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Community Centered Solar Development Engagement Project

Portage County, WI Report



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September 4, 2024

Community Centered Solar Development Engagement Project: Portage County, WI Report

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This project was funded by the U.S. Department of Energy Solar Energy Technologies Office, under Contract No. DE-AC02-05CH11231, in collaboration with Lawrence Berkeley National Laboratory, Michigan State University and University of Michigan. The research was performed as part of the [Community-Centered Solar Development](#) project.

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Table of Contents

Table of Contents	1
Executive Summary	2
Overview	2
Summary of Process	2
Community Conversations Key Findings	3
Next Steps for Portage County	4
Introduction	6
Solar Development in Portage County, WI	6
Advisory Committee	7
Interviews And Focus Groups	7
Focus Group Audience and Process	8
Focus group participant groups and key findings	8
Key Informant Interviews	11
Community Conversations	12
The process	13
Summary of table conversation results from Portage County	14
Concerns/Tradeoffs with these projects	14
Your vision of how large-scale solar best fits in your community	15
Where do community members have some ability to shape a project?	17
Community Revenue Use	17
Summary of participant exit surveys	18
Engagement around solar developments	19
Comments about the Community Engagement Process	20
Overarching Themes	20
Leverage Points for Local Government and Communities	22
Local Government	22
Community Coalition	26
Landowners	27
Nearby Neighbors	28
Community Members	29
Appendices	31
Common Issues From Interviews, Focus Groups, And Community Conversations	31
Exit Survey Results from Evaluation questionnaires following both Community Conversations	38

Executive Summary

Overview

As the U.S. undergoes a rapid transformation to renewable energy production, communities are grappling with the potential positive and negative impacts of large-scale solar (LSS) systems they might experience locally as the number of projects proliferates. UW-Madison Division of Extension piloted a community engagement process to learn how to involve community and local government voices in the siting and development of large-scale solar projects in rural Wisconsin, so that potential future projects can better reflect community values & priorities.

This research effort is part of a larger, national research project, [Community-Centered Solar Development](#), with Lawrence Berkeley National Lab, University of Michigan, and Michigan State University. The ultimate goal of this pilot is to contribute to the development of a replicable community engagement process for a national guidebook that planners, Extension educators, and local government officials can use for inclusive participatory planning to improve solar development processes and outcomes for all stakeholders. The purpose of this report is to share the community engagement processes that UW-Madison Extension undertook in Portage County, Wisconsin, including key findings of the focus groups and Community Conversations. In this Executive Summary, we summarize the perspectives of community members, identify key issues, and suggest leverage points for stakeholder input with LSS developers and the Public Service Commission.

Summary of Process

UW-Extension chose to conduct preliminary research through key-informant interviews and stakeholder focus groups to provide community context, as well as an overarching sense of opportunities and challenges associated with large-scale solar projects.

Prior to the focus groups, we conducted individual interviews with planners, community leaders, and local government officials from four different Wisconsin communities who had been involved in the development of a large-scale solar project completed in their areas. The focus groups included: (1) Local government officials, (2) Environmental and community leaders, (3) Lease-holding landowners (have a lease for either Vista Sands and/or Portage Solar projects), (4) Nearby neighbors to the solar projects, (5) Farm-supply businesses (farm equipment dealers, irrigation, pesticides, etc), and (6) College-aged youth. In total, 30 people participated in focus groups.

Following the focus group sessions, the project team organized two community conversations. Community conversations were public events of 50 attendees each. These events included educational presentations, a question-and-answer session, and small, facilitated table discussions with specific, predetermined topics. The topics discussed were derived from lessons learned in the focus groups. The process was designed to be inclusive of multiple stakeholders in the communities, recognizing that there are differing interests in communities, and striving to honor the multitude of voices.

Community Conversations Key Findings

We learned that community residents are seeking information about large-scale solar developments and battery energy storage and that public officials require tools, strategies and technical assistance to be prepared for these developments. We heard a need for community education and community engagement so that local governments' ordinances and agreements are inclusive of and reflect community values and priorities.

Residents are interested in learning about:

- The national strategy for an energy transition,
- The state regulatory process,
- The local, legal parameters on siting and permitting,
- Environmentally sound project siting and design,
- Equitable distribution of economic benefits, and
- Solar technology and the implications new technologies have for the local area.

There is a knowledge gap between those who are deeply involved with the regulatory process of these projects (solar developers and their attorneys and the Wisconsin Public Service Commission (PSC)), and those who are newly engaged with this process (local governments and members of the local community). The largest takeaway from public officials was the feeling of being “blind-sided” by these projects. Yet, members of the community were frustrated that their local governments are not providing more information.

Some of the key takeaways from these conversations are summarized below. We further explore these themes in the “Summary of Table Topics from Community Conversations” and “Overarching Themes” sections of the full report.

1. **Land Use and Agriculture:** This region of Wisconsin is deeply rooted in the sense of place around their agricultural landscapes. As prime agricultural land shifts away from food production, residents have concerns about impacts on the local food production and processing industry.
2. **Environmental Positives & Negatives:** Residents recognize the many potential environmental benefits of renewable energy, both globally and locally: less reliance on fossil fuels, cleaner air, improved soil and water quality, and the creation of pollinator habitat. At the same time, residents identified potential negative environmental impacts, including potential pollution to soil, decommissioning impacts to soil, and recyclability of panels and batteries. Further, there were concerns for the impact on wildlife, most specifically on the endangered greater prairie-chicken population and on movement of white-tailed deer from fencing around panels.
3. **Community Cohesion and Sense of Place:** Nearby neighbors to these projects are concerned about losing their sense of place as the visual aesthetics of the landscape change. Large-scale solar is seen as a departure from rurality and agriculture.
4. **Community Revenue Use/Distribution of Costs & Benefits:** Many residents have ideas about how the community payments can be used and would like to be involved in the decision-making process of how annual payments are allocated. Top ideas for use of

these payments included: lowering property taxes for residents, improving roads and infrastructure, payments to school districts, subsidies for home solar projects and other energy efficiency improvements, as well as funding for specific community projects and improvements. Furthermore, residents are concerned that nearby landowners bear the costs of these developments (in changes to their home landscape) while the region as a whole benefits from the energy produced.

5. Process by which Communities Learn about Large-Scale Solar Development:

Community members and local governments are frustrated that they learned about the large-scale solar development projects 1-2 years into the process and felt they had no recourse to influence the project.

Next Steps for Portage County

As it is highly likely that more solar developers will be approaching landowners within Portage County and beyond, our team recommends proactive education and preparation for local communities. Extension, identified as a trusted resource by community members, can provide education to local government officials on the regulatory process and guide conversations around how and where local governments have some influence to shape a project.

Furthermore, the UW-Stevens Point Center for Land-Use Education has developed a [mapping tool](#) that identifies areas suitable for solar energy development. This tool can be used proactively to pinpoint areas in the County that might be approached for solar development in the future. These regions of the County are ripe for educational programs, public engagement processes, and planning processes.

We recommend that local governments engage in facilitated conversations with their community members to explore and establish their vision for renewable energy in their community. As we learned, community members need an opportunity to understand the pros and cons of these types of projects, and further, to understand the regulatory process and where they have ability to shape a project.

Opportunities to engage the community in preparation for these projects include:

- Establish a community vision,
- Understand concerns and trade-offs,
- Identify people who may want to be involved in an ad-hoc committee to influence projects,
- Provide information to the community about pending projects in advance of developer contact.

Leverage points for County and local government include:

- Develop solar ordinances and include solar policy in comprehensive plans at the local and/or county level;
- Create solar overlay maps that identify areas suitable for solar development and areas to avoid;
- Negotiate about items the community could include in a developer agreement
- Support landowners in negotiating with developers by providing UW-Extension's [Guide for Leasing Land for Solar Development](#);

- Support nearby neighbors to the developments by providing information on good neighbor agreements.

Introduction

The U.S. is undergoing a rapid energy transformation to clean renewable energy as a major strategy to mitigate climate change and propelled by its cost-effectiveness. As with any transition, there is benefit for community members to receive information and hold discussions about alternative energy futures for the community to have a role in shaping their own energy future. Education about solar at various scales (e.g., developer-built and utility-run large-scale solar development, municipal solar, community solar, and rooftop solar) can help community residents understand the various pros and cons of solar developments, as well as the regulatory and financial environments dictating the feasibility of these projects.

The purpose of the Community Centered Solar Development Project is to better understand community concerns and potential benefits associated with large-scale solar energy projects. Our team conducted focus groups and interviews to learn about the specifics of solar development in Portage County. We then held two community conversations to both educate and hear from the broader community.

Participants at the community conversations identified opportunities and challenges for the development of large-scale solar and battery energy storage projects. UW-Madison Extension is reviewing the input from community members to inform the development of resources for local governments and community residents. These resources will suggest strategies to address community concerns about solar developments.

Solar Development in Portage County, WI

In Wisconsin, local jurisdictions do not have local control over projects at or above 100 megawatts (MW). These developments are under the jurisdiction of the Public Service Commission (PSC). The PSC approves solar developments after a period of review, which includes a public comment period. Local ordinances cannot preempt such development, but solar ordinances in place before applications are submitted to the PSC will be considered by the Commission.

Many of the rural communities in Portage County meet key criteria developers assess for suitability of large-scale solar development. The Center for Land Use Education at the University of Wisconsin Stevens Point conducted an analysis of the [suitability of land for large-scale solar development](#) in Wisconsin. Three criteria determine measurement of suitability: (1) Proximity to infrastructure (power transmission lines and substations); (2) Land use & cover (agricultural or undeveloped land is most favorable); and (3) Terrain (sloped land can impede solar development). The study found that 119,922 acres in Portage County (23% of the county's total 522,137 acres) are suitable for solar development, with 13,867 acres of land classified as highly suitable, primarily due to their proximity to transmission lines.

There are two large-scale solar developments in the works for the southern portion of the County (in the Village of Plover and Towns of Grant, Plover, and Buena Vista). The first development, the 250MW Portage Solar Project with a battery energy storage system by National Grid Renewables, (2,167 acres), was approved by the Wisconsin PSC ([Docket ID:](#)

[9810-CE-100](#)) in April 2023. It was estimated to be in operation by the end of 2024 but will not start construction until the second quarter of 2025.

