BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Evergy Missouri West, Inc., d/b/a Evergy Missouri West for Permission and Approval of Certificates of Convenience and Necessity Authorizing It to Construct, Install, Own, Operate, Manage, Maintain, and Control Two Solar Generation Facilities	)))))))	Case No. EA-2024-0292

EVERGY MISSOURI WEST'S
NOTICE OF COMPLIANCE FILING

COMES NOW, Evergy Missouri West, Inc. d/b/a Evergy Missouri West ("Evergy Missouri West," "EMW," or the "Company") and, for its *Notice of Compliance Filing* ("Notice"), states as follows:

1. On May 29, 2025, EMW, the Staff ("Staff") of the Missouri Public Service Commission ("Commission"), Midwest Energy Consumers Group ("MECG"), and Renew Missouri Advocates ("Renew MO") (collectively, the "Signatories") filed a *Unanimous Stipulation and Agreement* ("Agreement") that resolved all issues in this case.

2. The Agreement was approved by the Commission's *Order Approving Stipulation and Agreement and Granting Certificates of Convenience and Necessity* ("Order") issued on July 31, 2025.

3. Pursuant to the Agreement, the Signatories agreed that:

> i. The Company will investigate the feasibility of introducing solar grazing as an operating and maintenance ("O&M") feature of these Facilities and will file the results of such study in this docket with the Commission no later than six months after Commission grants CCNs to the Facilities.
>
> j. The Company commits to solicit feedback from any organization listed under Subparagraph 5(l) below and evaluate sharing land-use and conservation impact data with the non-profit Renewable Energy Wildlife Institute's ("REWI") SolSource Database. The Company will notify parties within 6 months of a Commission Order on the

results of its evaluation and decision regarding participation with SolSource Database.

k. The Company will solicit feedback and recommendations from the U.S. Fish and Wildlife Service, the Missouri Department of Conservation, and the Kansas Department of Health and Environment on both the solar grazing study and types of data for SolSource Data sharing.

l. If the Company decides to participate in the SolSource Database, it commits to meet with the OPC and Staff annually for the next three years to provide updates on the Company's experience and the effectiveness of implementing solar grazing at the sites of the Facilities.[1]

4. Attached hereto as Exhibit A, is EMW's solar grazing feasibility study, as well as the Company's conclusions, in compliance with the approved Agreement, as cited above.

WHEREFORE, Evergy Missouri West respectfully submits this *Notice* to the Commission

Respectfully submitted,

/s/ Roger W. Steiner

Roger W. Steiner, MBN 39586
Cole Bailey, MBN 77628
Corporate Counsel
Evergy, Inc.
1200 Main Street
Kansas City, MO 64105
Phone: (816) 556-2314
roger.steiner@energy.com
cole.bailey@evergy.com

Attorneys for Evergy Missouri West

[1] See, *Agreement*, p. 5, ¶5(i)-(l).

CERTIFICATE OF SERVICE

I do hereby certify that a true and correct copy of the foregoing document has been hand-delivered, emailed, or mailed, postage prepaid, to the counsel for all parties this 9th day of February 2026.

/s/ Roger W. Steiner

Attorney for Evergy Missouri West

Evaluation of the Livestock Grazing Report from WSP

The Feasibility Analysis Report for Agrivoltaics / Livestock Grazing prepared by WSP, January 2026, evaluates the feasibility of sheep grazing on Evergy's Foxtrot and Sunflower Sky solar projects. The feasibility depends most heavily on each solar project's sheep grazing readiness after construction and the cost difference between grazing and mowing at each site. Incremental considerations, not discussed in the WSP report, are included herein.

Mowing and Grazing

WSP obtained three estimates for mowing, shown in Table 4 in their report. The average cost ranges from approximately **[redacted]** to **[redacted]** per acre. The average cost to mow Evergy's largest existing solar farm, West Plains, is approximately **[redacted]** per acre. The Sunflower Sky and Foxtrot projects will be ten-to-fifteen times larger than the West Plains site, when considering acreage requiring mowing. Evergy would expect mowing costs to be more in-line with the lower range of the estimates shown in Table 4 of the WSP report, around **[redacted]** per acre, given economies of scale with these larger sites and because these two sites are predominantly flat with minimal physical barriers to mowing. As discussed below, in contrast to ongoing grazing expenses, this amount is expected to decrease over time after the initial establishment phase.

Looking at grazing, Table 5 in the WSP report shows a list of the local graziers with estimated costs. The average costs from the estimates received would be between approximately **[redacted]** and a little under **[redacted]** per acre for grazing.

Other Considerations

The seed mixes selected for both projects consist primarily of native warm-season grasses and forbs, along with naturalized cool-season species capable of tolerating reduced light levels beneath the solar arrays. Sunflower Sky has had some grazing friendly and Eastern Spotted Skunk friendly seed already applied. Foxtrot has the more traditional native seed mix mentioned previously. These plant communities typically require three to five years to establish. During this establishment period, it is essential that management activities—such as mowing, hand trimming, and targeted herbicide applications—are conducted in a manner that promotes the successful growth of the seeded species while controlling or eradicating undesirable vegetation, including noxious weeds and invasive species that may impede facility operations. This stage represents the most labor-intensive and financially demanding portion of the revegetation process. Once the vegetation is fully established, required management activities will decrease substantially. Long term maintenance is expected to be limited to selective herbicide treatments of individual unwanted plants and occasional mowing, as needed.

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Although the native mixes can accommodate limited future grazing, they are not optimal for that purpose and may require substantial conversion efforts—such as broadcast herbicide treatments or tillage—to remove the native species currently being established. For solar grazing operations, subsequent reseeding with a mix specifically designed to support grazing would be necessary. Implementing these changes would increase project costs and delay site revegetation, which in turn could affect compliance with stormwater management permit requirements.

Additionally, aspects of the final panel and fencing design at the Sunflower Sky site resulted in unavoidable impacts to wooded riparian areas and native grasslands, both recognized as critical habitat for the statelisted Eastern Spotted Skunk. In compliance with the Kansas Nongame and Endangered Species Conservation Act, Evergy was issued Kansas Action Permit 2025-15 to ensure appropriate mitigation of impacts to this designated habitat. As a permit condition, Evergy is required to identify and manage a parcel within the project boundary for the long-term benefit of the Eastern Spotted Skunk, with revegetation and habitat management activities to be maintained in perpetuity. Grazing within the mitigation area is not an approved land management practice.

Another impact to the project cost would be the need to design access gates between parcels, which has not been accounted for in the current site designs. Evergy would also need to verify that any quote received from a commercial grazer included the expense required to move grazing operations between parcels and across highways.

Lastly, Evergy is currently enrolled in the Nationwide Monarch Candidate Conservation Agreement with Assurances (CCAA) for Energy and Transportation Lands. This voluntary agreement promotes habitat-enhancing practices to support monarch butterflies while providing regulatory assurances for participating landowners. Evergy intends to enroll both the Foxtrot Solar and Sunflower Solar facilities in the Monarch CCAA and to manage these sites in a manner that benefits not only the monarch butterfly but also other at-risk species, such as the western regal fritillary butterfly. While grassland management that supports both pollinators and livestock grazing is achievable, integrating these objectives at this stage of construction introduces additional complexities and uncertainties for both projects. At Foxtrot, for example, the Missouri Conservation Department suggested that if grazing were selected, to wait until after July 1st to start. This would allow for the grasslands to be used for a “nectaring area during movements between breeding populations”.

Conclusion

The WSP report data and Evergy’s experience with a site much smaller than Foxtrot and Sunflower Sky would indicate that mowing is a more feasible alternative than solar grazing.

Additionally, solar grazing would create incremental impacts from reseeding areas to a more grazing friendly seed mix, designing for and installing access gates between parcels, and accounting for the state-listed Eastern Spotted Skunk and the CCAA.

The WSP report discussed herein meets the requirement of Evergy to perform a solar grazing feasibility study, as outlined in Section 5.i. of the stipulation and agreement in EA-2024-0292. Further, Evergy solicited feedback and recommendations from the U.S. Fish and Wildlife Service ("USFWS"), the Missouri Department of Conservation ("MDC"), the Kansas Department of Health and Environment ("KDHE"), and the Kansas Department of Wildlife and Parks ("KDWP"). Evergy received responses from the MDC and the KDWP. The KDHE indicated on 12/18/25 that they would reply with guidance, but they have not yet done so. No response was received from the USFWS. The attachments listed below meet Evergy's requirements to solicit feedback on the Renewable Energy Wildlife Institute's Solsource Database and to solicit feedback and recommendations from listed external entities, these two requirements being detailed in Sections 5.j. and 5.k., respectively, of the same stipulation and agreement.

A-1: KDHE_SolarGrazing_SolSource_ReviewRequest.pdf
A-2: KDWP_SolarGrazing_SolSource_Comments.pdf
A-3: KS_USFWS_SolarGrazing_SolSource_ReviewRequest.pdf
A-4: MDC_SolarGrazing_SolSource_Comments.pdf
A-5: MO_USFWS_SolarGrazing_SolSource_ReviewRequest.pdf
A-6: REWI Letter to Evergy Data Sharing.pdf

As for the SolSource database, the KDWP recommended consistency with methods of study performed elsewhere to help with determining wildlife habitat and use before and after construction. That said, the SolSource database is not currently operational, and funding is in question. Therefore, Evergy will not be participating in the SolSource database.

