

Staff Report



**Zoning and
Land Regulation
Committee**

Public Hearing: **November 15, 2022**

CUP 02577

Zoning Amendment Requested:

TO CUP: Solar Array Electric Generating Facility

Town/Section:

DUNN, Section 27

Size: **80 Acres**

Survey Required.

Applicant

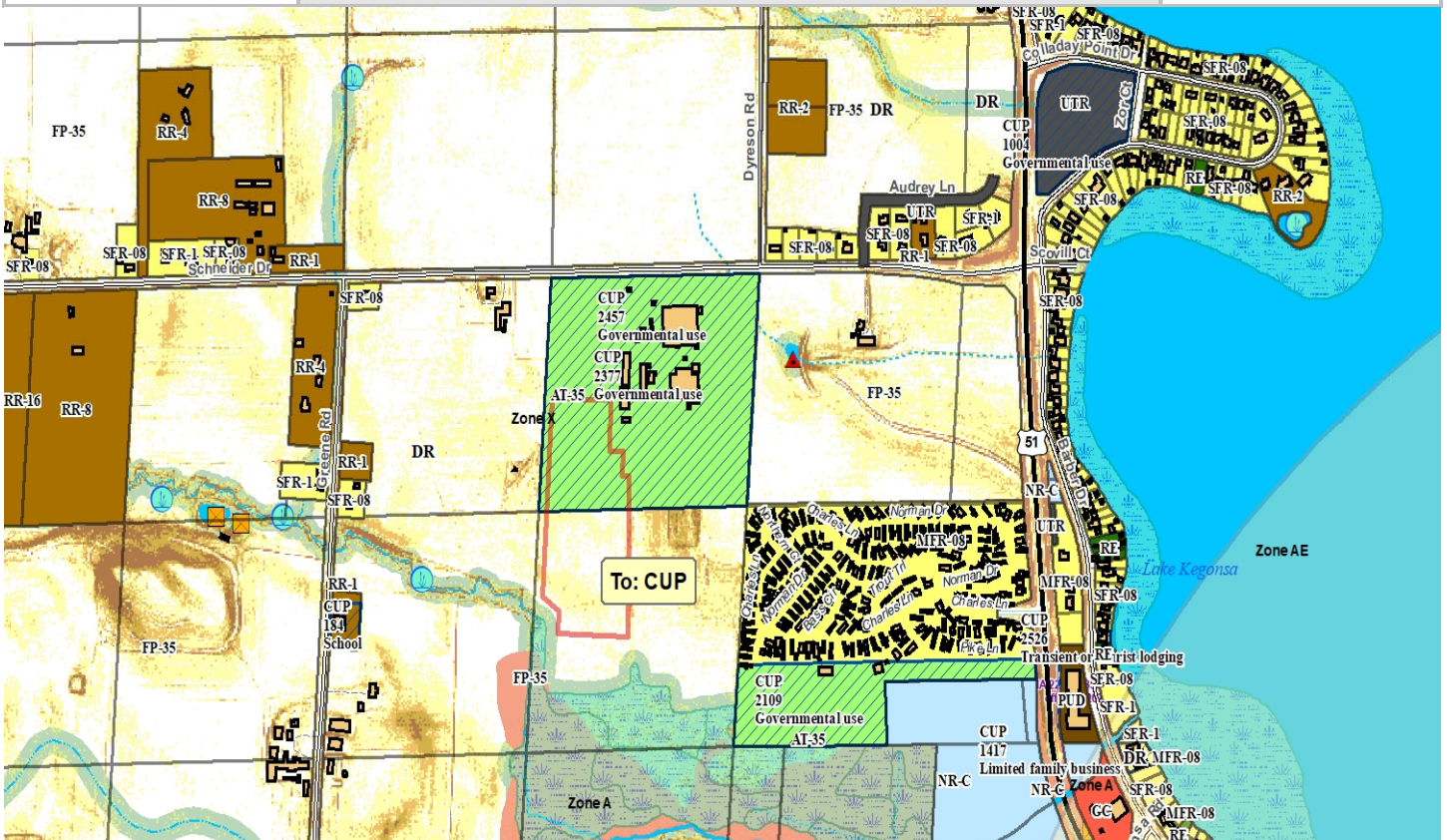
**REGENT OF UNIV OF
WIS 310 PETERSON
BLDG**

Reason for the request:

Solar Array Electric Generating Facility

Address:

**3725 SCHNEIDER
DRIVE**



DESCRIPTION: Applicant wants to construct a 15-acre solar array farm on part of the 278-acre property on Schneider Drive owned by the UW Board of Regents. The solar facility would be owned and operated by Wisconsin Power and Light Company, on land leased from the UW Board of Regents, and would generate 2.25 megawatts of energy for the area grid. The proposed solar array would straddle two parcels with AT-35 and FP-35 zoning; a solar farm is an allowable conditional use in both zoning districts.