The Vista Sands Solar Farm of Doral Renewables, LLC, still under review by the PSC ([Docket ID: 9820-CE-100](#)), aggregated leases on 9,500 acres of private land for its 1.3GW project. This would be the second largest solar farm in the Midwest and the largest in Wisconsin. The land under consideration is contentious because it is both production land for human food and contiguous to habitat for the threatened greater prairie-chicken and other bird species.

We based our case study in Portage County for four primary reasons:

- 1) The two projects mentioned above have created some community friction. Contracted farmers and landowners are pleased to support the projects, as they reap financial benefits from them and see opportunities to scale back on farming or retire. Nearby neighbors have concerns about aesthetics, sense of place, and wildlife. Community members and elected officials felt blind-sided due to lack of information about the projects and process.
- 2) The Vista Sands Project proposal (the larger of the two) had not yet been submitted to PSC, and it seemed that there might still be time for community residents to have some input into that project.
- 3) Portage County, due to its suitability for solar, is likely to be the site of future projects.
- 4) The Portage County Executive requested that UW-Madison Extension address this issue in the County.

Advisory Committee

The Extension team solicited guidance from a local advisory committee throughout this project. The group included individuals local to the Portage County area who were identified through the help of the local Extension Community Development Educator and the Area Extension Director. They included local government officials, renewable energy professionals, and agricultural professionals. They engaged with and assisted the Extension team in the following ways:

- Provided local advice to UW-Madison Extension educators about the context in Portage County;
- Assisted in identifying people to be included in interviews, focus groups, and community conversations;
- Provided input on interview and focus group questions to assure that local concerns were addressed in the process;
- Helped with outreach efforts for the community conversations.

Interviews And Focus Groups

At the onset of our project, the project team chose to ground the research through facilitated focus groups with various stakeholder groups and key informant interviews. With assistance from our advisory committee, our team identified individuals, organizations, and stakeholder

groups to engage in this process. The following sections of this report discuss the focus group audiences, process, and key findings followed by a section on the interviews.

Focus Group Audience and Process

The groups listed below were identified as having a vested interest and/or experience around either the Portage County large-scale solar projects or in solar and renewable energy in general. The project team engaged these groups so we could learn from their experiences around both the Portage Solar Project and Vista Sands Solar Project. We were interested in learning participants' level of involvement with the project and the process, impressions of the community's perceptions of the projects, concerns about and potential benefits of the project, and recommendations for improving the process of large-scale solar siting.

UW-Madison Extension conducted the focus groups in a private meeting room in a community space, the local public library. The team intentionally chose a space that was accessible and neutral. Focus groups took place over the course of two weeks in late February and early March 2024. Each session lasted 1.5 hours and included a facilitator from our project team as well as one to two team members taking notes. The focus groups followed standard focus group protocol, with a semi-structured interview format and opportunities for all participants to respond to the questions and to engage in conversation with one another. Focus group participants received a \$50 gift card to compensate them for their time and travel.

Focus group participant groups and key findings

1. Leased Landowners

Farmers and landowners who entered into a contract and/or lease agreement with either Doral (Vista Sands Solar Project) and/or National Grid Renewables (Portage Solar Project).

Key Findings: Landowners who held lease agreements with a developer felt overall satisfaction with their contracts and thought they are being well compensated for their land. When asked about negotiations with the developer, a few stated that the developers were more than willing to make changes, such as aesthetic vegetative buffers and other items. Each of the participants in this group had worked with an attorney to review and edit their contracts before signing off, and they all stressed the importance of working with a knowledgeable attorney for these projects. They shared that developers were easy to work with, and any concerns they had were addressed.

When asked about concerns of their nearby neighbors, such as loss of wildlife habitat and aesthetics of the landscape, leased landowners felt that the monetary compensation offered by developers to adjacent neighbors was adequate. Landowners who held lease agreements had been diligent in negotiating terms within their contracts and felt nearby neighbors could be doing the same through good neighbor agreements. Their own concerns included recognition of possible impacts on wildlife habitat and movement, as well as the need to keep wells active so that when the land is returned to farming, it can still be irrigated.

Finally, these farmers recognized that, over the last several decades, industrial agricultural practices have had negative impacts on the environment (water contamination from pesticides and fertilizers, aquifer drawdown, and erosion), and they felt that the land use change to solar with native and/or pollinator plantings would contribute toward positive environmental impacts. They saw the positives in these projects for the community as a whole through revenue payments, positive impacts for a changing climate and water and air quality, and as an option for landowners to keep their land in their family. One quote that stuck out and sums up this conversation is “For all these years, we worked for the farm. Now, the farm is finally working for us.”

2. Nearby neighbors

Immediately adjacent landowners to leased land in the project areas.

Key findings: Many nearby neighbors are simply looking for more information on 1) solar energy in general and the impacts it has on the local region, 2) how the regulatory and decision-making process works in Wisconsin, and 3) where the current planned and proposed projects are in the development timeline.

Neighbors who live next to these projects are feeling the ultimate “brunt” of their effects: 1) aesthetically, they will see the change in the landscape, 2) they may see a decrease in property values as the properties next door or across the road are built out with solar, and 3) there may be impacts on wildlife and deer movement, diminishing hunting opportunities on their land. Nearby neighbors stressed the impact these projects would have on agriculture - not just on food production, but this land use in general. It became clear that these community members have a sense of place deeply tied to an agricultural landscape and they are concerned about losing this.

3. Public officials

Local government elected officials and staff.

Key findings: Public officials from the affected area lamented that they felt blindsided by these developments. Lease agreements were already underway when they were notified by the developer, and they felt they had to scramble to not only provide input but also understand how they could do so. Many public officials were learning the process as it was happening. They feel it is not a level playing field since they are not as educated on the regulatory process as the PSC and solar developer companies.

The overall feeling of public officials was frustration, and they voiced the following issues with the process that they felt needs to be addressed:

1. Lack of notification in advance that these developments were coming: Officials were not notified until the majority of lease agreements and contracts had already been signed.
2. Lack of local control over land use: Officials were frustrated that local zoning does not supersede the project.

3. Education to the community: Residents are not necessarily aware of the PSC process. Many communities do not know these projects are a possibility or coming until they are already in the permitting and proposal process.
4. Statewide standards for setbacks and other protections: Currently, there are not consistent state-wide solar guidelines. For the unique case of the endangered Greater Prairie Chicken, the local government spent time developing location-specific standards.
5. State-prescribed formula for revenue sharing: The current payment system privileges counties over towns. The breakdown of annual project payments is 60% allocated to the county and 40% allocated to towns and villages based on the proportion of the project (in kW or MW) located in each municipality. However, town officials felt that towns typically bear the greatest burden on the local landscape.

4. Environmental leaders

Representatives of local environmental organizations and environmental groups.

Key findings: Environmental leaders had the most global view on the topic of large-scale solar development. Many of the participants felt the urgency and necessity of shifting to renewable energy to reduce fossil fuel consumption and mitigate the effects of climate change. At the same time, they acknowledged and recognized the local concerns for impacts on wildlife, especially on the already endangered prairie-chicken population as these projects are adjacent to the Buena Vista National Wildlife Area.

Further, they sympathized with neighbors to these projects who are feeling “boxed in” by developments.

This group’s largest point of emphasis was the need for more communication from the developer on their project and from the local government and PSC on process. This group also discussed how given that the PSC has decision-making authority, they are the body to address community members’ concerns through modifications in design. Further, participants offered that the PSC be responsible for assuring that the public is well informed about the project. Given that local governments are closest to the concerns of the public, the PSC could provide funding to local governments to coordinate communications. Overall, this group seemed to truly understand the trade-offs that come with these kinds of projects and recognize the need for better communication from developers and local government.

5. Youth

College students from UW-Stevens Point (high school students and Mid-State Technical college students were also invited, but none attended).

Key findings: The project team engaged youth in the research because they are the people whose lives will be impacted most by climate change and renewable energy development. More and more, youth are feeling anxiety around the changing climate, knowing that the decisions being made now are affecting their future. Often, youth are left out of these conversations, even though they will be the ones here in the next 40-60+

years. College youth who attended the focus group came with curiosity about the large-scale solar projects. Only a couple of the participants had heard about the proposed solar projects in Portage County prior to the focus group.

The students expressed questions and concerns around the following potential challenges: solar panel maintenance during different seasons, impact on groundwater levels and/or water quality, wildlife movement, soil quality following decommissioning, ecosystem impacts of mining to produce solar panels, and recyclability of solar panels following decommissioning. Some of these ideas had not yet been brought to the table, further underscoring that youth need a place in conversations around renewable energy. Overall, this conversation bolstered the conclusion that further education around large-scale solar is necessary.

6. Farm supply

Representatives from a variety of farm local supply chain businesses were invited, including those who represented fertilizer, irrigation, equipment dealers, trucking, vegetable processing, and other industries. (With only two participants, this was the lowest attended focus group.)

Key findings: Participants anticipated negative impacts on their businesses, as a significant amount of agricultural land will no longer actively grow crops in need of fertilizer, pesticides, or irrigation. One participant commented that he was not against solar power, only against siting it on prime farmland used for human food production. With that, even this small group did not agree on what land *would* be suitable for siting solar. They worried that well permits would lapse so that after the solar system is decommissioned, the land would not be suitable for agricultural production because the sandy soils require irrigation. These two attendees recognized the benefits that the community would gain through annual revenue payments but did not mention any other longer-term benefits from these projects. It became clear that these two participants had not given these projects much thought beyond the immediate, potential concerns and questions they had.

Key Informant Interviews

The project team interviewed specific individuals so we could learn from the experiences of other communities in Wisconsin that have gone through the development process of large-scale solar. Interviewed individuals included county planners and government officials who had navigated the solar development process for projects now in operation. We wanted to learn how the process went with the developer, how their community reacted, what they did at the local government level, and what recommendations they have or what they wished they had known ahead of time. This information helped frame where to focus education and discussion topics during community conversations. Further, as a guidebook on community engagement is developed, the lessons that they learned can be incorporated to provide advice for other communities.

Interviews took place virtually, each interview taking 45 minutes to one hour. Each interview included one member from the project team leading the questions, and another team member

taking notes and asking questions as needed. The biggest takeaways from the interviews are summarized below.