Feasibility Analysis Report
Agrivoltaics / Livestock Grazing

Prepared for:

Evergy Inc.

Kansas City, Missouri

Prepared by:

Elizabeth Gladstone, Consultant

Rebecca Dutton, Consultant

Kyle Spendiff, Assistant Vice President

Justin Williams, Assistant Vice President

WSP USA Inc.

1 E. Pratt Street, Suite 300, Baltimore, MD 21202

WSP Project No. US0050607.5550

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1.0 Introduction

Evergy, Inc. (Evergy) has requested WSP USA Inc. (WSP) to conduct a feasibility analysis for potential integration of sheep grazing into two solar power projects: the Foxtrot Solar facility (100 megawatts [MW], 600 fenced acres) in Jasper County, Missouri, and the Sunflower Sky Solar facility (66 MW, 327 fenced acres) in Wilson County, Kansas. This analysis focuses on sheep grazing both because it is the most common type of solar grazing and because sheep are particularly well-suited for this application. Included in this feasibility study is a review of the benefits and detractors of solar grazing, active and planned solar grazing projects throughout the Midwest, elements of solar grazing projects, and the estimated operating costs associated with traditional vegetation management versus livestock grazing schemes. As part of this analysis, WSP requested quotes from solar graziers and mowing operations, focusing on those that service Missouri and Kansas. This analysis indicates that solar grazing is an emerging vegetation management practice in the Midwest that can be cost-competitive with mowing, depending on several factors, including whether the sites have groundcover suitable for livestock grazing, a predator-proof perimeter fence, access to water, and are proximate to an experienced grazier with an adequate number of sheep.

2.0 Benefits and Challenges of Solar Grazing

2.1 Benefits

Solar grazing is a type of agrivoltaics[1] that incorporates livestock and solar energy generation and is one of the few agrivoltaics practices that is being successfully employed at the utility-scale (> 5 MW) in the United States (EPRI 2024). When site characteristics allow, solar grazing can be implemented as an alternate vegetation management strategy over traditional options such as mowing and herbicide application and has been reported to reduce operations and maintenance (O&M) costs (Abdullah Al Mamun et al. 2022, Gerke 2024). In addition to potential O&M savings, use of livestock grazing in place of mowing to manage vegetation at solar sites can provide supportive ecosystem services such as habitat for pollinators and other wildlife, increased soil health and carbon sequestration, and improved fire suppression (Kochendoerfer and Thonney 2021, Towner et al. 2022, ASGA 2024, EPRI 2024). Grazing is considered more beneficial for pollinators and other wildlife than mowing because plants can "rebound faster than they would following a mowing event," and depending on the mowing regime, rotational management of pastures may allow for more gradual or staggered bloom periods (ASGA 2024). Employing livestock for vegetation management may be of particular benefit at sites that present challenges for mowing, such as those with rocky terrain or in areas of high rainfall (Gerke 2024, EPRI 2024). Additionally, use of livestock grazing may reduce or eliminate damage to panels and other site equipment, such as collisions and rocks/debris kicked up during mowing (Grasby et al. 2021, McCall et al. 2023). Beyond these benefits, solar grazing has the potential to improve community support for solar projects, in turn facilitating successful project deployment (EPRI 2023, EPRI 2024, SETO n.d., Guarino and Swanson 2022, Michigan State University 2024). For instance, an 800 MW solar project in

[1] Agrivoltaics in the simultaneous use of land for solar photovoltaic power generation and agricultural production of crops, livestock, and livestock products (NYSERDA 2023).

Ohio that had been met with local opposition received approval partly due to its incorporation of agrivoltaics, including 1,000 sheep (Gilbert 2024).

2.2 Challenges

In a case study summarizing three examples of utility-scale (35 – 550 MW) solar grazing sites in three different regions (California, Georgia, New York) of the U.S., EPRI (2024) found that common challenges included predator protection, soiling of equipment pads, uneven grazing at the lower edge of panels, poor vegetation establishment, and transportation of water. Similarly, a recent census conducted by the American Solar Grazing Association (ASGA) and the National Renewable Energy Laboratory (NREL) reported that the most frequently cited challenges to successful sheep grazing on solar sites include proper fencing, water access, site design, wire management, and forage quality (ASGA 2025a). To protect sheep from predators, some projects have installed electric fencing along the inside of the perimeter fence for added security. Introducing guarding dogs is another way to address predation issues. To prevent sheep from resting on and soiling equipment pads, fencing can also be installed to exclude them from these areas. To manage vegetation close to the panels, the lower edge of the panel should provide enough clearance for sheep to graze comfortably. A 61 cm (24 in) minimum, lower edge ground clearance for static solar arrays is recommended. If grazing larger statured wool breeds, a higher ground clearance (75 - 90 cm, or 30 - 36 in) is recommended. To establish a competitive groundcover suitable for grazing, it is important to minimize soil disturbance during construction and to select a seed mix that is regionally adapted. Solar infrastructure/cable systems should be designed to allow equipment to pass between panel rows for groundcover maintenance and reseeding. Provision of on-site water sources (i.e. water wells) can eliminate costs associated with transporting water to the site; however, even when on-site water sources are present, transportation of water within the site may still be necessary and can require considerable time and labor. Many of these challenges may have cost implications for the initial investment or ongoing use of solar grazing.

3.0 Elements of Solar Grazing and Active Projects

3.1 Active and Planned Projects

Depending on some of the factors noted above, sheep can be integrated into solar sites without significant modification to traditional, utility-scale solar design, and have been the dominant livestock choice for solar grazing enterprises (ASGA 2024, McCall et al. 2024, NYSERDA 2024). The ASGA and NREL census reported more than 113,000 sheep are grazing 129,000 acres across over 500 solar sites nationwide (ASGA 2025a). In the Midwest alone, the census identified solar grazing sites spanning more than 6,800 acres across seven states (ASGA 2025a).

While solar sheep grazing is occurring at multiple locations across the Midwest, the practice is in its infancy. Additional solar grazing projects are planned or are in the early stages of trial. Active and planned projects across the Midwest include the following (see Figure 1):

- ACCIONA Energía is grazing approximately 450 Dorper sheep at High Point Solar Farm, a 500-acre, 100-megawatt (MW) project in Stephenson County, Illinois (Acciona 2024).

- Madison Gas and Electric (MGE) is grazing 70+ Katahdin sheep on 30 acres of its 6-MW Tyto Solar site in Dane County, Wisconsin (Schulz 2024).
- Minnesota Power is grazing 100 Katahdin sheep a Jean Duluth Solar, a 9-acre, 1.6-MW facility in St. Louis County, Minnesota (Minnesota Power n.d.).
- Doral Renewables' Mammoth North Solar in Starke County, Indiana is a 4,500-acre, 400 MW project grazing 1,500 St. Croix sheep (Fischer 2024; Lund 2024).
- Louisville Gas & Electric's (LG&E's) E.W. Brown solar facility is grazing more than 200 Shetland sheep at its 50-acre, 10-MW site in Mercer County, Kentucky (Puckett 2023).
- Researchers at the University of Missouri are establishing a demonstration solar grazing site at the South Farm Research Center in Boone County. The site was originally expected to begin operations in 2024 but has been delayed due to funding challenges (Beck 2024; Schleis 2025). Once completed, it will be the first agrivoltaic research site in Missouri (Beck 2024).
- Alliant Energy is planning to graze 60 Texel Sheep at its 32-acre, 5-MW Ledgeview Solar Project in Fond du Lac County, Wisconsin (Caporale 2024; Quandt 2024).
- Savion's Oak Run Solar is a 6,050-acre, 800-MW project in Madison County, Ohio, expected to begin construction in 2025. Oak Run is set to be the largest agrivoltaics project in the country, with integration of at least 1,000 sheep and 4,000 acres of crops (Eisenson 2024).
- Xcel Energy, in partnership with Minnesota Landscape Solutions, is currently grazing approximately 1,400 Katahdin sheep at its 1,500-acre Sherco Solar facility in Becker, Minnesota. When the facility is fully constructed in 2026, the 710-MW solar installation is expected to support upwards of 2,500 sheep across 5,000 acres (Hamilton 2025; Flaum 2025).

3.2 Livestock Selection

Sheep are considered ideal for solar grazing due to their docile temperament and short stature, which depending on site characteristics, can allow them to integrate into sites "with little to no modification of conventional structures" (ASGA 2024, McCall et al. 2024, NYSERDA 2024). While any breed of sheep can potentially be used for solar grazing, the most popular breeds used by solar graziers are Katahdins and Dorpers (Hartman 2023, ASGA 2019). Both are hair sheep that are prominent throughout the Midwest (EPRI 2023). Compared to wool sheep, hair sheep are typically smaller in stature, do not need to be shorn, and are more tolerant of heat and humidity (EPRI 2024). Additionally, hair sheep are reported to have higher lambing rates and greater parasite resistance (EPRI 2023; Grasby et al. 2021). Table 1 details the breeds and characteristics of sheep grazed at the Midwest solar projects listed above.