CONDITIONAL USE PERMIT DECISION MAKING: “Conditional uses” are those land uses which, because of unusual nature and potential for impacts on neighboring lands, public facilities, the environment or general welfare, warrant special consideration and review.

Prior to granting or denying a conditional use, the zoning committee shall make findings based on evidence presented and issue a determination whether the proposed conditional use, with any recommended conditions, meets all of the following standards:

- i. General standards for approval of a conditional use under s. 10.101(7)(d);
- ii. Any prescribed standards specific to the applicable zoning district.
- iii. Any prescribed standards specific to the particular use under s. 10.103.

The applicant has provided information that shows that the proposed use will meet the CUP criteria listed below, from Section 10.101(7)(d) of the Zoning Code:

- a. That the establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, comfort or general welfare;*
- b. That the uses, values and enjoyment of other property in the neighborhood for purposes already permitted shall be in no foreseeable manner substantially impaired or diminished by establishment, maintenance or operation of the conditional use;*
- c. That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district;*
- d. That adequate utilities, access roads, drainage and other necessary site improvements have been or are being made;*
- e. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets; and*
- f. That the conditional use shall conform to all applicable regulations of the district in which it is located.*
- g. That the conditional use is consistent with the adopted town and county comprehensive plans.*
- h. If the conditional use is located in a Farmland Preservation Zoning district, the town board and zoning committee must also make the findings described in s. 10.220(1).*

The applicant has also provided information on how the proposed project meets the five CUP standards for all Farmland Preservation Districts:

- 1. The use and its location in the Farmland Preservation Zoning District are consistent with the purposes of the district.*
- 2. The use and its location in the Farmland Preservation Zoning district are reasonable and appropriate, considering alternative locations, or are specifically approved under state or federal law.*
- 3. The use is reasonably designed to minimize the conversion of land, at and around the site of the use, from agricultural use or open space use.*
- 4. The use does not substantially impair or limit the current or future agricultural use of surrounding parcels of land that are zoned for or legally restricted to agricultural use.*
- 5. Construction damage to land remaining in agricultural use is minimized and repaired, to the extent feasible.*

Zoning Code s. 10.103 lists no special requirements for Electric Generating Facilities.

OBSERVATIONS/ FACTUAL INFORMATION: The University of Wisconsin owns approximately 278 acres of land in this area, 118 acres of which is south of Schneider Drive. The initial CUP application described the project as a 2.25 megawatt solar facility that would be on up to 15 acres of leased land, and identified the two 40-acre parcels involved. The precise location and geometry of the 15 acres was still being refined in coordination with the Town of Dunn's review. County staff sent out public notices with the project boundary that was shown on the initial application. Based on County staff's initial review, and the Town of Dunn's requirements for solar facilities and meetings held with the Town, the applicants have submitted additional information and updated documents for the ZLR public hearing.

In their application, the applicants explain how the proposed use would meet the conditional use standards. They state that it will provide clean energy to the surrounding area, host agricultural research on co-locating solar and agriculture, and that the proposed location is set back from Schneider Drive to reduce visibility from neighbors and the travelling public (original plans had it 800 feet away, revised plans show it at ~640 feet), as well as avoiding impacts to wetlands and natural areas to the south. They also claim it will support the activities at the UW-Madison Physical Sciences Lab and will not affect continued agricultural production on the surrounding lands. The site would be accessed by a private access road proposed to extend west from the Physical Sciences Lab site (location was revised from original plans based on town feedback, see plans in the "Supplemental" materials). Estimated traffic counts have not been provided, but solar facilities typically see low traffic to and from the site, generally only for periodic maintenance as needed.

The application also explains how the solar array would be consistent with the Farmland Preservation zoning district requirements (which apply to the southern parcel / southern half of the CUP area). They state the facility will support agricultural research at this location, that the location uses a southern-facing slope for optimal energy production in

close proximity to the existing electrical distribution line on Schneider Drive, and avoids impacts to prime agricultural soils. The site plan has been updated to comply with the Town's policy of limiting the solar array to no more than 5 acres of prime ag soils, a policy which applies to the southern parcel based on it being outside the Urban Service Area for sewer and water service. The revised driveway location also minimizes impacts to prime soils and crop production on the northern parcel. The site plan also identifies an access route for farm equipment to cross, around the north end of the solar array. In its approval of the CUP, the Town of Dunn requires periodic reports on the agricultural research done on site. Additionally, the applicants have provided a copy of the Decommissioning Plan for removal of the solar installation at the end of the lease term.

