development of livable communities; 2) Promoting economic development and workforce trained in the energy efficiency and renewable energy industry; 3) Promoting mitigation and adaptation to climate change that addresses public health safety, infrastructure, economic and environmental issues; and, 4) Being a leader and role model in the area of energy conservation, energy efficiency, reduction of greenhouse gas emissions and use of renewable resources within Kane County and throughout the region.

For illustrative purposes, the Project is anticipated to result in a decrease of roughly 9,740 metric tons of CO<sub>2e</sub> annually, or more than 237,300 metric tons CO<sub>2e</sub> over the Project's

lifespan. This is equivalent to the removal of more than 51,587 passenger vehicles from roadways. Assuming everyone in Kane County owned a passenger vehicle, the overall reduction would be equivalent to 10% of Kane County residents' vehicles according to the United States Census Bureau's July 1, 2022 population estimates.

**6. Explain how the establishment, maintenance or operation of the special use will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare (25-4-8-2-A).**

The State of Illinois found that the protection of "health, welfare, and prosperity of all Illinois Residents require[s] the provision of adequate, reliable, affordable, efficient, and environmentally sustainable electric service...". Accordingly, Illinois has set several mandatory benchmarks regarding the percentage of electricity that must be provided by renewable sources as follows: 40% by 2023, 50% by 2040, and 100% by 2050 (Public Act 102-0662). Furthermore, The Illinois State Climatologist, responsible for providing climate information for farmers, government agencies, policymakers and citizens, recently detailed current climate change impacts within Illinois including flooding and related contaminate exposure, drought stress, more frequent and severe heat waves, agricultural pressures, vector-borne disease risk, decreased air quality, and associated economic damages<sup>i</sup>. The Construction of the Project will further the above goals, while supporting the mitigation risks to public health, safety, and overall welfare of local and regional communities.

The Project will be designed and constructed to comply with building, safety, and electric code requirements, as well as standard industry practices. In the unlikely event of an emergency, the Project will be equipped with a secure device containing keys accessible only by Project staff and emergency responders to accommodate uninterrupted access to the site. The Project has coordinated with the Sugar Grove Fire Protection District and will continue to collaborate as the Project advances. A water main runs along the west side of South Barnes Road, and a fire hydrant is located along the Project's boundary.

Photovoltaic panels are constructed with non-toxic materials and are designed to absorb rather than reflect light. Utilized equipment will be tested against widely accepted certifications standards as required. The single axis tracking technology moves panels with the sun to maximize efficiency. The Project will not impact wetlands or other sensitive water resource areas. Furthermore, as indicated within the provided environmental studies, the site did not indicate the presence of sensitive species or habitats.

Concerning electromagnetic fields ("EFM"), common non-ionizing sources such as household appliances that people interact with daily including vacuums, dishwashers, and electric ovens all have higher EMF compared to the Project's inverters and main power transformers, reaching background levels of less than 0.2 mG within with 25' and 100' respectively. On average, Americans are exposed to about 1 mG daily. Studies conducted on solar facilities demonstrate EMF is negligible compared to federally regulated exposure limits<sup>ii</sup>.

Please see Exhibit I for additional information concerning health and safety considerations of the Project and its equipment.

**7. Explain how the special use will not be injurious to the use, enjoyment and value of other property in the immediate vicinity (25-4-8-2-B).**

The proposed Project will not diminish others' enjoyment of land or be injurious to the value of property within the immediate vicinity. There is no permanent lighting serving the Project thereby avoiding any contributions to light pollution or impacts to abutters' circadian rhythms. The Project will be operated in a manner which adheres to the Illinois Pollution Control Board regulations surrounding noise.

The Project's robust vegetative screening will screen views of the proposed development from adjacent non-participating residences, and provide additional habitat for wildlife. Please see the attached site plan for further details on screening placement and species composition. The Project has coordinated with the Kane County Forest Protection District to refine the proposed seed mix to compliment regional consistency, as well as maximizing blooming window coverage for the benefit of wildlife and ancillary aesthetic considerations.