Lincoln University's research farm grazes approximately 600 Katahdin ewes year-round in Missouri. Chris Boekmann, Farm Superintendent, reports that Katahdins are hardy, have good foot health, are resistant to internal parasite issues, and lamb successfully on open pasture without the use of facilities. He notes that the source of the breeding stock is an important consideration as the genetics of the animals, as well as pasture/grazing management, is critical in determining the level of parasite resistance the sheep will display (C. Boekmann, personal communication, August 13, 2024).

Table 1: Sheep Breeds and Characteristics

Solar Project Name (State)	Sheep Breed	Breed Type (Hair or Wool)	Characteristics
Tyto Solar (Wisconsin); Jean Duluth Solar (Minnesota); Sherco Solar (Minnesota)	Katahdin	Hair	Medium stature, hardy, adaptable, docile, parasite resistance, good foragers[1, 2]
High Point Solar Farm (Illinois)	Dorper	Hair	Medium to large stature, hardy, adaptable, good foragers[3, 4]
Mammoth North Solar (Indiana)	St. Croix	Hair	Small to medium stature, adaptable, docile, parasite resistance, excellent foragers[5, 6]
E.W. Brown Solar (Kentucky)	Shetland	Wool	Small stature, hardy, adaptable, docile[7, 8]
Ledgeview Solar (Wisconsin)	Texel	Wool	Medium stature, adaptable, docile[9, 10]

[1] The Livestock Conservancy n.d.(a)
[2] Oklahoma State University n.d.(b)
[3] Oklahoma State University n.d.(a)
[4] Bennett and Diehl n.d.
[5] The Livestock Conservancy n.d.(c)
[6] Oklahoma State University n.d.(d)
[7] The Livestock Conservancy n.d.(b)
[8] Oklahoma State University n.d.(c)
[9] Texel Sheep Breeders Society, n.d.
[10] Heritage Sheep Reproduction, n.d.

While most solar grazing systems utilize sheep, the use of other animals such as cattle, poultry, and rabbits is also possible (Macknick et al. 2022). Goats, while commonly used for other applications of prescribed (or targeted) grazing are generally not recommended for solar sites because they are more likely to engage in climbing and chewing behaviors that can damage site equipment (Agrivoltaics Solutions 2020). As the US has a strong history of cattle production, and cows outnumber sheep in the US by a factor of 17, there has been a growing interest in utilizing cattle for solar grazing, (Silicon Ranch 2025). As with sheep, concerns regarding damage to solar arrays, health of cattle, disease resistance, hardiness, and heat resistance are considered.

Cattle can also be used to graze solar sites, however, modifications such as elevated or vertical bifacial panels and reinforced system structures are often reported as necessary (Hartman 2023; Horowitz et al. 2020; Makhijani 2020). Although there are currently few active solar projects incorporating cattle grazing, it remains an area of active research. University of Minnesota's West Central Research and Outreach Center (WCROC) has operated a cattle agrivoltaics research project on its 1.25-acre, 500 kW site since 2018 (InSPIRE n.d.). Research published by the program so far has focused on the effect of panel shade on cattle well-being.

Another organization exploring "cattlevoltaics" is H2 Enterprises, based in Colorado. In a webinar presented to ASGA members, H2 Enterprises shared results from cattle grazing trials on three 750-acre solar sites (ASGA 2025b). These sites were originally constructed without consideration for agriculture or grazing and featured conventional designs with 2P tracking systems, where the leading edge of panels ranged from 1 to 2 feet above ground. Only minor site modifications were made, such as tightening cabling and fencing off combiner and inverter boxes. Various yearling cattle breeds – such as Black Angus, Charolais, and cross breeds – were grazed. Findings indicated that cattle benefitted from panel shade, achieved good weight gain, and adapted well overall. Developers reported that the cattle effectively controlled vegetation without causing damage to the panels. Although unpublished, these results suggest that cattle grazing may be feasible on traditional utility-scale solar sites with minimal site modifications (ASGA 2025b).

In ASGA webinar, Jess Grey stated Dexter, Belted Galloway, Pineywoods, and American Milking Devon had ideal characteristics, specifically disease resistance, being less picky eaters than other species, lacking horns, shedding their hair, and being dual purpose for meat and milk, for agrivoltaics (ASGA 2025b). She also stated that a composite breed of those species as an "inverter cattle" were being experimented (ASGA 2025b).

Communities may be more accepting of agrivoltaics projects that incorporate cattle grazing (EPRI 2023, Michigan State University 2025). Cattle production is the largest livestock industry in the United States, with approximately one-third of U.S. land currently used for cattle grazing (USDA ERS 2023; SETO 2024). In contrast, sheep production accounts for less than 1 percent of the U.S. livestock industry (USDA ERS 2020). While cattle grazing scenarios are likely to have higher installed costs due to the often-cited need for alternative site designs, such projects may realize greater community support (Horowitz et al. 2020; McCall et al. 2023; Gilbert 2024; Michigan State University 2025).

The U.S. Department of Energy announced plans to advance cattle agrivoltaics through the Large Animal and Solar System Operations (LASSO) Prize. Initially expected to award winners in May 2025, the prize is offering $8 million to demonstration projects, with the intent to "validate and de-risk" the practice and "facilitate wider adoption" (SETO 2024). However, the prize is currently on hold, pending funding availability. The U.S. Department of Energy SETO announced the Foundational Agrivoltaic Research for Megawatt Scale (FARMS) funding program to provide funding of $500,000 to $1.6 million to six projects in 2022, although there are no updates on those projects currently.

3.3 Design Considerations

The panel height and spacing typical of most ground-mount solar configurations allow for integration of sheep, though other modifications to facility layout, design, and infrastructure may be needed for solar grazing to be successful (NYSERDA 2024, ASGA 2024, McCall et al. 2024). Design considerations for "grazing-ready" solar facilities include adequate fencing, site access, and critically, water access. Cattle typically require higher solar arrays to be installed at six to eight feet, with steel posts secured six feet in the ground (Mt. Solar n.d., West Central Research and Outreach Center 2023, Center for Rural Affairs n.d.).

A predator-proof perimeter fence is essential infrastructure for solar grazing operations (Kochendoerfer and Thonney 2021, DePillis 2021, NYSERDA 2024). The perimeter fence "does not need to be higher than 7 feet" and common types include agricultural woven wire and chain link (NYSERDA 2024). Other fence types, such as the standard game fence used by Evergy, may also be suitable, though the adequacy of the perimeter fence for protecting and containing sheep should be discussed with the grazier (DePillis 2021). Electrical fencing or barbed predator wire may be installed along the inside of the perimeter fence for added protection (EPRI 2024, NYSERDA 2024). Combined cattle and sheep grazing may also reduce the risk of predators (ASGA 2025). To accommodate safe passage of livestock and personnel, 20 to 24-foot exterior double gates are recommended (NYSERDA 2024). Developers may also consider installing interior fencing or otherwise adjusting the site layout to assist with rotational grazing (ASGA 2024).

Above-ground cable management systems should provide 24 to 32 inches of clearance to allow passage of sheep underneath without interference, and all wires and cables less than 36 inches from the ground should be neatly tucked and secured to prevent damage to sheep and equipment, while cattle may require an even higher height of six to eight feet (NYSERDA 2024, West Central Research and Outreach Center 2023, Center for Rural Affairs n.d.). Other site equipment such as switches, inverters and concrete equipment pads should be protected with fencing (i.e. livestock panels, woven wire, or mesh fencing) to exclude livestock (NYSERDA 2024, ASGA 2024, Macknick et al. 2022, DePillis 2021, ASGA 2025). For instance, ASGA (2024) references a custom bracket that was built to prevent sheep from rubbing against an emergency switch.

On-site amenities such as wells or connection to municipal water lines and power outlets are ideal, and water access may indeed be critical to the feasibility of solar grazing at many sites (Agrivoltaic Solutions 2020, Kochendoerfer et al. 2019, NYSERDA 2024). While solar graziers can use transported water, water hauling is one of the main costs of sheep grazing, so access to on-site water will substantially reduce investment and operating costs for graziers (McCall et al. 2022, Agrivoltaic Solutions 2020).

Solar infrastructure and cable systems should be designed to allow for the passage of equipment between panel rows for reseeding groundcover - a typical part of pasture maintenance - and other maintenance activities (EPRI 2024; Agrivoltaics Solutions 2020). In some instances, property owners may not allow livestock grazing and may require re-negotiation of land agreements, which may impact cost.