A solar farm is a passive land use; as such it is expected to have minimal impacts in terms of noise, odor, dust, and traffic. In response to feedback from both Town staff and neighboring land owners to the west, the applicants were asked to provide more detail on the proposed plantings both inside the solar enclosure and visual screening outside the enclosure. Sheet PV-1.03 shows the location of "vegetation screening shrubbery", and the "Sample Wisconsin Native Plantings" list identifies the proposed types of plantings that would be used for the facility.

In light of public inquiries received about the visibility of the solar panels from homes in the area, staff reviewed the terrain and the distance of the proposed solar array from residential homes in the area. The closest homes to the solar array would be the home owned by the UW Regents (670 feet away), the Bay View Heights neighborhood to the east (750 feet away), and the homes along Greene Road (ranging from 1180 to 1300 feet away). See the "Distance to Surrounding Homes" and "Terrain/Elevation" exhibits in packet.

Standards Specific to the Applicable Zoning District

The proposed facility meets the requirements of the AT-35 and FP-35 zoning districts, including building setbacks, height, and lot coverage. The AT-35 and FP-35 districts allow as a conditional use "Electric generating facilities, provided 100% of the production output of the facility is derived from renewable energy resources".

The stated purpose of both the AT-35 and FP-35 zoning districts include accommodating a wide range of agriculture and agricultural accessory uses, at various scales, as well as the intent to "Allow for other incidental activities, compatible with agricultural use, to supplement farm family income and support the agricultural community."

Resource Protection

Resource protection corridors are mapped on site, but are located south of the proposed solar CUP area and reflect the areas with wetlands and floodplain. The revised plans in the "Supplemental" materials identify the location of the solar array and fencing in relation to the wetland boundaries and the 100' minimum wetland buffer required by the Town of Dunn, which is more than the 75' buffer Dane County requires. In addition, a portion of the proposed solar field is within the Shoreland Zone, due to proximity to an intermittent stream to the south. Within the Shoreland Zone portion of the parcel there is a maximum limit of 15% impervious surface before mitigation measures are required. The proposed solar array appears to be well under this limit. A shoreland zoning permit will be required for any structures located in the Shoreland Zone.

TOWN PLAN: The proposed conditional use is located in the town's agricultural preservation area and also the town's limited service area (northerly ~1/6th of the CUP area). The town's plan identifies a variety of [requirements, criteria, and possible conditions](#) for conditional uses that are intended to mitigate potential impacts to neighboring properties (e.g., screening, lighting, signage, etc.). The plan also includes general siting standards for nonfarm development designed to protect prime agricultural soils, sensitive environmental features, wildlife habitat, and the town's rural character. The site plan showing the conceptual layout of the solar system within the ~15 acre proposed conditional use area appears to largely satisfy the town's siting standards.

County comprehensive plan policies generally support the development of renewable energy projects that are sited in a manner consistent with, "...community and regional development objectives, and the overall protection of public health, safety and the environment."

As indicated below, the Town of Dunn has approved the CUP with a number of conditions designed to ensure compliance with the various town plan requirements. Pending any concerns raised at the ZLR public hearing, and

imposition of appropriate conditions of approval, staff recommends that the committee find the proposed conditional use to be consistent with both the town and county comprehensive plans. (For questions about the town plan, contact Senior Planner Majid Allan at (608) 267-2536 or allan@countyofdane.com)

TOWN ACTION: On October 10th, the Town Board recommended approval of the CUP with the following conditions:

1. According to the vegetation plan submitted on October 7, 2022, the permit holder shall plant vegetation in a manner which helps buffer, screen, break up, or soften views of the solar panels and associated buildings from the public road or adjacent residences. The applicant shall work with Dane County Zoning to ensure the vegetation plan meets the requirements of this condition.
2. Solar panels and associated structures (excluding fencing or driveways) cannot sit on more than 5 acres of prime soils.
3. Solar panels and associated structures cannot be more than 14 feet in height, except no more than one acre of the site may have solar panels up to a height of 20 feet, with view considerations as detailed under Condition #1.
4. Any external lighting shall be limited to lighting that is necessary for safety and lighting for interpretive signage. All lighting must be dark skies compliant. Lighting for interpretive signage must be downward facing, shaded, cannot spill over on neighboring property lines, dark skies compliant, and be shut off from 10 pm to 7 am.
5. Construction must occur between 7 am and 7 pm.
6. Any hazardous, toxic, or explosive materials stored or used on site must be stored, used, and disposed of in accordance with state and federal laws.
7. The area beneath the solar panels must be planted with native, pollinator-friendly vegetation or be used for agricultural activities such as crop production or grazing. The native, pollinator-friendly vegetation must be maintained to avoid other vegetation from growing under the panels.
8. All new wires associated with the CUP shall be located underground, including all wires that transfer electricity from the solar panels to another location beyond the CUP boundary, except overhead wires may be installed between existing poles when underground wiring is not feasible.
9. The only fencing allowed within the CUP area will be fencing that surrounds facilities that could be a hazard to the public. Such fencing must include locks and may be no taller than 8 feet. No barbed wire or razor wire fencing is permitted.
10. Signage is limited to safety, no trespass, interpretive, educational, and facility signage. Such signage can be no larger than 32 square feet and the aggregate square footage of all signage is limited to 160 square feet.
11. A third driveway access from Schneider Drive will not be permitted. A temporary construction driveway can be placed on Schneider Drive with Town of Dunn approval.
12. Permit holder shall abide by the terms of the decommissioning plan, which is approved by the Town of Dunn prior to the applicant's Dane County Zoning and Land Regulation Committee meeting.
13. Solar panels that are no longer functional must be recycled according to the best practices at the time in order to mitigate environmental contamination.
14. Periodic information and reports will be made available to the Town of Dunn or the public, which discusses the research and learning activities which have occurred at the solar array.
15. The CUP area shall not exceed 15 acres in size.
16. Holder of the CUP is required to obtain all necessary local, county, state, and federal permits and licenses related to the electric generating facility.
17. The CUP will terminate upon decommissioning of the solar project.
18. The CUP area must be located outside of the Town's 100 foot wetland setback.

STAFF RECOMMENDATION: At this time, public comments have been submitted to the County in opposition to the proposed CUP. In addition, we have been notified of a violation on an adjacent parcel on the UW-owned property involving the storage of boats on a farm residence. The public comments have been provided in the meeting packet as part of the petition materials, available for public review, and enforcement action is being taken to address the violation.

In addition, the Town of Dunn recently adopted an ordinance, Ordinance No. 11-25 regulating solar panels. The ordinance limits the height of solar panels to 14 feet, among other criteria. In its approval of this CUP, the Town indicated it may allow panels up to 20 feet in height on up to 1 acre of area, as part of this project with consideration for views of the site from nearby roads and residences (see Town conditions #1 and #3 above). However, this would require a change to the Town's new policies and a proposal to include 20-foot tall panels would be inconsistent with that policy. For clarity and consistency with the current-day town policies, we recommend the panels be limited to 14 feet in height.

Staff recommends postponement of this petition, due to the public opposition and the existing zoning code violation on the property. This would be consistent with the ZLR Committee's adopted rules and procedures. This would also allow the applicants time to address the concerns raised by the public, and to address the code violation.

NOVEMBER 15th ZLR MEETING: This petition was postponed at the November 15, 2022 meeting due to public opposition. Members of the public submitted comments both in support of, and opposition to, the petition. Neighbors in the area expressed the following concerns and questions:

- Concern with public notices and information shared about the potential project.
- Visual impacts of the solar array and the need for screening.
- The consumption of prime agricultural land for the project.
- Proposed height of the panel equipment exceeding the 14-foot limit set by Town of Dunn's solar ordinance.
- What would the equipment and panels be made of, and can they be recycled? Could the equipment contaminate the soil, stream and groundwater?
- Concerns that solar power facilities are experimental.
- Have other locations been considered for the array that could be less impactful?
- Concerns about stormwater management / runoff.
- The loss of animal habitat.
- Whether UW students will visit the site for education and research activities as indicated by the applicants.
- The existing zoning code violation on the site related to the storage of UW Hoofers boats.