1. **Municipal governments can prepare for renewable energy development and engage with both a developer and local community members.** The problem is that local governments often do not know that a large-scale solar project is coming until it is already underway. Developers are engaging with prospective landowners and making lease agreements without it made known to the local government. The best thing local government can do is start providing opportunities to discuss solar development before lands for large-scale solar development have been contracted for. Options for how a community can prepare include: develop a solar overlay map to be part of their zoning and comprehensive plan, develop land use policies or a solar ordinance, and identify different offsets and community benefits that they would like to negotiate (i.e. set-backs, visual buffers, road maintenance, etc.).
2. **Education ahead of a development is crucial.** There are different levels of solar energy: on-site (e.g. rooftop) solar, community solar, large-scale solar. All have their own regulatory processes and laws around them. Education about solar can be done ahead of a project so that communities understand the implications and are not scrambling when a developer knocks on the door. Extension can be a leader in this education, as a trusted and unbiased entity. Further, discussions around solar and renewable energy development can be framed in different ways, whether that be emphasizing energy independence and cost savings, or focusing on climate change mitigation. Communities that have these conversations ahead of time are likely to be more open to renewable energy projects when they arise.
3. **Community members and the general public currently misunderstand the process of large-scale solar siting.** Local government, in partnership with Extension, can provide education on the roles of local government and the Public Service Commission (PSC), and where communities have an opportunity to shape a project. A few of our interviewees stressed that communities are highly unlikely to stop a project from happening (i.e., through lawsuits), and that it is best to focus energy and efforts on gaining the maximum benefits from these projects through negotiations with the developer and through benefits agreements.

Community Conversations

The project team used the lessons learned from interviews and focus groups to design community input sessions. Our goals were twofold: First, to provide a venue for community members to engage in conversations about large-scale solar development, with specific attention to the two proposed projects (Portage Solar and Vista Sands Solar); and second, to test the engagement strategy, called community conversations. This engagement strategy is designed to allow for some education and to encourage conversation.

The community conversations were framed as an invitation to the public to share their views on large-scale solar development. We were intentional in advertising these events as a

conversation—a place where participants were invited to engage in discussion with other community residents. We chose to structure the public input as a conversation to recognize the importance of giving voice to residents by providing an opportunity for people to talk about their concerns and hopes for the community.

While we recognize that there are benefits to *training community leaders*—for example, on negotiating benefits for the community, developing solar overlay maps and including solar land use in comprehensive planning—the community conversations were primarily a venue to hear resident views. We recommend an auxiliary session for training community leaders on the above topics as supplemental to the community conversations.

The process

The community conversation process was based on previous work done by Dane County Extension¹ and is similar to many public input processes that emphasize semi-facilitated conversations in small table discussion groups. Focus group discussions and interviews with individuals involved with other solar projects provided our research and planning team with an understanding of the community context and a sense of what the issues would be. We developed specific discussion questions and topics based on what we learned from our preliminary research.

The community conversations were held on two different evenings in two different locations at the end of March 2024. We chose to host two community conversation events so that community members had an option for which evening and/or location worked better for them. One event was held at Boston School Forest in Plover, a more rural location which was closer to the proposed projects areas. The second evening's event was held at the Portage County Courthouse Annex Building in Stevens Point, this location being within the population hub of the county.

We publicized the community conversations in the local press, through Portage County Extension's website and social media, and via multiple listservs and social media accounts. Both events were attended to capacity, and during the first night several people had to be turned away due to limited space. This positive turnout indicates that the issue of solar development is of great concern to the community. Attendees included residents of the local community, nearby neighbors to the proposed projects, contracted landowners, and local government officials. There was also an employee from one of the solar development companies at both community conversations, who attended as an observer.

The public events began with two presentations:

- 1) An overview of large-scale solar development (including video clips from the nearby Saratoga Solar project) as well as the legal and regulatory environment pertaining to solar facilities by Sherrie Gruder, UW-Madison Extension Energy Specialist,

¹ See, for example, the [Dane County "Engage Dane" initiative](#) facilitated by Extension Educators Melinda Habecker and Sharon Lezberg.

- 2) A presentation by the Columbia County Planner, Kurt Calkins, entitled “A Roadmap to Addressing Developers and Citizen Input on Large-Scale Solar Development”. Kurt’s presentation provided an example of how to work with solar developers based on experience with 4 solar developments in another county.

The presentations were followed by a question-and-answer period. Because the time allotted for questions was limited, and because we wanted to get as many of participant questions answered or addressed as possible, we had participants write their questions on notecards. A member of our team read these questions and the presenters attempted to answer them (several questions had to do with experience with plant decommissioning or other issue areas that our research team did not have answers to).

Following the presentations, participants were asked to select a discussion table. Topics included:

- Concerns/Tradeoffs with these projects
- Your vision of how large-scale solar best fits in your community
- Where do community members have some ability to shape a project?
- Community Revenue Use: How do you want to see the revenue from these projects spent?

A table host facilitated each discussion with a predetermined set of four broad questions. After the first “round” of conversation at each table, participants had the option to choose a second discussion table, although some attendees did leave after the first conversation round concluded. A scribe took notes from each table discussion on a flip chart. This was done for two reasons; one being so that our team had an accurate record of the conversations that took place, and the second reason so that participants could see their ideas being recorded. The results from these discussions are summarized in the section below.

Summary of table conversation results from Portage County

Concerns/Tradeoffs with these projects

Community members who live around these projects feel the effects of large-scale solar projects at a personal level. Anticipated changes in the landscape—the conversion of agricultural fields and occasional woodlands into rows and rows of solar panels—were disconcerting to those who live proximate to the contracted lands. For local residents, this land use change is not only an aesthetic concern; the broader concern is how taking a large amount of agricultural acreage out of production will influence the agricultural economy at large. Participants stressed the importance of this region for potato and vegetable production. The local economy (jobs, revenue, taxes) is tied up in the growing and processing industries. Processing companies, including Del Monte and McCain Foods, are key to the local area. Community members have many questions about how this could potentially harm the local industries: *Will there be a loss of jobs? Will this affect the local agricultural economy? Will the local potato and vegetable processors stay in the area? Will there be enough food to feed people?*

Participants discussed how solar fields will impact the environment, in both positive and negative ways. Many attendees understood that a shift to solar energy would reduce CO₂ emissions, thus helping to address climate change. Community members also noted that industrial agriculture has led to both groundwater contamination and aquifer depletion. As such, solar energy would be a positive land use in that there would be a decrease in pesticide and fertilizer application. Natural plantings under solar panels can lead to an increase in pollinator habitat and reduce wind erosion and resulting “dust bowls.” Several participants were excited about the potential for a new agricultural endeavor: raising sheep for vegetation management. All these changes would be a net positive for the environment.

Local residents expressed concerns about how “endless” rows of solar panels and enclosures (8-foot-high fences) would impact wildlife. The area is contiguous with habitat for threatened prairie-chickens. Many residents use the land as hunting grounds. These local concerns are very much tied to changes in land use.

Another environmental concern was around decommissioning at the end of the project time period. Participants voiced the following questions: *What will happen to the panels at the end of the project? Can the panels be recycled? How will batteries be disposed of? What happens if the developer goes bankrupt—who will satisfy the decommissioning requirements?*

An overarching theme was the need for more information and communication about these projects. Community members who live nearby are frustrated that they are not hearing more from their local government. It became apparent that more education is needed on how the process of large-scale solar siting and development works in Wisconsin by a subject matter expert, but further, community members want more transparency and accessible updates and communication from their local government. Municipal and County government officials, along with UW-Extension, are perceived as more trusted, respected, and accessible than state government officials or the developer, so they are the trusted messengers to engage with communities on large-scale solar, especially early on.

Additionally, many community members do not have a firm understanding of why large scale solar is necessary or happening. Questions arose as to why there is not more rooftop solar—this being a fundamental educational piece about the process of energy production and energy needs. To summarize, further education is necessary around the transition to large-scale renewable energy in general, as well as why specific areas within Wisconsin are viewed as more favorable to developers.

Your vision of how large-scale solar best fits in your community

Participants at this table conversation were, for the most part, open to having large-scale solar in the community. The phrasing of the question may have dissuaded those residents who were against the current developments from attending this table conversation, as the table title seems to accept, in advance, that there will be solar and that it can benefit the community. Participants

tended to live far enough away from the development (with one or two exceptions where contracted landowners were participating) that they wouldn't be personally impacted by the extensive solar arrays.

The two main questions we asked during the table conversation were:

- 1) What is your vision for the community regarding large-scale solar development? In what ways might a community benefit from large-scale solar farms?
- 2) How can the local community retain its rural/agricultural character and heritage while also accommodating large scale-solar development?

The table conversations tended to address potential benefits and downsides of solar development. Three vision components summarize the main conversation themes:

Maintain the agricultural base of the community.

Participants in the discussion valued the agricultural heritage and economic base for the area (Grant, Plover, and Buena Vista Towns). An agricultural industry and landscape is central to the future vision for the area. Participants maintained that the towns continue to thrive due to their agriculture base. The sense of place is firmly grounded in the aesthetics of an agricultural landscape.

Nevertheless, there was a recognition that farming needs to evolve with new agricultural practices. Likewise, the economic viability of farming needs to be maintained (there was a recognition that farmers have their equity tied up in land and equipment, and that a retirement strategy is to lease or sell these assets). While communities need to be able to adapt to changing situations (e.g., changing land use over time), participants stressed that use of prime agricultural land for solar be minimized. Participants recommended that options for putting solar installations on marginal land or rooftops take precedence over solar on agricultural lands.

One participant suggested limiting the amount of farmland that could be converted to solar development to 1% of farmland in the town. This percentage would be considerably smaller than the amount of land currently slated for solar development in Grant and Plover Towns. Participants also suggested that the burden (of transferring land use from agriculture to solar development) be shared across the state, rather than disproportionately shouldered by one county. The majority of these suggestions fall under the realm of state policy.

Integrate solar with agriculture for environmental benefits.

Some participants stressed that Portage County could become a leader in the energy transition and could model the way for other communities. Communities can move more toward energy-independence and improve resilience with local energy production. Some participants foresaw a decrease in energy bills through solar development.

Other potential benefits of transitioning some agricultural lands to solar may include:

- Improvement of groundwater quality due to a reduction of nitrate pollution from fertilizers used on cropland
- Prairie and pollinator habitat development in solar fields
- Agrivoltaics—the integration of agriculture with solar panels

- Continuous cover of the land to protect soil and rest the land, while resulting in less stormwater runoff to streams.

Participants anticipated large-scale solar to be a quiet industry that need not disrupt the sense of peace in the area.