3.4 Forage and Rotational Grazing

3.4.1 Forage Mix

When selecting a forage mix, it is important to select species that are regionally adapted, shade-tolerant, meet solar site height criteria (not exceeding 18 to 24 inches in height), and are suitable for grazing livestock (Agrivoltaic Solutions 2020, Fulwider et al. 2024, Gelley et al. 2021). Other site characteristics such as soil type, pH, and prior crop history should also be considered when selecting an appropriate seed mix (Gelley et al. 2021). A typical pasture blend includes 60-70% grasses, 30% legumes, and up to 10% forbs (Agrivoltaic Solutions 2020). For solar grazing sites in the upper Midwest, the University of Wisconsin (UW)-Madison recommends a mix of cool-season grasses (ex. orchardgrass, meadow fescue, and Kentucky bluegrass) and legumes (ex. red clover) for their shade tolerance and forage quality and provides rates and ratios for a sample mix (see Table 2) (Fulwider et al. 2024). At 76% grasses and 24% legumes, UW-Madison's sample mix generally aligns with Agrivoltaics Solutions' (2020) recommendations. Kevin Betley with DJM Ecological Services, Inc. estimates that the installation cost (materials and labor) of the seed mix in Table 2 would be similar to a native pollinator mix (personal communication, November 20, 2024).

Seed mixes designed primarily for pollinator benefits typically consist of warm-season grasses and forbs. While these mixes can be managed through sheep grazing, blends dominated by cool-season grasses, such as the example below, are specifically formulated to maximize nutrition and growth to support livestock production (Fulwider et al. 2024). If pollinator habitat is a vegetation management goal, it is important to carefully plan grazing schedules to accommodate bloom periods (Center for Rural Affairs n.d.).

Table 2: Sample Solar Pasture Mix

Species	%	Pounds (Lbs)/Acre
Meadow fescue (*Schedonorus pratensis*) or orchardgrass (*Dactylis glomerata*)	60	15
Kentucky bluegrass (*Poa pratensis*)	16	4
Red clover (*Trifolium pratense*)	24	6

Source: Fulwider et al. 2024

Fulwider et al. (2024) explains that meadow fescue and orchardgrass are likely to produce better under single-axis trackers than fixed tilt panels, and regardless of the panel racking, will need to be grazed in a timely manner to prevent panel shading as they can both reach heights up to 4 feet. Pasture mixes generally require two to four harvests annually to maintain grass height below the solar panel and nutritional value for livestock (Gelley et al. 2021). A list of cool-season grasses and legumes that are recommended forage for solar grazing sites in Ohio and the broader Midwest can be found in Ohio State University's factsheet, "*Forage as a Vegetative Cover for Utility-Scale Solar in Ohio*" (Gelley et al. 2021). The list includes species characteristics such as maximum growth height, seeding rate and depth, and ease of establishment. Experts recommend consulting with university extensions, the USDA Natural Resource Conservation Service (NRCS), or grazing experts to develop site-specific seed mixes that will support livestock and meet developer needs related to panel shading and Storm Water Pollution Prevention Plan (SWPPP) permitting requirements (EPRI 2023). ASGA does note that Kentucky-31 fescue can produce toxins that can affect livestock, and efforts should be made to keep it from grazing areas or institute seasonal avoidance of fields where it is present (ASGA n.d.).

3.4.2 Forage Establishment and Maintenance

Pasture establishment should occur in early spring or late summer/early fall; if construction occurs outside of these windows, it may be necessary to plant a cover crop to suppress weeds prior to establishing permanent pasture (Fulwider et al. 2024). Care should be taken to minimize soil disturbance during construction to support soil health and forage establishment (EPRI 2024). If possible, establishment of forage species should occur prior to solar array installation; however, "solar panel installation will often occur before vegetation establishment" and can be accomplished by drilling between panel rows and broadcast seeding underneath panels (Fulwider et al. 2024, Macknick et al. 2022, Hartman 2023). As noted above, cover crops such as annual rye, oats, and winter wheat can be planted prior to or at the same time as seed mixes to suppress weeds, control soil erosion, and serve as a nurse crop for seedlings (Andrew et al. 2024, Macknick et al. 2022, Agrivoltaic Solutions 2020). Re-seeding may be necessary in the first couple of years following construction, and periodically thereafter to maintain the pasture (Agrivoltaics Solutions 2020). Agrivoltaics Solutions (2020) explains that construction at newly developed solar sites will reduce the percent vegetation coverage during the first one to two years, but reseeding efforts are expected to produce full vegetation coverage once the site has recovered from construction.

3.4.3 Forage Yield and Quality

Studies suggest that forage grown on solar sites produces lower yields but are of similar or higher nutritive quality to those grown on open pasture (Portner et al. 2024, Andrew et al. 2021). Portner et al.'s (2024) research in Minnesota found that while panels reduce forage yield by 50% due to shading, they do not reduce forage quality, "based on similar or higher crude protein, fiber content and digestibility, and mineral levels" of forage planted underneath solar panels vs. open air. Researchers at Oregon State University found that lambs that grazed on open and solar pastures grew at similar rates, despite reduced forage yield in the solar pastures (Andrew et al. 2021). This finding was attributed to higher forage quality in solar pastures and to lower heat stress experienced by the lambs due to the provision of shade by the panels. Research by Deboutte (2024) at three different solar facilities in France found that both forage biomass and nutritive value increases under the shade of the panels, possibly due to lower soil temperatures and higher soil humidity. Deboutte's (2024) observation of greater forage biomass under panels conflicts with Portner et al. (2024) and Andrew et al.'s (2021) studies referenced above, as well as Cornell University's finding that forage production underneath panels was 2.5 times lower than forage production in unshaded conditions (Kochendoerfer et al. 2022).

Andrew et al. (2024) cautions that extreme weather conditions (ex. drought, waterlogging) combined with lower light conditions under the panels can make solar pasture establishment and maintenance very challenging. Weed pressure and heavy trampling underneath panels caused by grazing animals seeking shade[3] were noted as additional factors complicating forage production. Andrew et al. (2024) concludes that "the conventional setting of ground-mounted solar panels, although providing an important opportunity for livestock grazing, was not optimized for pasture production at the site." To optimize solar pasture production, the authors suggest diverse pasture mixes incorporating species tolerant of both shade and heavy traffic, and intensive weed management, particularly at the pasture establishment phase (Andrew et al. 2024, Andrew et al. 2021). Regardless of the vegetation management approach (i.e., mowing, grazing, pollinator habitat), poor forage establishment can lead to higher costs, as supplemental controls will be needed to manage weeds (Lawrence 2022, EPRI 2024).

3.4.4 Toxic Plants

While toxic plants such as milkweeds (*Asclepias spp.*), buttercups (*Ranunculus spp.*), St. Johnswort (*Hypericum perforatum*), and white snakeroot (*Eupatorium rugosum*) can be common in pastures, livestock will normally avoid these plants if they have access to abundant, good quality forage (Fulwider et al. 2024, Foulk 2023). To prevent toxicity issues, UW-Extension emphasizes a grazing plan that includes regular soil testing and management of soil fertility and pH levels to help desired species outcompete weeds (Gildersleeve et al. 2013, UMain Extension 2021). Severe infestations of toxic and unpalatable

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[3] Andrew et al. (2021) found that "sheep prefer to spend more than 40% of their grazing time and practically all of their resting time (>95%) beneath solar panels."

species can be managed by mechanical mowing or herbicide application[4] (Fulwider et al. 2024). Additionally, turf type grasses specifically Kentucky-31 fescue, should not be used for livestock forage, as they may contain fungal endophytes which improve the stress tolerance of the plants but produce compounds that are toxic to livestock (Gelley et al. 2021, ASGA n.d.).

3.4.5 Rotational Grazing

Solar graziers often use rotational grazing for vegetation management at solar sites (EPRI 2023). Rotational grazing "involves the frequent movement of livestock through a series of pasture subdivisions called paddocks," unlike continuous grazing where animals roam freely on an open pasture (USDA Climate Hubs n.d., Agrivoltaic Solutions 2020). Graziers typically delineate paddocks within the perimeter fence using temporary electric fencing (Kochendoerfer et al. 2019, Hartman 2023). The benefits of rotational grazing include improved soil and animal health (due to reducing animal traffic), forage yield, and weed control (EPRI 2024, Agrivoltaics Solutions 2020). Macknick et al. (2022) suggest that solar facilities under construction for grazing develop a Prescribed Grazing Plan (PGP), or strategic grazing plan. The PGP provides a blueprint for grazing that determines target animal stocking rates, timing of animal moves, and duration of pasture rest periods post-grazing. Additionally, PGPs will outline forage testing protocols and specify what if any mechanical methods the grazier will use to supplement livestock grazing at the site (Agrivoltaics Solutions 2020). PGPs may be developed by a rangeland consultant or the grazier, in coordination with the developer (EPRI 2024). Kochendoerfer et al. (2022) advises sheep farmers grazing solar sites to "take into consideration that up to 2.5 times less forage is produced in panel-shaded areas" when planning their grazing rotation to avoid over-grazing. Agrivoltaic Solution's (2020) "*Preliminary Sheep Pasture Rotation and Grazing Plan*" is an example of a PGP that was developed for EDF Renewables for use by graziers.