As supported by prior testimony provided before Kane County's Zoning Board of Appeal, the County Board, and its Development Committee, CohnReznick, a leading property valuation advisory services firm based out of Chicago has reinforced that solar projects have not "caused consistent and measurable negative impacts on property values", or "deterred the development of new single-family homes on adjacent land", supported through analysis and conducted interviews with more than 60 county and township assessors across Illinois (Exhibit J).

**8. Explain how the special use will not impede the normal, orderly development and improvement of the surrounding property (25-4-8-2-C).**

The Project will not burden municipal resources as the site will be unoccupied. The Project is expected to generate nearly 1 million dollars in taxes during the operational lifespan, of which roughly 75 percent will support the West Aurora School District 129 (\$605,224.78), and Waubensee College 516 (\$54,773.67). The increased tax revenue generated from the Project can be reinvested to fully serve the community and its needs. It is respectfully submitted that few applicants or other taxpayers can make this same representation. Please note that these estimates were modeled using 2022 tax rates and current Illinois Department of Revenue guidance. It is likely these values will be adjusted, resulting in higher tax revenues for Kane County and corresponding taxing entities.

For the reasons stated elsewhere in this application, the Project will not impede the normal and orderly development and improvement of surrounding properties, or community overall.

**9. Will adequate utility, access roads, drainage and other necessary facilities be provided? Please explain (25-4-8-2-D):**

The Project proposes to interconnect to ComED's existing distribution facilities paralleling South Barnes Road. Access will be provided via a new driveway. The Project has coordinated with Sugar Grove Township's Highway Commissioner, Doug Musser regarding permitting and engineering considerations. The Project will provide an ancillary safety benefit by helping reduce wind-driven snow drift across South Barnes Road through the proposed fencing.

The proposed development adds approximately 15,330 square feet of impervious area to the Site. In accordance with the Kane County Stormwater Management Ordinance, Category I Best Management Practices (BMPs) are required to be incorporated into the Project. The proposed BMPs will provide runoff volume reduction and water quality treatment for one inch of rainfall over the added impervious area. The volume of water reduction and treatment required is approximately 1,280 cubic feet. Permanent Vegetation is proposed to meet the Category I BMP requirements. A native seeding mix that is suitable for site conditions will be selected in accordance with the Practice Standards of the Illinois Urban Manual. Permanent Vegetation (Code 880) will establish a permanent cover to stabilize soils and enhance permeability while reducing runoff and erosion. The location for the permanent vegetation is shown in the provided plan set. Please see the attached Stormwater report for more details regarding BMPs. In summary, the Project will be designed in a way which fully meets the needs of the Site and will not burden the neighboring properties or community.

The Project will not utilize limited resources, or require sewerage and/or connection to available public or water systems.

**10. Will adequate measures be provided for ingress and egress and so designed to minimize the traffic and congestion? Please explain (25-4-8-2-E):**

The Project will follow applicable requirements to ensure the safety of the travelling public and Project stakeholders. There will be no substantial short-term or long-term traffic impacts during construction or operation given the size of this Project. Compared to other roadways serving permitted solar facilities within Kane County, South Barnes Road is lightly travelled in comparison. The proposed access location maintains a clear line of sight for north and southbound traffic. Sugar Grove Township's Highway Commissioner did not express any safety concerns regarding the proposed project, but rather identified how the construction would provide a tangible benefit as previously introduced.

**11. Will the special use conform to the regulations of the district in which it is located? Please explain (25-4-8-2-F):**

Commercial Solar Energy Facilities are listed as an allowed special use in the Farming District, and the Project will conform to all applicable regulations.

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<sup>i</sup> <https://stateclimatologist.web.illinois.edu/climate-change-in-illinois/>

<sup>ii</sup> <https://pubmed.ncbi.nlm.nih.gov/26023811/>