Utilize revenue from the solar developments for the benefit of the community.

Participants recognized the financial implications of large-scale solar, both for the participating landowners and the community. These benefits can support the well-being of the community as a whole. Participants stressed that revenue should be used for the good of the community, by funding schools, roads, infrastructure, and community projects as needed. Landowners who lease their land benefit financially. Participants supported the farmer/landowner's property rights, which give them decision making power over the use of the land.

Where do community members have some ability to shape a project?

Community members, in general, were not clear on how much local control is possible concerning these large-scale solar developments. State law restricts local control a great deal, yet community members can have impact in several ways, primarily through planning processes, developer agreements, and negotiating good neighbor contracts with the developer. This discussion table focused on how community members could have the most leverage in shaping the project.

Top recommendations from this group were that:

- 1) Local communities (Counties, Towns, Villages) can work together to develop a vision for solar development in advance of a project being proposed, so that developers know what the parameters are. Community-derived vision components can be included in land use plans and can be part of the submission for PSC consideration.
- 2) Educational institutions (including UW-Madison Extension) can convene education sessions and community discussions about solar energy before developers start locking in contracts.
- 3) Local elected officials can be given authority to negotiate with the developer to assure that community benefits and community concerns are addressed in the planning phase.

Community Revenue Use

How do you want to see the revenue from these projects spent?

The majority of community members were not aware that the community as a whole reaps financial rewards from large-scale solar projects. This discussion was designed to inform them that annual financial resources will be available and to engage them on how to use the funds to benefit the community. Community members had many differing ideas about where the annual payments to the county and municipalities could be used. Most importantly, participants noted that it is important for local officials to engage with community members about how to allocate the revenue. The most commonly mentioned ideas for how to use the revenue were:

- 1) Tax relief
- 2) Road improvements
- 3) School district funding
- 4) Subsidies for home solar projects and other energy conservation and sustainability initiatives
- 5) Investments in land management for sustainability

Other suggestions included aid for community initiatives such as homeless support, community projects such as parks and recreation, civic areas, libraries, and offsetting utility costs for residents.

During the conversations, we heard that residents would like to be *involved* in the determining the use of revenue by participating in budget meetings and listening sessions on community benefits and revenue use.

The discussion on revenue use brought up a more fundamental question about democratic process. Typically, local governments hold budget meetings that are open to the public but are minimally attended. Given that communities hosting solar developments can anticipate reaping a financial windfall (from revenue distributions), it is important to consider proactive and inclusive approaches to budget decision-making. Town governments can provide multiple opportunities to inform and engage residents about financial aspects of solar developments. Participatory budget development takes time but can go a long way toward resident support for local government initiatives.

Summary of participant exit surveys

At the conclusion of the community conversations, participants were given an opportunity to fill in a short exit survey to voice additional concerns about large-scale solar in their community, including the process by which they were informed about the project. Additionally, participants were asked how they felt about the 'community conversation' event and the information they received during the event.

This summary has two components: first, an overview of participant comments about engagement around the solar developments; second, a summary of participant comments regarding the community conversations.

Engagement around solar developments

Exit survey respondents expressed great consternation about the whole process by which they were informed about the solar developments. While respondents expressed appreciation for the opportunity to learn, be part of discussions, and share their concerns (during the community conversations), most respondents felt that these conversations were happening too late in the process (for Portage County) and would not have any impact on the project direction. Without doubt, people are concerned about what is happening in their own communities, and thus feel frustration at the lack of decision-making authority about large-scale solar siting. Respondents came to the event seeking information and understanding about solar development in general, and more specifically, the projects currently being developed in their community.

A key theme from the conversation tables and the exit survey was the lack of advance communications and information from local officials about the large-scale solar projects coming to Portage County. Exit survey respondents noted that local officials, UW-Madison Extension, and/or other public agencies are responsible for initiating the conversation prior to developers coming to a community. On the flip side, local officials themselves report being 'blind-sided' by these developments. They, also, would have appreciated advance notice by either the developer or the Public Service Commission.

Many residents (outside of participating landowners) did not learn about the project until they received a postcard about an upcoming open house (sponsored by the developer). These residents emphasized the need for information, communications, and engagement in decision making before the solar development was a "done deal." Several of their comments follow:

"The community was not a part of the process from the very beginning and by the time it was brought to the public there was little that could be collaborated to ensure this was supported by the community."

"People are interested in gaining knowledge about how solar will impact the environment and how the economics gained will benefit the community."

"Planning and communication is key to an informed electorate, proactive policy makers could have made this process easier and more transparent, but since they did not, the community is forced to react."

"Solar development is a very complex planning issue and involves stakeholders from all parts of the community. Great caution is necessary for these projects, as well as consistent community communication."

Exit survey respondents noted that they want to receive unbiased information from a trusted source (such as University Extension) or the local officials. Respondents wanted more research done on the economic impact of solar developments—both on community economics and on other sectors of the local economy.

“UW [is] in a great position to lead these local discussions as a neutral source of information and knowledge.”

Comments about the Community Engagement Process

In general, comments from the exit survey indicated that participants appreciated the opportunity to learn about solar development and to have conversations about solar development in Portage County. That said, it was clear that many local participants wanted a more local focus to the program (and wanted to be able to influence the project design). Thirty-seven respondents agreed with the statement, “My community’s needs and concerns were addressed through the information presented and discussed,” 11 were neutral, and 4 disagreed with the statement.

Respondents also noted that the program speakers appeared biased in favor of solar development, and that they were focused on the global positives, but less attentive to the negatives experienced by local residents. Some of the resistance to speakers came from the perception that the organizers were biased toward support of local utility developers.

“There appeared to be a bias by Extension toward supporting [the] interests of developers.”

“Have a speaker come in to discuss the negative instead of only focusing on the positive”

“Work to be more balanced”

“Check facts/terms used”

One challenge to hosting information and conversation sessions is that people come with different pre-existing information about the project, and different desires for information (e.g., level of detail). Several exit survey respondents noted that the information session was too long and detailed and requested that the detailed material be provided to participants in a printed fact sheet. Others, however, indicated that the information provided was very valuable.

Overarching Themes

The research team reviewed the full array of notes and transcripts from interviews, focus groups transcripts, and documentation from the community conversations. From these engagements, a number of overarching themes emerged about large-scale solar development. Themes cover both the impact on communities and preferred methods of engaging residents around these developments. In some cases, the themes represent the desire for policy or practice that does not currently exist in Wisconsin.

Land Use & Agriculture

- Impact on food production and the food industry: In an area where agriculture is for human food consumption, is conversion to solar the best land use? What impact will this

have on the food industry (supply chain, processing chain)? Further, a few residents had concerns about the possibility of increased food prices for consumers.

- How much food production land should be converted to solar? Can marginal land (those lands that are not suitable for agriculture or development and are not protected wetlands) be prioritized for solar?
- Visual impact: A change in land use will visually affect residents.

Environmental Positives

- Global: Big picture positives for the environment: less reliance on fossil fuels; cleaner energy.
- Local: cleaner air, pollinator habitat, better water quality, less soil loss, and richer soil.

Environmental Negatives

- Global: Unknown to residents the variables of plant decommissioning and life-cycle for materials used in solar; End of life/possibility of recycling or reuse for panels, batteries, and associated materials.
- Local: Pollution and aesthetic concerns if materials are not removed from the site at the end of the project time period.

Community Cohesion and Sense of Place

- Large-scale solar development has the potential to create factions and divisions within small communities; community cohesion, when imperiled, can lead to more long-term consequences.
- Sense of place: residents of rural areas have moved there for a sense of quiet, safety, and immersion in an agrarian environment. How will a change in land use and aesthetics affect residents' sense of place?

Distribution of Costs and Benefits

- Perception that one region is disproportionately bearing the cost (in terms of loss of sense of place, hunting grounds, change in aesthetics) by producing energy for the state, while residents of other areas do not suffer the visual impacts.
- Some residents (contracted landowners) benefit financially while other residents do not benefit financially.
- Are community benefits fairly distributed? Counties receive 60% of the financial windfall whereas towns receive only 40% (yet towns are tasked with supporting/updating infrastructure and funding schools).

Process by which Communities Learn about Large-Scale Solar Development

- Local & county government and community members learn about solar developments so late in the process that land contracts are already locked in.
- Lack of transparency and notification by the developer.
- Desire for early communication and education from local government.

Leverage Points for Local Government and Communities

In Wisconsin, local governments do not have jurisdictional control over large-scale solar and energy storage siting, permitting, and design decisions for projects 100MW or larger. However, there are several points of influence before and during the development process that can help shape projects to reflect community values and priorities, address concerns and risks, and improve benefits for the community and environment.

Strategies for influencing large-scale solar and energy storage project siting that consider improving economic, social, health, and environmental outcomes are described below. These are presented by audience - local government, landowner, neighbors, and residents. Some of these tools and practices are currently available, while others are still being researched during this time of rapid renewable energy development.

Local Government

1) Solar ordinances and comprehensive planning

Large-scale Solar (100MW or over): Many local governments have not addressed large-scale solar generation and battery energy storage systems (BESS) in their comprehensive (comp) plans and zoning ordinances because these projects have become common only recently. A comprehensive plan is a key planning tool for communities to set a vision for their clean energy future and to integrate solar energy with other community goals like land use and economic development to guide growth for the next 20 years (see side-box, from the Wisconsin State Comprehensive Planning Law). The community can amend the current comp plan to include LSS.

Developers and utilities are rapidly building out clean energy infrastructure to decarbonize the grid and save money by replacing coal and natural gas plants. They are siting and building predominantly in rural Wisconsin where there are more optimal conditions for solar development: suitable land close to public roads that lack obstructions like trees, low population density, transmission lines, and nearby substations.

To get a project permitted, a developer applies for a Certificate of Public Convenience and Necessity (CPCN) from the Public Service Commission (PSC) of Wisconsin.

One of the CPCN requirements is to show that the proposed solar system will not unreasonably interfere with the orderly land use and development plans for the area involved. That requires developers to address the local government comprehensive plan on land use and environmental priorities regarding LSS and wind projects.

Section 2(e) Agricultural, natural and cultural resources element. A compilation of objectives, policies, goals, maps and programs for the conservation, and promotion of the effective management, of natural resources such as groundwater, forests, productive agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, metallic and nonmetallic mineral resources consistent with zoning limitations under s. 295.20 (2), parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources.