3.5 Additional Considerations

3.5.1 Solar Grazing Contract

Details including site access and security, signage, vegetation management standards, insurance requirements and costs, roles, responsibilities, and expectations across all parties should be clearly defined in writing (Macknick et al. 2022). There are two template solar grazing contracts that are currently publicly available at no charge and can be used as a starting point. One was developed by the ASGA in coordination with the Food and Beverage Law Clinic at Pace University (ASGA n.d.). The second was developed by the North Carolina Cooperative Extension (NCCE) and the Center for Environmental Farming Systems (CEFS) Initiative (CEFS n.d.). These templates offer similar but varied approaches to allocation of risk and responsibilities between the solar utility entity and livestock grazier (Guarino and Swanson 2022). The template contracts include insurance requirements for the grazier - including commercial general liability, commercial automobile liability, and workers compensation - where the solar site manager is named as an additional insured. The template contracts also include provisions for supplemental vegetation management (e.g., mowing) if sheep alone will not effectively manage the vegetation.

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[4] UW-Extension recommends not grazing for at least a 14-day period following herbicide application (Gurda and Renze n.d.).

3.5.2 Communication and Site Access

To facilitate livestock grazing, the solar facility owner/operator must arrange for the grazier to have 24/7 access to the site and provide an internal or external staff member to coordinate with (DePillis 2021, EPRI 2024). Communication between the grazier, site owner/operator, and site employees is key to the success of the vegetation management plan (EPRI 2024; Hartman 2023). A rangeland consultant can help facilitate communication between the site owner/operator and sheep grazier and can assist with developing the vegetation management and grazing plans (EPRI 2024).

Hartman (2023) emphasizes that most site employees will have no experience with livestock and will need to be educated, so they know what to expect. Additionally, existing labor agreements should be updated as needed to include interactions with livestock. Signs should be posted on gates informing workers of the presence of livestock with instructions to keep gates closed, and emergency contact information (ASGA 2024).

3.5.3 United Agrivoltaics Readiness Scale

United Agrivoltaics' Grazing Readiness Scale establishes pricing guidelines based on site size and classification. Classifications are determined by characteristics such as security, access to water, and forage quality (see Table 3). Each class builds on the level below it, with increased levels having better conditions for graziers. Bronze sites meet minimum requirements and incur the highest management fees. Platinum sites are considered optimal for grazing and will see lower fees that United Agrivoltaics assures will be "less expensive than mechanical mowing," with costs typically about half per acre compared to Bronze-rated sites.

Table 3: United Agrivoltaics' Grazing Readiness Scale

Class	Considerations	Vegetation
Bronze	Well fenced for sheep, gates latch tight, common access code, lock, or lockbox	Any
Silver	Retention ponds or live water nearby, access to 110 power	Pre-sprayed with targeted herbicide and free from thistles, dogweed, vines, burdocks and poisonous plants
Gold	Water well on site	Sheep friendly vegetation such as low grow pasture grass mixture
Platinum	Space for staging/handling, subdivided with inexpensive pasture fencing to reduce or remove need for portable fences, inverters fenced in separate	High quality sheep friendly vegetation

3.5.4 Grazing Readiness Checklist

Table 4 provides a checklist summarizing key site attributes and considerations that influence whether sheep grazing is feasible, cost-effective, and operationally practical at a solar facility. The checklist evaluates Evergy's Foxtrot and Sunflower Sky sites against these criteria to highlight conditions that support – or may limit – their overall grazing readiness.

Table 4: Sheep Grazing Readiness Checklist

Criterion	**Foxtrot** *100 MW, 600 fenced acres*	**Sunflower Sky** *66 MW, 327 fenced acres*	Notes
Land access permissions for livestock	Conditional	Meets	*Sunflower Sky*: Evergy owns the land; permissions for livestock are assumed but one parcel should be confirmed. *Foxtrot*: Permissions for livestock require review.
Challenging terrain and/or high rainfall	N/A	N/A	Sites do not present terrain or drainage conditions that would limit livestock grazing or mowing.
Predator-proof perimeter fencing (20 to 24-ft gates)	Meets	Meets	7-ft tall perimeter fencing with 20 to 24-ft wide gates present.
24/7 grazier access	Meets	Meets	Continuous site access is required for grazing feasibility and is assumed to be available.
On-site water	Meets	Meets	On-site water available; additional access points within each array block would improve grazing readiness and may reduce grazing fees.
On-site power outlets	Meets	Meets	110-V power is available at each inverter pad.
High-quality, sheep-friendly vegetation	Partial	Partial	Ground cover is planned but not optimized for grazing.
Fencing around equipment pads and inverters	Partial	Partial	Permanent fencing is not available; the grazier would need to install mobile electric fencing.
24-inch minimum ground clearance at lower panel edge	Meets	Meets	Minimum panel clearance meets recommendations for grazing.
Above-ground cable management systems with 24 to 32-inch ground clearance	Partial	Partial	CAB wireways are as low as 18 inches in some locations and may need protection.
Wires and cables less than 36 inches from the ground neatly tucked and secured	Meets	Meets	Wiring is neatly tucked and tied to panels.

4.0 Comparing Costs: Mowing vs. Livestock Grazing

McCall et al. (2023) analyzed vegetation O&M costs associated with four different ground cover types at ground-mounted solar sites: Native vegetation, sheep grazing, turfgrass, and gravel. To determine the total costs associated with each ground cover type, the authors considered the following individual activities: Mowing, herbicide application, weeding, trimming, grazing, fencing, and site monitoring. The estimated costs they arrived at did not factor in other expenses that may exist for a given site. They found that turfgrass has the lowest vegetation management cost, averaging $265/acre per year. The average cost of sheep grazing was higher at $307/acre per year. The authors suggest that sheep grazing costs are higher despite lower costs for individual management activities (i.e., mowing, trimming, herbicide application) because "more individual activities are required" (McCall et al. 2023). They qualify this finding by noting that O&M costs are variable based on site specific conditions and note that "other driving factors related to permitting, social license to operate, ground cover resilience, visual impacts, and individual company standards often outweigh potential cost differences."

Horowitz et al. (2020) analyzed installed costs for different ground-mounted dual-use[5] photovoltaic (PV) designs (PV + crops, PV + sheep grazing, and PV + pollinator habitat) to installed costs over bare ground. All dual-use PV scenarios were found to have higher installed costs than PV over bare ground, with PV + sheep grazing scenarios incurring the smallest price premium of +$0.07/Watt. While site preparation costs were generally expected to be lower for grazing systems than for systems over bare ground, the authors assume that PV + grazing systems may require higher site investigation costs, additional fencing, and water well installation.

While McCall et al. (2023) and Horowitz et al. (2020) suggest higher installed and vegetation O&M costs for PV + grazing compared to more traditional systems, other sources indicate that sheep grazing could be, depending on the site, more cost-effective than traditional vegetation management approaches:

- At Louisville Gas & Electric's (LG&E's) E.W. Brown solar facility in Kentucky, the cost to use sheep to manage 10 acres of the 50-acre site was $11,500 the first year and $9,000 the second, compared to $14,000/year using mowing (Warren 2023).
- KDC Solar in New Jersey saw a 50% reduction in O&M costs on a 16-acre test site, which led them to expand the practice to other locations (Pickerel 2016).
- At BHE Renewables' Topaz Solar Farm in California, price quotes indicated that the cost of grazing was 33 – 66% lower than mowing. Currently, sheep graze 3,500 acres within the arrays, while cattle graze 1,700 acres around the perimeter fence (EPRI 2024).
- Silicon Ranch's Bancroft Station Solar Farm in Georgia reports an average 20% cost savings in vegetation management using solar grazing compared to mowing but notes that "cost is highly dependent on the density of unpalatable weeds and subsequent need for mowing" (EPRI 2024).

[5] "Dual-use" is another term for agrivoltaics.

- At Novis Renewable's Finger Lakes Solar Sites in New York, solar grazing was sometimes more cost effective than mowing. The relative cost of solar grazing compared to mowing varied site-to-site based on factors such as terrain and forage quality (EPRI 2024).
- A study at Cornell University found that managing vegetation with sheep requires 2.5 times fewer labor hours than mowing and string trimming, suggesting lower costs. The additional labor hours for mechanical management were attributed in part to uneven ground and narrow rows between panels that are "time consuming to navigate without damaging the solar panels" (Kochendoerfer et al. 2019).

Lexi Hain, founder and former-Executive Director of the ASGA, reports that utility scale rates for solar grazing are between $250 - $400/acre (Grasby et al. 2021). This aligns with Cornell University's report that solar grazing fees in the eastern U.S. average $326/acre (Kochendoerfer et al. 2019). However, United Agrivoltaics[6] reports a much wider range, estimating grazing fees between $380 to more than $1,500/acre based on site location and vegetation management needs (ASGA 2024).

WSP contacted 16 sheep graziers in Missouri, Arkansas, Oklahoma, and Kansas to request per acre vegetation management estimates and received nine responses ranging from $250 to $550/acre per year (see Table 5 and Figure 2). Some graziers noted that their pricing included additional trimming and mowing as necessary. Graziers emphasized that costs vary based on several factors, including panel type, the ability to walk sheep between panel blocks, access to water and 110v electric outlets, forage quality, vegetation height requirements, and requirements for managing vegetation outside the panel arrays (e.g., along perimeter fencing, access roads, setbacks, and buffer zones). Several graziers also highlighted the importance of designated areas for loading/unloading livestock and parking equipment such as trailers, water wagons, and portable corrals.