STAFF UPDATE: At the November public hearing, applicants presented their proposal and addressed the concerns raised to date. They shared information on the project schedule, meetings held since winter/spring of 2022 for stakeholder engagement, and the types of research they wish to conduct. They explained this location was chosen over others because of its proximity to the UW Madison campus, because they wish to use the south-facing slope, and wish to use the existing Physical Sciences Lab facilities for parking and access to avoid the need to build new on a fresh site. They addressed how the proposed location complies with the Town's policy limiting disturbance of prime ag soils, and the Town's 100' wetland buffer, and noted the Environmental Impact Assessment (EIA) done in March of 2022. They also explained that smaller-scale solar facilities between 200 kilowatts and 2.25 megawatts such as this one are critical for utilities like Alliant to meet their renewable energy goals.

Applicants also provided the following materials in response to the comments and questions raised during the hearing:

- Written response to comments.
- The Final Environmental Impact Assessment (FEIA) – the 54-page FEIA report is included in meeting packets, and additional information and documents are available at <https://sustainability.wisc.edu/strategic-initiatives/renewable-energy/kegonsa-research-campus/>
- Revised plan set dated 11/10/2022 modified the panel height to a maximum of 14', removed the 20' panels.
- A specification / information sheet for the solar panels.

Staff note that the plans presented on November 15th contain plantings in select locations to soften and screen views of the solar panels. The Town may require additional plantings prior to issuing a license for the project (see recommended

condition #1 below). The revised plans limit panel height to 14 feet (see also recommended condition #3). The information provided in the original application, the FEIA (which was reviewed by public agencies including WDNR), and other supplemental materials address the questions about the potential for environmental and health impacts, including the solar panels and their treatment at the end of the project's life. Prior to construction, the project will require an erosion control permit from the Dane County Land and Water Resources Department, and may also require approval of a stormwater management plan, per applicable County ordinances (see recommended condition #13). Zoning staff is working with the landowners to address the boat storage issue. See below for potential CUP conditions to consider.

CUP 2577 Potential Conditions of Approval:

1. The permit holder shall plant vegetation in a manner which helps buffer, screen, break up, or soften views of the solar panels and associated buildings from the public road or adjacent residences. Plantings shall be provided according to the conceptual vegetation plan and "Sample Wisconsin Native Plantings" list submitted on October 28, 2022; in addition at least 3 trees shall be planted on the north end between the panels and Schneider Drive.
2. Solar panels and associated structures (excluding fencing or driveways) may not cover more than 5 acres of prime soils (see site plan).
3. Solar panels and associated structures cannot be more than 14 feet in height, with view considerations as detailed under Condition #1.
4. Any external lighting shall be limited to lighting that is necessary for safety and lighting for interpretive signage. All lighting must be dark skies compliant. All lighting must be downward facing, shaded, cannot spill over on neighboring property lines, dark skies compliant, and be shut off from 10 pm to 7 am.
5. Construction must occur between 7 am and 7 pm.
6. Any hazardous, toxic, or explosive materials stored or used on site must be stored, used, and disposed of in accordance with state and federal laws.
7. The area beneath the solar panels must be planted with native, pollinator-friendly vegetation or be used for agricultural activities such as crop production or grazing. The native, pollinator-friendly vegetation must be maintained to avoid other vegetation from growing under the panels.
8. All new wires associated with the CUP shall be located underground, including all wires that transfer electricity from the solar panels to another location beyond the CUP boundary, except overhead wires may be installed between existing poles when underground wiring is not feasible.
9. Fencing shall be limited to the fencing shown on the site plan, must include locks and shall be no taller than 8 feet. No barbed wire or razor wire fencing is permitted.
10. The main sign is limited to 32 square feet per Dane County Sign Ordinances.
11. A third driveway access from Schneider Drive will not be permitted. A temporary construction driveway can be placed on Schneider Drive with Town of Dunn approval.
12. Permit holder shall abide by the terms of the decommissioning plan, which must be in a recordable form acceptable to the Town of Dunn and must be approved by the Town of Dunn prior to CUP approval by the Dane County Zoning and Land Regulation Committee.
13. Solar panels that are no longer functional must be recycled according to the best practices at the time in order to mitigate environmental contamination.
14. Periodic information and reports will be made available to the Town of Dunn or the public, which discusses the research and learning activities which have occurred at the solar array.
15. The CUP area shall not exceed 15 acres in size.
16. Holder of the CUP is required to obtain all necessary local, county, state, and federal permits and licenses related to the electric generating facility.
17. The CUP will terminate upon decommissioning of the solar project.
18. The CUP area must be located outside of the Town of Dunn's 100 foot wetland setback.

Any questions about this petition or staff report please contact Rachel Holloway at (608) 266-9084 or holloway.rachel@countyofdane.com