Developers cannot respond to or accommodate local communities if areas for future business and residential development are not designated, or if future expansion of parks, green-space, green infrastructure, wildlife corridors, and natural areas is not indicated in the plan (without development setbacks being mentioned).

Establish a Community Vision and Priorities

It is helpful for local governments to establish what the community's vision and priorities are regarding LSS projects. The priorities, when identified through an inclusive participatory process with the community, will reflect the local sense of place. Local planners and Extension community development educators may be able to assist with the process.

The vision and goals can be included in the comprehensive plan where they are incorporated into the community's development goals while balancing solar development against other community values. Then, they can be used by a developer to help steer what parcels are pursued to site a project (as long as they comport with state law) and to help shape developer commitments to the community in terms of addressing and financially contributing to community goals and needs.

These can include investments in priorities like local schools, organizations that serve the community, local workforce development and jobs, affordable housing, parks and natural areas, as well as natural resource protection and community and environmental health.

Authority – State and Local Levels

While it is advisable for a county to develop an ordinance for large-scale solar and energy storage, principal authority for approving projects 100MW and larger is placed with the Wisconsin Public Service Commission (PSC). Therefore, a local authority cannot enact an ordinance to preclude or prevent a project. Some Wisconsin local governments have tried, and those ordinances have been struck down and the communities have incurred legal fees.

The PSC includes Department of Natural Resources (DNR) review of environmental aspects of the proposed project to determine that it will not have adverse impact on environmental benefits, including but not limited to ecological balance, public health and welfare, and historic sites. The DNR is developing solar Best Management Practices in 2024-2025 that will be useful to local governments and developers (they will be posted on DNR and Energy On Wisconsin websites).

Counties may enact an ordinance related to aspects of large-scale solar siting that preserve or protect public health or safety, are reasonable, and don't violate state law.

Provisions that do not address health or safety (i.e. vegetative buffers, set-backs, seed mixes) may be permitted provided they do not "significantly increase the cost of the system or significantly decrease its efficiency".

Consider a Community Benefits Agreement

Local governments may require a Community Benefit Agreement by ordinance to be negotiated with a developer as part of a large-scale renewable energy and BESS project. This

legally-binding agreement ensures benefits and protections to host communities and workers. See tool 7 below on Community Benefits Agreements.

Consider a Road Use Agreement

A road use agreement (Wis. Stat. § 349.16) can contain terms for payments for roadway maintenance, damage, and improvement. The agreement is often administered through the county Highway Department rather than through Zoning.

Inclusive Process

When developing an ordinance, establishing priorities, and negotiating with a developer or utility on a CBA, ideally do so with meaningful community engagement, education, and technical analysis. Engage all community groups, including any underserved and low-income community members, to help ensure a range of stakeholders' priorities are incorporated.

Resources - Model Ordinances for large-scale energy projects:

UW-Madison Extension will be developing a model solar ordinance for local government consideration, and which will be posted on the [Energy on Wisconsin website](#). Below are existing documents for reference.

Model Ordinances:

- Solar: [Solar: Great Plains Institute. \(2020\). Wisconsin solar model ordinance.](#)
- Wind: [Southeastern Wisconsin Regional Planning. \(2016, November\). SEWRPC model zoning ordinance: Zoning regulations for wind energy systems.](#)
- Battery Energy Storage: [Utility-Scale Battery Energy Storage Systems Model Ordinance by the American Clean Power Association \(ACP\) \(2023\)](#) is designed to inform the formation of individual ordinances or state regulations to guide the development of utility-scale energy storage facilities.

Large-scale Solar (Less than 100 MW): Local governments in Wisconsin have permitting authority over solar and wind development that are 99.9MW or smaller. However, they cannot adopt restrictions that are more stringent than state restrictions (Wis. Stat. § 66.0401(1m); Wis. Admin. Code PSC § 128.03).

State law also prohibits local governments from placing any restriction on wind or solar systems unless that restriction “(a) Serves to preserve or protect the public health or safety; (b) Does not significantly increase the cost of the system or decrease its efficiency; [or] (c) Allows for an alternative system of comparable cost and efficiency” (Wis. Stat. § 66.0401(1m)).

2) Zoning rules and siting standards

Counties, towns, cities, and villages regulate land use through zoning. A zoning ordinance identifies residential, agricultural, commercial and industrial districts and the types of uses permitted within each district. Uses can be permitted as a conditional use. Local government may set restrictions addressing how the LSS business operates, including truck traffic, noise levels, dust, and other impacts to nearby properties.

Counties and towns can amend their zoning ordinances through a statutorily required approval process, including public hearing notices. Note that zoning and plans by state law must be consistent with adopted comprehensive plans.

Zoning can be used to address multiple types of solar applications, from rooftop solar on homes, businesses, and organizations to ground mount solar on brownfields, marginal or municipal land, parking lots and private lots.

Local governments may receive technical assistance through SolSmart; use the [SolSmart Program Guides](#) to develop effective solar zoning, permitting, and inspection. SolSmart has been used successfully by many Wisconsin local governments to address community interest in putting solar in other areas than solely on agricultural land.

3) Solar overlap maps

A solar overlay map is created by municipalities and can be incorporated into their comprehensive plans or future land use maps. This map identifies areas that are suitable for solar, areas not suitable, and potentially will identify buffer zones around sensitive areas (i.e. wildlife habitat, streams, etc.). Solar overlay maps can act as a guidepost to direct future developments and as a way to incorporate solar energy development into future land use plans.

Sample Documents:

- [Documents Relating to the Town of Plover Solar Overlay to the Future Land Use Plan](#)
- [Town of Grant Solar Documents](#)

4) Engaging the PSC

The PSC holds one or several scoping meetings during the case review for LSS construction to provide an opportunity for the public to learn about the proposed project. PSC and DNR staff are present along with the developer. Local governments can attend these and ask questions.

Also, local governments can intervene before the PSC has issued a Certificate of Public Convenience and Necessity (CPCN). However, consider that intervening is a big financial and legal commitment.

Resource:

To learn how the PSC approves public construction projects, view the step-by-step process on their webpage: [How Construction Projects are Approved](#).

5) Developer agreements

Developer agreements are a tool to help communities ensure that new large-scale energy projects bring value to their communities, land, and workers. They are a binding contract negotiated between the developer and local government.

Provisions of development agreements can include:

- Addressing risks. Some include fire hazard risks management, training of local fire and EMS and associated costs;
- Decommissioning solar arrays at the end of the project: removing panels, recycling and reclamation; soil testing and addressing any substances that would impede farming edible, safe crops and negatively impact human and environmental health;
- Decommissioning battery energy storage systems at the end of the project; and
- Employment requirements.

Community Coalition

6) Community Benefits Plans (CBP)

CBPs are required by the US Department of Energy and US Department of Agriculture (though they each use different frameworks) as part of proposals for federal funding under BIL and IRA. They ensure that communities and workers realize long-term benefits from federal investments in clean energy and infrastructure. CBPs have import as they count for one fifth or 20 percent of the project applicant's score. They can be flexible so that they are crafted to suit the needs of the project and communities.

CBPs are not legally-binding. They lay out a blueprint crafted by the developer in collaboration with a local community-based coalition of stakeholder organizations like neighborhood organizations, faith communities, labor groups, and underserved community groups. Community benefits plans provide a framework to ensure that the project provides long-term social, health, economic, and environmental benefits while reducing project risks.

Resources on Community Benefits Plans:

- [DOE: Community Benefits Plan Website with templates](#)
- Rocky Mountain Institute: [Community Benefits Plans: Driving Equitable Clean Energy Development](#), September 25, 2023.

7) Community Benefits Agreements (CBAs)

CBAs involve a community-led processes to develop legally-binding agreements signed between community groups or coalitions and project developers to bring positive improvements

to the community and to the developer during and after a solar development project. They can be between local governments (referred to as host communities) and developers as well.

The community will need to form a coalition of diverse stakeholders. Those groups will tailor the agreement to the local needs and aspirations. It is important to clearly establish each party's roles and responsibilities within the agreement to promote accountability and enforcement including setting performance benchmarks.

CBAs may be a result of a community benefits plan and are encouraged by U.S. Department of Energy (DOE). CBAs can identify community priorities or labor benefits a developer agrees to deliver including local workforce training, housing, and local economic development in return for community support or workforce availability for a project.

CBAs can be used to:

- guarantee economic benefits such as good local jobs, funding to schools, parks, and local organizations, energy efficiency upgrades to buildings;
- monitor and fund environmental protection and habitat preservation;
- improve infrastructure such as roads, community buildings, energy, public transportation;
- reduce delays in the process, ensure accountability; and
- address environmental justice concerns so that nearby residents have positive outcomes.

Resources on Community Benefits Agreements:

- [DOE's Community Benefit Agreement Toolkit](#)
- [DOE's Community Benefit Agreement - FAQs](#)
- [Center for Rural Affairs Empowering Rural Development through Community Benefit Agreements](#)

8) Project Labor Agreements

CBAs can contain Project Labor Agreements as well. CBPs include addressing labor engagement and investing in job quality and a skilled workforce including for disadvantaged, underserved communities.

Landowners

9) Lease Agreements

A lease agreement between the landowner and the developer addresses compensation, taxes, land use, well maintenance, land remediation, risks and remedies, liability, and decommissioning the project, among many other details.

UW-Madison Extension resources, while not providing legal counsel to individuals, provide tools for landowners to use in analyzing these often complicated, binding, and long-term lease agreements. This includes a mm to view that talks through the likely terms of the agreement, the meaning of those terms, and how to more successfully negotiate the

agreements. Written resources have been developed by two Extension attorneys to help landowners avoid contracting issues.

Resources:

The following resources are available on both UW Madison Extension's [Energy On Wisconsin website](#) and [Farm Management webpage](#).

- [Are you Thinking about Leasing Your Farmland for Solar Development? A Guide for Leasing Land for Solar Development, attorneys William Oemichen and Kelly Wilfert, UW-Madison Extension, August 2024.](#)
- [Conversations with Solar Developers: A Companion Worksheet, Kelly Wilfert and William Oemichen, UW-Madison Extension, August 2024.](#) A guide for landowners to use during a conversation with a solar developer to aid in asking questions and to document your understanding of the company's responses. This can be shared with an attorney the landowner hires to review the lease agreement provided by the developer.
- [Solar Contract Seminar - Reviewing Solar Lease Opportunities \(youtube\), UW-Madison Extension, August 26, 2024.](#) This recorded workshop includes an overview of Large-Scale Solar Development trends in the US and Wisconsin and the research, programs, and community engagement UW-Madison is doing with USDOE grant funding to prepare Wisconsin communities for the rapid clean energy transformation. The body of the workshop addresses issues and considerations in leasing land for large-scale solar development.