Some graziers expressed concerns that the planned seed mixes at the Sunflower Sky and Foxtrot Solar sites may not be optimized for grazing, noting that they appear primarily designed for pollinator habitat, which could conflict with grazing objectives. For example, if grazing begins in the spring, some areas would be grazed before flowering, which could affect reseeding and prevent flowering altogether that year. Conversely, delaying grazing until after flowering can reduce forage quality and palatability. To balance both pollinator and grazing benefits, one grazier recommended a dual approach: planting cool season grasses inside the fence and around panel areas to support livestock, while establishing blocks of warm-season, pollinator-friendly mixes outside the fence.

In addition, a grazier raised concerns about the planned seeding rates - 16.8 lbs/acre at Foxtrot Solar and 10 lbs/acre at Sunflower Sky – stating these would not provide sufficient forage quantity or quality. This concern aligns with published guidance; Fulwider et al. (2024) notes that "pasture mixes are often drilled at 20-25 lbs/acre."

Generic (not site-specific) mowing estimates received by WSP are generally comparable to grazing estimates (see Table 6). Solar Panel Mowing & Spraying by the Werner Family in Frankfort, IL,

[6] United Agrivoltaics is a sheep grazing firm currently grazing 15,000 sheep on 5,100 acres of solar sites in nine states across the U.S. (ASGA 2024). They also offer consulting services to assist with permitting, agrivoltaics design, seed mixtures, water solutions, and more.

estimated a range of $275 to $400/acre per year, based on variables such as site location, array design, and the need for herbicide sprays. Lanracorp, a national vegetation management contractor, offered a preliminary estimate of $290/acre per year. A confidential renewable energy developer reported to WSP that the cost to mow and spray a 50-acre site typically costs $30,000 annually ($600/acre) for the first three years, decreasing to $18,000 annually ($360/acre) thereafter. Evergy estimates current mowing costs at its solar sites range from $404 to $574/acre per year.

Based on the estimates received by WSP, the average cost of grazing is $399/acre per year at the low-end, and $442/acre per year at the high-end (see Table 5). The average cost of mowing is $332/acre per year at the low-end, and $466/acre per year at the high-end (see Table 6). These costs are for ongoing maintenance of the site, and do not factor in any upfront investment cost increases or other maintenance costs that could be incurred at the site due to use of solar grazing.

Table 5: Sheep Grazing Cost Estimates Per Acre/Year **CONFIDENTIAL**

Grazier Name	State	City	Per Acre/Year Quote - Low	Per Acre/Year Quote - High
[redacted]				
Average			$399	$442

[1] Assumed "Per Acre Quote – Low" cost when calculating average.

Table 6: Mowing Cost Estimates Per Acre/Year **CONFIDENTIAL**

Mowing Company Name	State	City	Per Acre Quote - Low	Per Acre Quote - High	Notes
[redacted]					
Average			$332	$466	N/A

[1] Assumed "Per Acre Quote – Low" cost when calculating average.

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5.0 Conclusion

Based on current site designs and preliminary pricing, neither Foxtrot nor Sunflower Sky demonstrates a clear advantage for sheep grazing over conventional mowing; however, grazing is a feasible and competitive vegetation management option at both sites. Key considerations that influence grazing costs include any upfront investments, predator-proof perimeter fencing, groundcover suitable for livestock, access to on-site water, and proximity to an experienced grazier with an adequate flock. These and other factors determining a site's "grazing readiness" are detailed in the Grazing Readiness Checklist (see Section 3.5.4).

The initial investment associated with establishing a "grazing ready" facility may ultimately determine if grazing is a cost-effective strategy at a particular site. Chief among the factors determining grazing feasibility is site access and security. Without fencing that can contain and protect livestock and 24/7 site access for the grazier, solar grazing cannot occur. Access to on-site water is another factor that can significantly affect feasibility. Pasture quality also plays a major role, as unpalatable plants that are not grazed will require alternative management, such as mowing, and may necessitate supplemental feed for sheep.

Sites that have been optimized for grazing (i.e., access to on-site water, high quality and abundant pasture, and interior fencing to support rotational grazing) can expect lower grazing fees than sites that meet only minimum requirements. Additionally, larger project acreages provide larger price reductions. United Agrivoltaics' Grazing Readiness Scale (see Table 3) in Section 3.5.3 can help Evergy understand the factors influencing grazing fee pricing and assess whether sheep grazing may be an economical vegetation management solution for future sites.

Review of site designs and feedback from solar graziers indicate that both Foxtrot and Sunflower Sky are feasible for solar grazing and would likely be classified as "Silver" sites under United Agrivoltaics' Grazing Readiness Scale. Some graziers provided lower cost estimates for Foxtrot, due to its larger array blocks, which reduce labor requirements and animal stress by minimizing herd moves. Key site attributes that support grazing at both locations are summarized below and in Section 3.5.4.

Both projects have access to on-site water. The solar grazier could fill watering tanks with above-ground hoses or transport water to and from the live water source with an ATV. Providing additional water access points within individual array blocks would further improve grazing readiness and is likely to reduce grazing bids.

The projects have 110-volt power at each inverter pad, enabling the use of mobile electric fences. Both sites have a fixed, 7-foot perimeter game fence to keep out predators, but it will be the responsibility of the solar grazier to manage the herd in individual paddocks using mobile electric fence or a wireless electric fence with livestock collars. If predators become a problem, the solar grazier would be responsible for implementing additional measures such as guard dogs or supplemental electric fence around the perimeter.

All panels are mounted on single axis trackers, which graziers consistently identified as preferable to fixed systems for sheep grazing. The minimum height of solar panels is 2 feet and meets the grazing recommendations, and all wiring is tied to solar panels and tucked away from access to sheep. The only exception is the CAB wireway that runs in line with the inverter pads at the ends of rows; these wireways have average heights of 2 feet with a minimum height of 18 inches, and may need to be protected with mobile electric fence. The equipment pads will also need to be protected with mobile electric fencing by the solar grazier to prevent soiling on equipment pads.

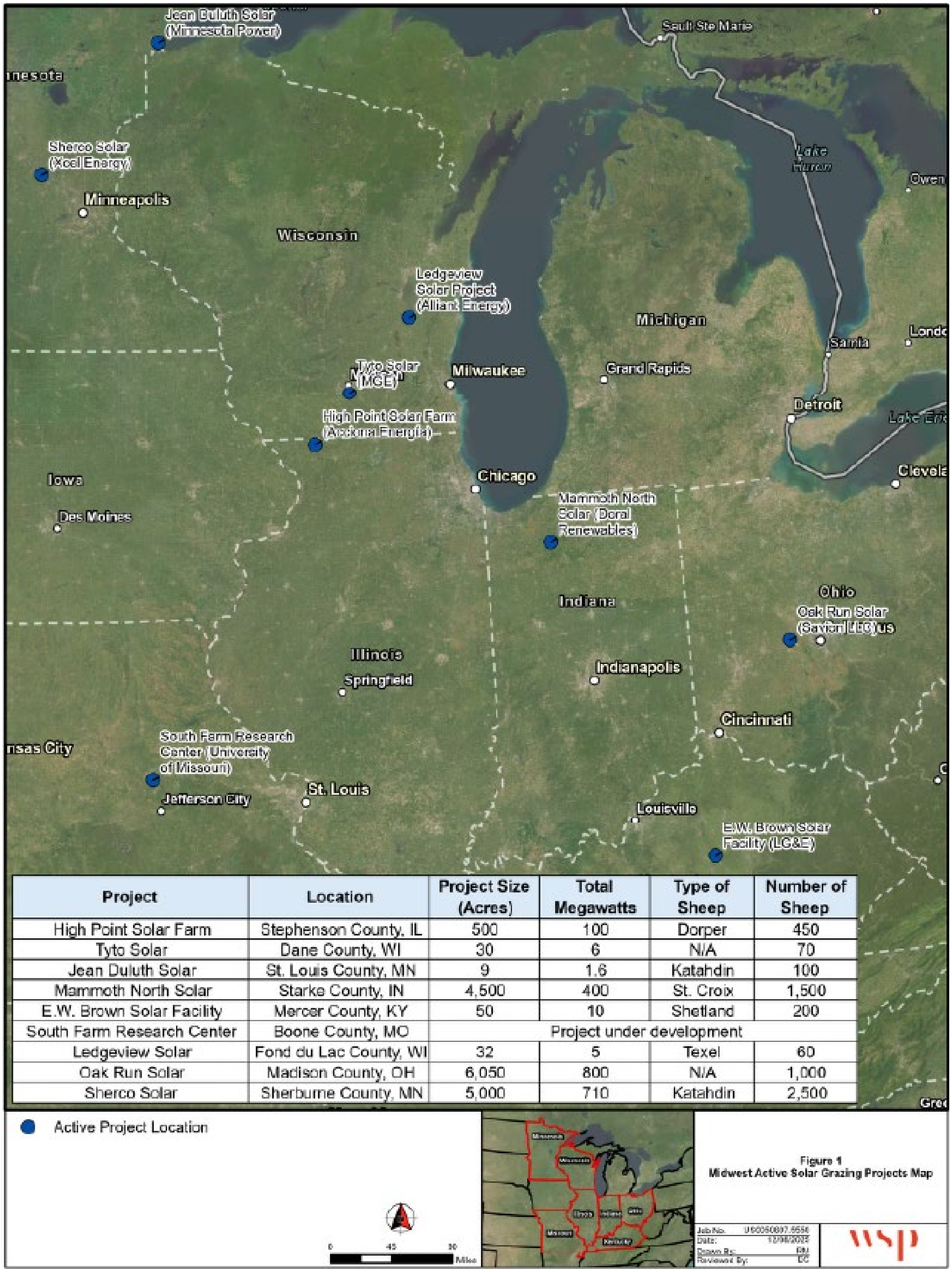
The site designs for both Foxtrot and Sunflower Sky specify 18 feet between panel rows, providing adequate space for sheep movement. Gravel roads throughout the sites facilitate equipment access and provide areas for loading and unloading of livestock. Livestock movement between array blocks is feasible provided public roadways are avoided.