Nearby Neighbors

10) Good Neighbor Agreement (GNA)

A GNA is a legal contract between the developer and some of the neighboring landowners whose land was not leased for a large-scale solar development, battery energy storage system (BESS) or substation. Typically, a good neighbor agreement includes the developer providing vegetative screening to reduce the view of the development along with some monetary benefit. Some developers might contract for planting bushes for participants while others suggest that can be part of what a neighbor might use the money for.

How the agreement is crafted varies across developers and across projects. Some developers provide a lump sum up front while others provide annual payments for a few years or for many years. These are not considered "impact or compensation" payments as they are not calculated to mitigate perceived impacts. Also, they are not necessarily offered consistently to all neighbors. The developer decides which property owners are offered a GNA.

Overall, a Good Neighbor Agreement is a tool to help engage more people in the project and to provide a way for them to benefit from its success. In return for money offered, it likely requires that the owner agrees not to interfere with the project directly or indirectly.

Community Members

There are several ways community members can learn about a proposed LSS development and get involved at various stages of the project. They include:

- Understanding the law.
- Participate in public processes:
 - Attend one or more developer open houses and study their website.
 - Attend a local government meeting or listening and input session about planning for large-scale renewable energy projects.
 - Review public meeting notes when attendance isn't possible.
 - Attend a PSC scoping meeting. There may be several of these meetings during the case review for construction. DNR, PSC and the developer are present, and questions can be asked.
 - Make or submit comments to the Public Service Commission of Wisconsin (PSCW).^{*} How to prepare effective public testimony is outlined in the addendum from PSC below. Do so using the docket ID assigned to the project. Example: [Portage Solar Project Docket ID: 9810-CE-100](#) which includes all records pertaining to the project.
 - The Public Service Commission holds public hearings on large-scale renewable energy projects and takes public comment either in person or in writing for a posted official specific comment-period only. A person's testimony may consist of the person's personal knowledge or personal opinions only. Referring to a document is permissible. More information about this process and requirements are below.
 - Ask local government representatives to hold and participate in community input sessions on ways to use the annual money local governments will get from developers. After the LSS project is approved by the PSC and built, which can take 2-4 years, and the project is generating electricity, local governments will receive funds.

In sum, Wisconsin counties, cities, villages, and towns have limited authority to regulate solar and wind energy projects based on State laws. Yet, there are leverage points during the siting process and tools stakeholders can use to help shape a project to reflect community priorities and bring value to the community.

*Addendum

Requirements for Public Comment, Public Service Commission of Wisconsin, page 3/3
More information

If you have questions regarding how to submit testimony or file a written comment in a Commission docket, please contact the docket coordinator. If you do not know the docket coordinator for the docket on which you wish to comment, please call (608) 266-5481 or (800) 225-7729. Hearing or speech-impaired individuals may also use the Commission's TTY number; if calling from Wisconsin (800) 251-8345, if calling from outside Wisconsin (608) 267-1479. Any person with a disability who needs accommodations to participate should contact the docket coordinator. Please also see below for suggestions regarding how to prepare an effective public comment.

How to Prepare Effective Public Testimony or Public Comment

The following are suggestions for preparing effective public testimony or a written public comment in a Commission case.

1. **Identify yourself and your relation to the docket.**
 - a. Are you a customer of the affected utility?
 - b. Do you live in the project area?
 - c. Do you operate a business that will be affected by the case?
2. **Be specific about your concern.**
 - a. If you are concerned about effects on wildlife, what form of wildlife, and what are you concerned may happen?
 - b. If you are concerned about effects on your quality of life, what parts of your life will be impacted?
 - c. If you are concerned about environmental effects, who or what would be harmed if the environmental effects occur, and in what way?
 - d. If you are concerned about a financial impact, how will the financial impact affect you? What will you need to change about your life if the impact occurs?
3. **Explain the basis for your opinion and knowledge.**
 - a. Have you consulted similarly situated members of the public?
 - b. Have you done research, and if so, what did you research?
 - c. Do you know of a similar outcome in a comparable situation?
 - d. Do you have education or training in the subject on which you are commenting?
 - e. Have you consulted experts on the subject?
4. **Propose an alternative.**
 - a. If you do not like a planned construction site, propose a modification to the planned site that would reduce or eliminate the impact you are concerned about.
 - b. If you do not like a perceived environmental impact, propose a way to reduce or eliminate the impact you are concerned about.
 - c. If you do not like a perceived effect on your quality of life, propose a way to reduce or eliminate the effect on your quality of life.

Appendices

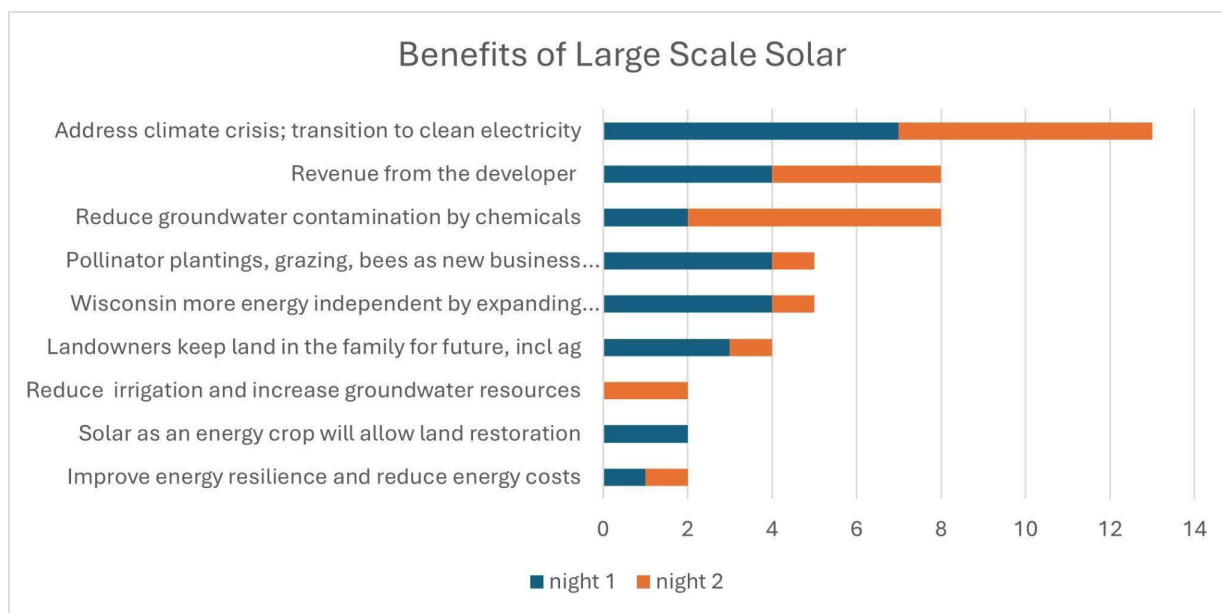
Common Issues From Interviews, Focus Groups, And Community Conversations

Both the individual interviews and the stakeholder focus groups brought up a wide range of issues surrounding large-scale solar development, including benefits and concerns, as well as suggestions for improving the siting process for communities. These issues were shared in the community conversations, and participants used dot voting to indicate which of the issues they felt were most important. While the dot voting is not statistically significant, given the small number of people voting, it still may suggest some issues that deserve attention.

Community Conversation participants also had the opportunity to suggest other issues beyond those we shared from the interviews. These discussions of issues aligned very closely with those issues pre-identified by the interviews and focus groups. Some additional issues were suggested during the community conversations, which are indicated in the graphs below.

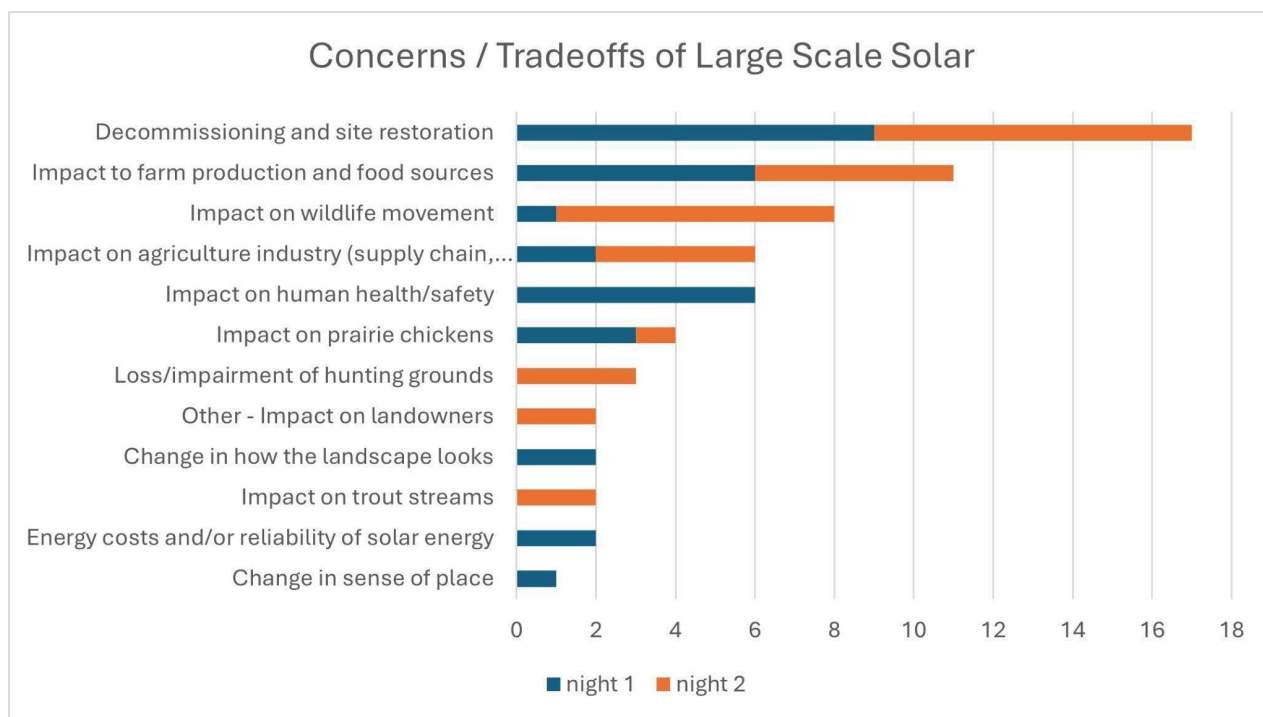
The Community Conversations were held in two different locations. The first night's meeting took place in a more rural location closer to the developments, and participants indicated great concern about the impact of solar development on food production, the agricultural economy, and human health. The second night's meeting took place in the county seat and university town, and participants showed more concern for wildlife, environmental, and recreational impacts, although they also indicated concern about food production and the agricultural economy. Most of the time there was broad agreement about the highest priorities at both meetings.