To improve grazing readiness at both Foxtrot and Sunflower Sky, Evergy may consider establishing ground cover optimized for livestock grazing, including seeding mixes at 20 to 25 pounds per acre, particularly within the panel arrays. High quality, abundant forage can reduce grazing bids by extending the grazing season, allowing sheep to remain on-site longer, and reducing the need for supplemental feed.

Studies evaluating the use of cattle in agrivoltaic systems are underway, including several projects funded through the U.S. Department of Energy's FARMS program (U.S. Department of Energy 2022, Silicon Ranch 2025). As most of these studies began within the past 3 years, data is still being collected, and final reports are expected in the coming years.

Figures

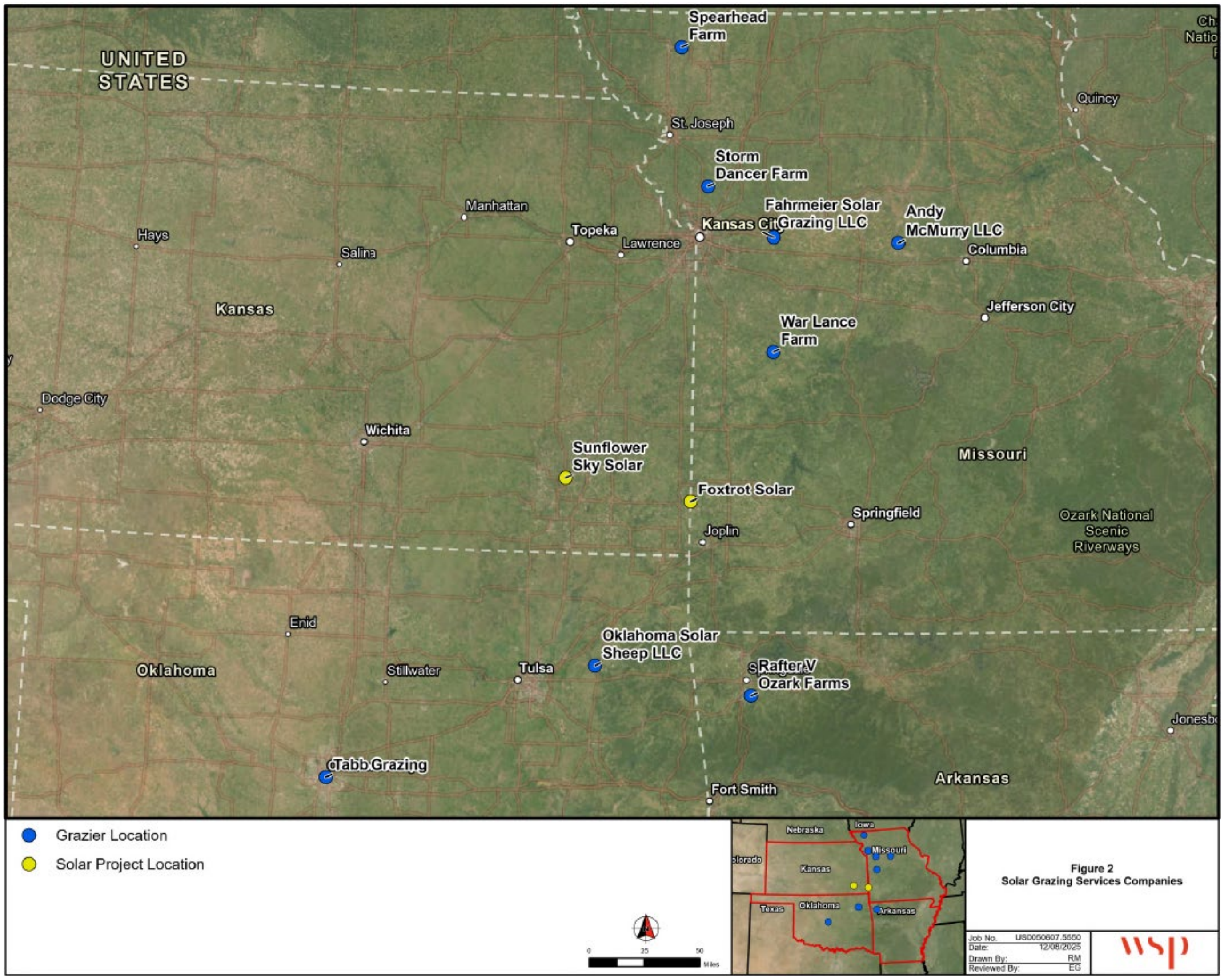
Figure 1: Midwest Active Solar Grazing Project Map



Project	Location	Project Size (Acres)	Total Megawatts	Type of Sheep	Number of Sheep
High Point Solar Farm	Stephenson County, IL	500	100	Dorper	450
Tyto Solar	Dane County, WI	30	6	N/A	70
Jean Duluth Solar	St. Louis County, MN	9	1.6	Katahdin	100
Mammoth North Solar	Starke County, IN	4,500	400	St. Croix	1,500
E.W. Brown Solar Facility	Mercer County, KY	50	10	Shetland	200
South Farm Research Center	Boone County, MO	Project under development			
Ledgeview Solar	Fond du Lac County, WI	32	5	Texel	60
Oak Run Solar	Madison County, OH	6,050	800	N/A	1,000
Sherco Solar	Sherburne County, MN	5,000	710	Katahdin	2,500

Figure 2: Solar Grazing Services Companies

The solar grazing companies shown in the figure below were identified using the ASGA Solar Grazing Map (https://solargrazing.org/map/) and selected based on their proximity to Evergy's Sunflower Sky and Foxtrot Solar sites. United Agrivoltaics is not depicted on the map but has multiple farmers operating in the areas of the Sunflower Sky and Foxtrot Solar sites.



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Outlook

Re: Sunflower Sky Grazing Feasibility Study

From Eric Johnson <Eric.Johnson@evergy.com>
Date Thu 12/18/2025 3:21 PM
To Scott Satterthwaite [KDHE] <Scott.Satterthwaite@ks.gov>

Internal Use Only

Thank you, Scott. Let me know if you or others have any questions on this....

Happy Holidays!!!

Eric Johnson
Lead Environmental Consultant
Wildlife Conservation and Compliance
Evergy
eric.johnson@evergy.com
O: 785-508-2431 **M:** 785-380-6602

Evergy.com

From: Scott Satterthwaite [KDHE] <Scott.Satterthwaite@ks.gov>
Sent: Thursday, December 18, 2025 12:51 PM
To: Eric Johnson <Eric.Johnson@evergy.com>
Subject: RE: Sunflower Sky Grazing Feasibility Study

Thanks Eric. Per our conversation we will look through the material provided and reply with any guidance as requested.

Best Regards,
Scott

Scott L. Satterthwaite
401 Water Quality Coordinator
Bureau of Environmental Field Services, Watershed Management Section
Kansas Department of Health and Environment
1000 S.W. Jackson St., Suite 430
Topeka, KS 66612-1367
Phone (785) 296-5573
Mobile (785) 480-9837

EMAIL- Scott.Satterthwaite@ks.gov

From: Eric Johnson <Eric.Johnson@evergy.com>
Sent: Wednesday, December 17, 2025 10:25 AM
To: Scott Satterthwaite [KDHE] <Scott.Satterthwaite@ks.gov>
Subject: Sunflower Sky Grazing Feasibility Study

EXTERNAL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Internal Use Only

Good morning Scott,

Evergy is in the process of constructing a solar generation facility (Sunflower Sky) in Wilson County, Kansas, near the town of Altoona, KS. This project was previously reviewed by KDHE (KS Permit No.: S-VE01-0007) during the environmental due diligence and permitting process prior to construction. Savion was the original developer, and Evergy just recently purchased the project.

As part of the final approval process from the Missouri Public Service Commission, we were directed to:

1. investigate the feasibility of introducing grazing as an operating and maintenance feature of the facility and,

2. evaluate sharing land-use and conservation data with the non-profit Renewable Energy Wildlife Institute's (REWI's) SolSource Database.