Dot-voting results from CCSD Community Conversations



Benefits of Large Scale Solar

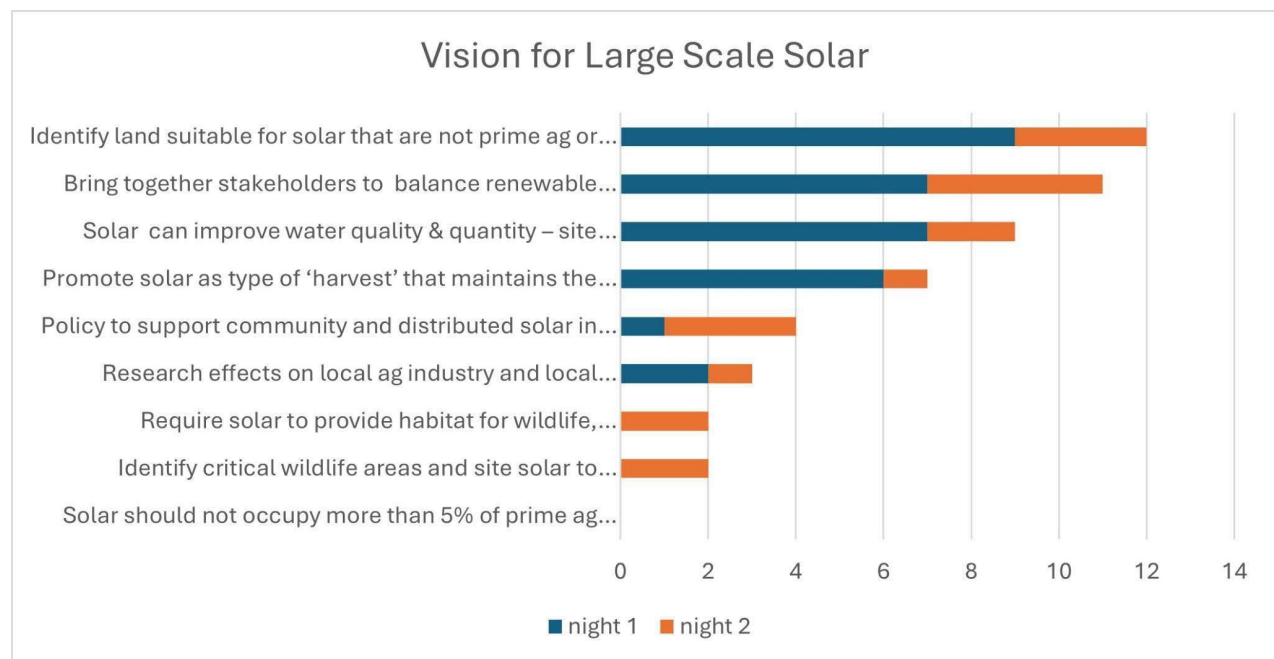
	Night 1	Night 2	Both
Essential to address the climate crisis and transition to clean electricity	7	6	13
Solar on agricultural lands will reduce groundwater contamination by chemicals	2	6	8
Revenue from the developer will boost local governments and alleviate revenue constraints	4	4	8
Wisconsin more energy independent by expanding solar energy	4	1	5
Pollinator plantings, sheep grazing, bee keeping can be new local business opportunities	4	1	5
Local landowners receive payments and keep land in the family for future uses including agriculture	3	1	4
Improve energy resilience and reduce energy costs	1	1	2
Solar as an energy crop will allow land restoration	2	0	2
Solar on agricultural lands will reduce irrigation and increase groundwater resources	2	0	2
Other (please list):	0	0	0



Concerns/Tradeoffs of Large Scale Solar

	night 1	night 2	Both
Decommissioning and site restoration	9	8	17
Impact to farm production and food sources	6	5	11
Impact on wildlife movement	1	7	8
Impact on human health/safety	6	0	6
Impact on agriculture industry (supply chain, processing industry)	2	4	6
Impact on prairie chickens	3	1	4
Loss/impairment of hunting grounds	0	3	3
Energy costs and/or reliability of solar energy	2	0	2
Impact on trout streams	0	2	2
Change in how the landscape looks	2	0	2

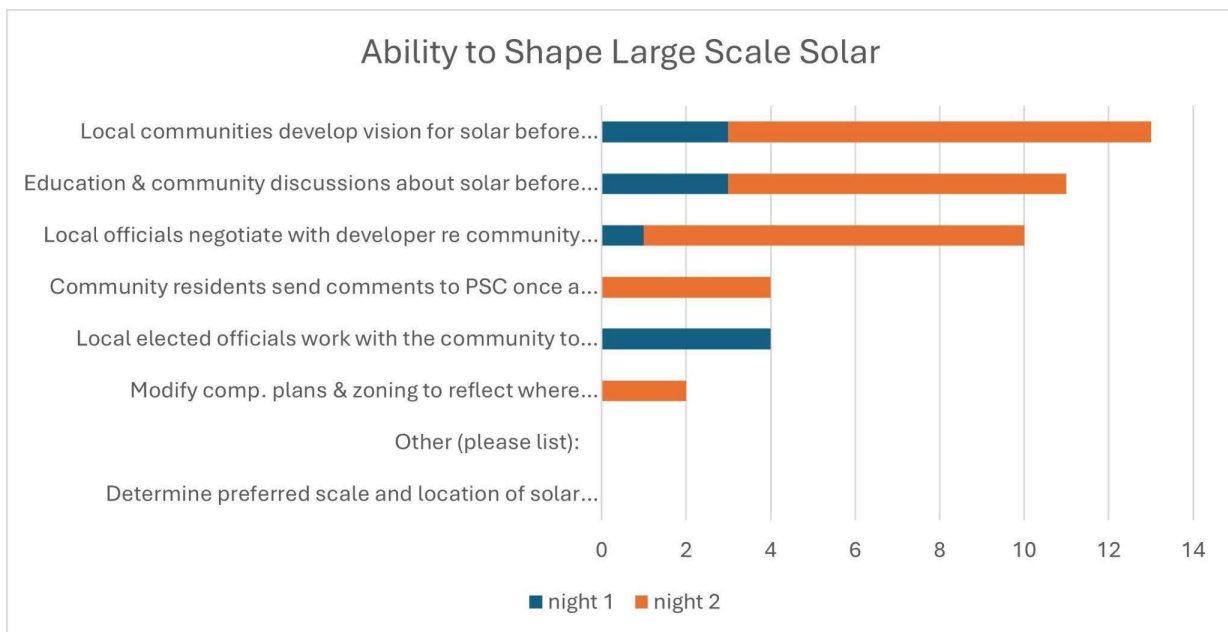
Other - Impact on landowners	0	2	2
Change in sense of place	1	0	1



Vision of how large-scale solar best fits in your community

	night 1	night 2	Both
Identify lands suitable for solar that are not prime agricultural soils or critical ecological habitat.	9	3	12
Bring together stakeholders to make recommendations balancing	7	4	11
Solar development can improve water quality and quantity – site projects where there are currently conflicts over water use.	7	2	9

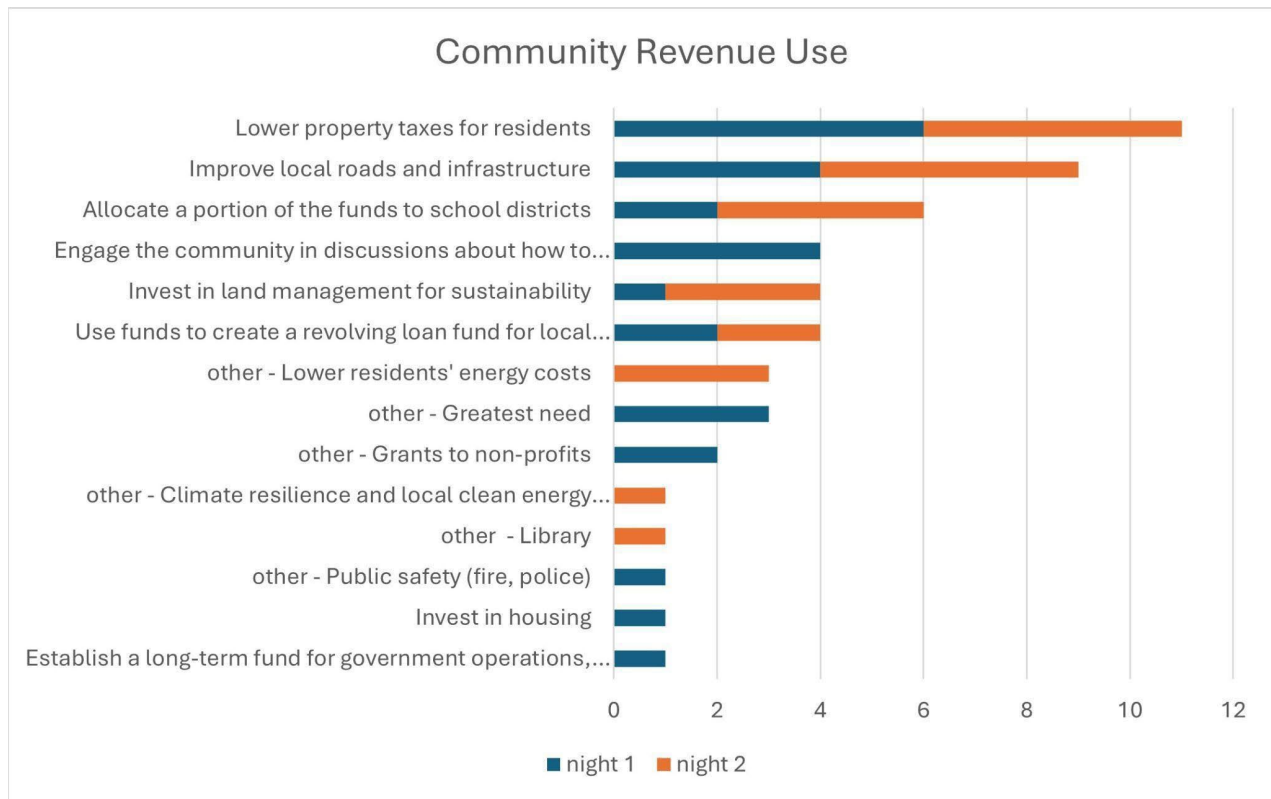
Promote solar development as a type of 'harvest' that maintains the agricultural character of our community.	6	1	7
Explore policy changes so that community and distributed solar are more feasible in Wisconsin.	1	3	4
Research whether solar development would have long-term negative effects on our local agricultural industry and on our local economy.	2	1	3
Identify critical wildlife areas and site solar to maintain connectivity / movement of wildlife.	0	2	2
Require solar development to provide habitat for wildlife, food for pollinators, and/or forage for sheep and workable agreements with farmers.	0	2	2
Explore policy changes that solar development should not occupy more than 5% of prime agricultural land in any County	0	0	0