As we assess the feasibility of using grazing as a means of vegetation management for this site, we are requesting any guidance or recommendations you may have as it pertains to potential benefits and/or impacts to water resources that we need to consider. Additionally, please provide any information or guidance you may have as it relates to our potential involvement in REWI's SolSource Database.

Attached are a map of project layout and the final Vegetation Management Plan for the site. Please note that this vegetation management plan was designed prior to our need to investigate the feasibility of grazing this site.

Please let me know if you have any questions on this or require further clarification.

Sincerely,

Eric

Eric Johnson
Lead Environmental Consultant
Wildlife Conservation and Compliance
Evergy
eric.johnson@evergy.com
O: 785-508-2431 **M:** 785-380-6602

Evergy.com

Outlook

[EXTERNAL]KDWP Response (ERT20250992-2, 20240129-7) - Sunflower Sky Solar Grazing and Data Collection Discussion

From Zac Eddy [KDWP] <Zac.Eddy@KS.GOV>
Date Thu 1/22/2026 7:44 PM
To Eric Johnson <eric.johnson@evergy.com>

This Message Is From an External Sender
This message came from outside your organization.

Report Suspicious

Eric,

Thanks for reaching out to KDWP regarding the requirement that Evergy's Sunflower Sky project in Wilson County, Kansas assess the feasibility of including grazing as a management practice as well as sharing land-use and conservation data with the REWI SolSource information database.

At this point, it may be most helpful to schedule a call to have a detailed discussion of what is required by the Missouri Public Service Commission. KDWP wants to be mindful of their priorities, but notes the existing restoration plan is required through KDWP Action Permit 2025-15 Amd. 1 to offset losses to critical habitat for the Kansas-listed Eastern Spotted Skunk. KDWP does not believe that grazing is incompatible with the production of habitat suitable to the species, but implementation would need to be conducted in such a way that it maintains the necessary vegetative structure and composition of the restored habitat. It's also likely that a formalized grazing plan would need to be reviewed and approved prior to amending the restoration plan/permit for the Eastern Spotted Skunk.

Regarding the collection and sharing of data with the SolSource database, KDWP would largely be amenable to this. To improve the consistency and comparability of the data, we would generally recommend that methods are consistent with studies done elsewhere to determine habitat availability and use by wildlife before and after construction. These data may show a beneficial or adverse effects to a range of species, but could be useful to natural resource agencies to better inform future siting guidance and impact assessments.

Please let me know if you would like to schedule a time to discuss these topics in more detail.

Thanks.

ZE

--
Zac Eddy | *Terrestrial Ecologist*
Kansas Department of Wildlife and Parks
512 SE 25th Ave. | Pratt, KS 67124
O: (620) 672-0788 | M: (620) 388-0043
ksoutdoors.gov

Outlook

Sunflower Solar Grazing Feasibility Study

From Eric Johnson <Eric.Johnson@evergy.com>
Date Wed 12/17/2025 9:58 AM
To Michele_McNulty@fws gov <michele_mcnulty@fws.gov>

2 attachments (14 MB)
20250708_SunflowerSky_Stantec_ESS Mitigation Plan and VMP_Revised_Final.pdf; Figure_01_Sunflower_V2.pdf;

Internal Use Only

Good morning Michele,

Evergy is in the process of constructing a solar generation facility (Sunflower Sky) in Wilson County, Kansas, near the town of Altoona, KS. This project was previously reviewed by USFWS (FWS Tracking # 2024-0099453) during the environmental due diligence and permitting process prior to final design and construction. Savion was the original developer, and Evergy just recently purchased the project.

As part of the final approval process from the Missouri Public Service Commission, we were directed to:

1. investigate the feasibility of introducing grazing as an operating and maintenance feature of the facility and,
2. evaluate sharing land-use and conservation data with the non-profit Renewable Energy Wildlife Institute's (REWI's) SolSource Database.

As we assess the feasibility of using grazing as a means of vegetation management for this site, we are requesting any guidance or recommendations you may have as it pertains to potential benefits and/or impacts to Federal Trust resources that we need to consider. Additionally, please provide any information or guidance you may have as it relates to our potential involvement in REWI's SolSource Database.

Attached are a map of project layout and the final Vegetation Management Plan for the site. Please note that this vegetation management plan was designed prior to our need to investigate the feasibility of grazing this site.

Please let me know if you have any questions on this or require further clarification.

Sincerely,

Eric

Eric Johnson
Lead Environmental Consultant
Wildlife Conservation and Compliance
Evergy
eric.johnson@evergy.com
O: 785-508-2431 **M:** 785-380-6602

Evergy.com

Outlook

[EXTERNAL]Foxtrot Solar Grazing Comments

From Jordan Meyer <Jordan.Meyer@mdc.mo.gov>
Date Fri 1/16/2026 12:02 PM
To Eric Johnson <Eric.Johnson@evergy.com>
Cc Steve Buback <Steve.Buback@mdc.mo.gov>

Hi Eric,

MDC staff have reviewed the materials and project location and provided the following comments regarding the potential for implementation of grazing at Evergy's Foxtrot Solar project in Jasper County.

MDC records indicate that the project is adjacent to occurrences of hardpan prairie communities of conservation concern and occurrences of regal fritillary, a butterfly species proposed to be listed as threatened under the Endangered Species Act.

If regal fritillaries were to use habitat within Foxtrot Solar's project area, it will likely serve as a nectaring area during movements between breeding populations. To support this species, please consider planting nectar species that bloom during peak flight (June–early July), such as pale purple coneflower and butterfly milkweed, and delay grazing until July 1.

I have CC'ed MDC state botanist Steve Buback for any further questions.

Otherwise, the application of grazing as a form of vegetation management on Foxtrot solar is unlikely to cause negative impact on neighboring fish, forest, and wildlife species.

Please let me know if you need anything else. I hope you have a good weekend.

Jordan James Meyer (he/him/his)
Policy Coordinator
MO Dept. of Conservation
2901 W. Truman Blvd
PO Box 180
Jefferson City, MO, 65102
573-522-4115 ext 3197

Outlook

Foxtrot Solar Grazing Feasibility Study

From Eric Johnson <Eric.Johnson@evergy.com>
Date Thu 12/18/2025 3:13 PM
To Budd, Kris R <kris_budd@fws.gov>

2 attachments (11 MB)
Figure_01_Foxtrot_V2.pdf; Foxtrot - Vegetation & Soil Management Plan (1).pdf;

Internal Use Only

Hello Kris,

Evergy is in the process of constructing a solar generation facility (Foxtrot Solar) in Jasper County, Missouri. This project was previously reviewed by USFWS (FWS Tracking # 2025-0042601) during the environmental due diligence and permitting process prior to final design and construction. Invenergy was the original developer, and Evergy just recently purchased the project.

As part of the final approval process from the Missouri Public Service Commission, we were directed to:

1. investigate the feasibility of introducing grazing as an operating and maintenance feature of the facility and,
2. evaluate sharing land-use and conservation data with the non-profit Renewable Energy Wildlife Institute's (REWI's) SolSource Database.

As we assess the feasibility of using grazing as a means of vegetation management for this site, we are requesting any guidance or recommendations you may have as it pertains to potential benefits and/or impacts to Federal Trust resources that we need to consider. Additionally, please provide any information or guidance you may have as it relates to our potential involvement in REWI's SolSource Database.

Attached are a map of the project layout and the final Vegetation Management Plan for the site. Please note that this vegetation management plan was designed prior to our need to investigate the feasibility of grazing this site.

Please let me know if you have any questions on this or require further clarification.

Sincerely,

Eric

Eric Johnson
Lead Environmental Consultant
Wildlife Conservation and Compliance
Evergy
eric.johnson@evergy.com
O: 785-508-2431 **M:** 785-380-6602

Evergy.com

REWI
Renewable Energy Wildlife Institute

700 12th St NW STE 700
Washington, DC 20005-4052
info@rewi.org | rewi.org

23 January 2026

Eric Johnson
Lead Environmental Consultant
Wildlife Conservation and Compliance
Evergy

Dear Mr. Johnson,

This letter serves as a documentation of our conversations about a voluntary ecological data-sharing infrastructure for solar facilities (a.k.a. SolSource Database) hosted by the Renewable Energy Wildlife Institute (REWI). We appreciate your interest in participating in this resource.

REWI has over a decade of experience in voluntary data sharing with private corporations to create anonymous datasets that address questions and provide insights at a scale not possible if the data remained private. We look forward to working with you on sharing any wildlife or environmental datasets that become available at your solar facilities over their service periods.

While this project's continued funding from the US Dept. of Energy is still in question, REWI is committed to seeing this resource meet its full potential. Based on the timeline of potential data availability from your facilities we discussed being Q3 of 2027, we will have a working version of the data-sharing infrastructure available publicly by that date. In the meantime, we have other resources available such as a literature library, data templates, lists of wildlife and vegetation sampling protocols that have been used at solar facilities, and our data sharing agreement. Please feel free to contact me to receive copies of any of these resources.

Sincerely,

Ryan S. Butryn
Information Science Lead
Renewable Energy Wildlife Institute