Where (and when) do community members have some ability to shape a project?

night 1 night 2 Both

Local communities (Counties, Towns, Villages) should work together to develop a vision for solar development in advance of a project being proposed and put that into land use plans for PSC consideration.	3	10	13
Educational institutions (including UW-Madison Extension) should convene education sessions and community discussions about solar energy before developers start locking in contracts.	3	8	11
Local elected officials negotiate with the developer to assure that community benefits and community concerns are addressed in the planning phase.	1	9	10
Local elected officials work with the community to develop solar overlay maps	4	0	4
Community residents should send in comments to the PSC once a proposal is submitted.	0	4	4
Comprehensive plans and zoning are modified to reflect where the community prefers solar arrays.	0	2	2
Local elected officials work with the community to determine the preferred scale and location of solar developments.	0	0	0
Other (please list):	0	0	0



Community Revenue Use

	night 1	night 2	Both
Lower property taxes for residents	6	5	11
Improve local roads and infrastructure	4	5	9
Allocate a portion of the funds to school districts	2	4	6
Use funds to create a revolving loan fund for local energy efficiency and clean energy projects	2	2	4
Invest in land management for sustainability	1	3	4
Engage the community in discussions about how to allocate the revenue	4	0	4
Other - Greatest need	3	0	3
Other - Lower residents' energy costs	0	3	3
Other - Grants to nonprofits	2	0	2


Community Revenue Use

Establish a long-term fund for government operations, recognizing the limits in levy revenue	1	0	1
Invest in housing	1	0	1
Other - Public safety (fire, police)	1	0	1
Other - Library	0	1	1
Other - Climate resilience and local clean energy investment	0	1	1


Exit Survey Results from Evaluation questionnaires following both Community Conversations

Below is a summary of the exit survey results. Surveys were received back from 54 people. There were ~100 attendees between the two community conversations.

1. On a scale of 1-5, where 1 means you very much **Disagree** and 5 means you very much **Agree**, tell us how you feel about this evenings' program.

	Disagree  Agree					
	1	2	3	4	5	n/a
<i>The format of the community conversation worked well</i>		1	9	13	30	1
<i>Overall satisfaction with this event</i>		2	9	12	27	
<i>I had opportunity to voice my thoughts</i>		5	4	9	39	3
<i>The provision of childcare was important to my ability to attend</i>	8	1	1	2	2	43
<i>Food being provided was important to my ability to attend</i>	8	16	5	4	9	10
<i>The provision of the gift card was important to my ability to attend</i>	16	5	8	5	4	11

2. To what extent do you believe the information presented and discussed aligns with the needs of your community regarding large-scale solar projects?

	Disagree  Agree					
	1	2	3	4	5	n/a
<i>My community's needs and concerns were addressed through the information presented and discussed</i>	1	3	11	16	21	2

3. What was your biggest take-away idea for you from this evening's program?

Responses from Community Conversation 1

<i>To do this for an upcoming project we need a bigger room, notify those impacted by certified mail, notify those who benefit by US mail, mention secondary impacts such as, high voltage power lines, security, public safety, fire, construction traffic</i>
<i>Read the room a little better. Use language that is accessible to a common denominator</i>

<i>My take away was that people have deep concerns about new things that change their homes. Planning and communication is key to an informed electorate, proactive policy makers could have made this process easier and more transparent, but since they did not, the community is forced to react.</i>
<i>Good Neighbor Agreement</i>
<i>People are interested in gaining knowledge about how solar will impact the environment and how the economics gained will benefit the community.</i>
<i>A better understanding of the current scope of large-scale solar projects and what the issues are.</i>
<i>Great way to start conversation and hear the needs. Think more info/resources to help keep conversations honest/true would be helpful next round. Christina can elaborate later :)</i>
<i>More detained information to answer questions is needed. Many questions asked and few definite answers Portage County should have done this process earlier. Learned a few items but not a lot.</i>
<i>People want more information and to have an opportunity to provide input</i>
<i>Can't involve everyone in a community in this process - how to balance community input with getting work done.</i>
<i>More information should have been shared with the community.</i>
<i>UW in a great position to lead these local discussions as a neutral source of information and knowledge.</i>
<i>The project is happening regardless of comments here. We needed to have input earlier.</i>
<i>What I learned by coming here tonight, thank you very much.</i>
<i>How the Solar Company is concern in some things.</i>
<i>The belief of conflict of interest (utility, developers, signed land owners, other community members) bring miscommunications.</i>
<i>There is a desperate need to improve overall project communication.</i>
<i>Willingness to listen and answer questions, well informed.</i>
<i>Progress</i>
<i>Importance of these discussion opportunities.</i>
<i>Communication is Key</i>
<i>Great background information on solar and local zoning ability to impact decision making process.</i>
<i>Developer should be required to inform public - land owners and adjacent land owners, they are considering a project in the township.</i>
<i>Many people care about the projects, they just don't understand them.</i>
<i>The community was not a part of the process from the very beginning and by the time it was brought to the public there was little that could be collaborated to ensure this was supported by the community.</i>
<i>We need better communication prior to projects like this. We feel that we aren't given choices, like it is what it is.</i>

Responses from Community Conversation 2

<i>A lot of times the answers to the questions brought up was, I don't know, which is good to be honest, but I think it reflects that more research needs to be done and things thought out a bit more.</i>
<i>I'm in</i>

<i>The \$ going to the county \$4.2 million</i>
<i>Opportunity for input</i>
<i>There is appetite for discussion</i>
<i>That there is lots of work going into this, (that's a good thing)</i>
<i>Need more room for more residents</i>
<i>A lot of information NEEDS to happen before going forward</i>
<i>Solar development is a very complex planning issue and involves stake holders from all parts of the community. Great caution is necessary for these projects, as well as consistent community communication.</i>
<i>I just appreciated being able to share my concerns.</i>
<i>Lack of info / feasible ideas amongst community members</i>
<i>Knowing more about the future and development of solar in Portage County</i>
<i>Economic Impact Needed</i>
<i>Acquired badly needed information I hadn't had before this meeting</i>
<i>The importance of community involvement</i>
<i>There appeared to be a bias by Extension toward supporting interests of developers.</i>
<i>Explain PSC process</i>
<i>collaboration and cooperation</i>
<i>Need information on impact to the area, financial impacts, environment</i>
<i>The views of farmers at my table were extremely informative</i>

4. Would you like to learn more about any of the following topics concerning large-scale solar development?

	<i>Total responses</i>
<i>Negotiating solar leases on private property</i>	<i>13</i>
<i>Impacts on the local economy, including impacts on agriculture and energy-related jobs</i>	<i>29</i>
<i>Solar compatibility with other land uses (farmland, brownfield, marginal land)</i>	<i>27</i>
<i>Community agreements with developers</i>	<i>18</i>
<i>Options for developing solar overlay maps and zoning</i>	<i>10</i>
<i>Revenue for local governments and communities</i>	<i>20</i>
<i>Impacts to wildlife and environment</i>	<i>35</i>
<i>Impacts to human health and safety</i>	<i>20</i>

Other, please indicate

<i>Disposal expenses & long range planning to dispose of toxic materials. Costs of materials for the overall project and toxic load to the environment</i>

<i>True net costs/savings of solar vs. conventional</i>
<i>water quality</i>
<i>have land in project now</i>
<i>The science behind the solar panels, the storage batteries, the impact of aging parcels</i>
<i>most have been discussed on local level</i>
<i>disposal of used panels</i>
<i>more information</i>

5. Do you have any other comments about large-scale solar in your community?

<i>Definition of "utility-scale" solar needed.</i>
<i>Just beginning to really learn about solar</i>
<i>Well done. The food and gift certificate were nice touches to encourage participation and enhance the event.</i>
<i>Many times big dollars are talked about. How many dollars does this amount to, per person, per year? (give an example)</i>
<i>Twenty-five year leases seem like a short time frame. Recycling of the solar panels is a major concern.</i>
<i>Wish we had more solar.</i>
<i>Maintain Roads</i>
<i>Good to see progress toward green energy and concern about carbon issues.</i>
<i>WHY ARE THEY EXEMPT From Local Zoning and land use maps.</i>
<i>I'm excited</i>
<i>I am in favor</i>
<i>I think we need to know more about the impact before we jump in with both feet.</i>
<i>Make this known to more community members and residents</i>
<i>Have a speaker come in to discuss the negative instead of only focusing on the positive</i>
<i>Batteries need to be in this conversation</i>
<i>Local applications for hydrogen energy storage</i>
<i>Could present some of these ideas with more simplistic presentation and save details for handouts</i>
<i>Look to the history of the land when making decisions</i>
<i>Work to be more balanced</i>
<i>Check facts/terms used</i>
<i>Yes please, lots more!</i>
<i>With battery storage.</i>
<i>Until the entire county is net zero and energy independent</i>
<i>Can we arrange tours of the arrays/construction sites for local schools to educate kids about clean energy jobs?</i>
<i>Three hour meeting is too long, make it more like two.</i>