

VILLAGE OF MCFARLAND **Sustainability & Natural Resources
Committee**

NOTICE OF PUBLIC MEETING

Wednesday, April 19, 2023

7:00 PM

McFarland Municipal Center
Community Room

AGENDA

You are invited to this meeting through a Zoom webinar. The public may attend in-person or remotely through the webinar or telephone options listed below.

PLEASE CLICK THE LINK BELOW TO JOIN THE ZOOM WEBINAR:

<https://us02web.zoom.us/j/85120458074>

Or by Telephone: +1 (312) 626-6799

Webinar ID: 851 2045 8074

Press *9 to raise/lower hand. Press *6 to mute/unmute.

1. CALL TO ORDER, ROLL CALL.

2. PUBLIC APPEARANCES.

- a. This is an opportunity for members of the public to address the Sustainability and Natural Resources Committee for items that are not on the agenda. Please remember this is a hybrid meeting conducted in person and through the Zoom online meeting platform. Meeting attendees wishing to address the Committee about items not on the agenda may do so at this time. Zoom attendees should type their name and address in the Question and Answer feature within the Zoom online meeting platform at this time. Members of the public who are present in person and wish to address the Committee should fill out a public comment form and turn into the meeting chairperson. When you are called upon to speak, state your name, address, and provide your comments to the Committee for their consideration. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to sustainability@mcfarland.wi.us to be included as part of the meeting.

Members of the public may also speak during their selected agenda item as they designate on the public comment form or in the Question and Answer feature on Zoom.

3. APPROVAL OF MINUTES.

- a. Motion to approve the minutes of the March 13, 2023 Sustainability and Natural Resources committee meeting.

4. BUSINESS.

- a. Discussion regarding public information meetings held for conservancy management plan
- b. Update regarding the upcoming Arbor Day event.
- c. Discussion on No Mow May website and registration
- d. Discussion on OEI Grant Application Update
- e. Discussion and possible action to make a recommendation to the Village Board regarding approval of a proposal from HGA for Comprehensive Energy Planning and Predesign Net Zero Energy Services for the Community Center.

5. SCHEDULE NEXT MEETING DATE.

- a. Monday, May 8, 2023 at 6:00 p.m.

6. ADJOURNMENT.

Any person who has a qualifying disability as defined by the Americans with Disabilities Act that requires the meeting or materials at the meeting to be in an accessible location or format should contact the McFarland Municipal Center at (608)838-3153, 5915 Milwaukee Street, McFarland, Wisconsin, or village.clerk@mcfarland.wi.us by 2:00 p.m. at least 5 business days prior to the meeting so that any necessary arrangements can be made to accommodate each request. If the meeting or request is less than 5 business days from the meeting, requests for accommodations may still be made and reasonable efforts will be made to accommodate each request.

VILLAGE OF MCFARLAND

Sustainability & Natural Resources Committee Minutes

Monday, March 13, 2023 - 6:00 PM

1. CALL TO ORDER, ROLL CALL.

President Clow called the regular meeting of the Sustainability & Natural Resources Committee to order at 6:00 PM in the Community Room of the Municipal Center. This meeting was held via Zoom webinar.

Members present: Edward Wreh, Darrel Waldera, Kitty Brussock (arrived at 6:04 p.m.), Bruce Fischer, Judy Taber, Carolyn Clow

Members not present: Angela Freedman

Staff Present: Public Works Director Lee Igl, Parks Superintendent Sayer Larson, Associate Planner Kong Thao, Assistant to the Public Works Director Aimee Irwin, and Town & Country staff Tim Stieve.

2. PUBLIC APPEARANCES.

- a. *This is an opportunity for members of the public to address the Sustainability and Natural Resources Committee for items that are not on the agenda. Please remember this is a hybrid meeting conducted in person and through the Zoom online meeting platform. Meeting attendees wishing to address the Committee about items not on the agenda may do so at this time. Zoom attendees should type their name and address in the Question and Answer feature within the Zoom online meeting platform at this time. Members of the public who are present in person and wish to address the Committee should fill out a public comment form and turn into the meeting chairperson. When you are called upon to speak, state your name, address, and provide your comments to the Committee for their consideration. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to sustainability@mcfarland.wi.us to be included as part of the meeting.*

Members of the public may also speak during their selected agenda item as they designate on the public comment form or in the Question and Answer feature on Zoom.

None.

3. APPROVAL OF MINUTES.

- a. *Motion to approve the amended minutes of the January 9, 2023 Sustainability & Natural Resources Committee meeting.*

Motion by President Clow, seconded by Trustee Wreh, to approve the amended minutes of the January 9, 2023 Sustainability & Natural Resources Committee meeting. Motion carries 6 - 0 - 0.

- b. *Motion to approve the minutes of the February 13, 2023 Sustainability & Natural Resources Committee meeting.*

Motion by President Clow, seconded by Trustee Wreh, to approve the minutes of the February 13, 2023 Sustainability & Natural Resources Committee meeting. Motion carries 6 - 0 - 0.

4. BUSINESS.

a. Discussion and action to make a recommendation to the Village Board regarding the award of contract for the 2023 McDaniel Park beach improvements project.

Larson introduced the McDaniel Park beach improvements project. Tim Stieve of Town & Country Engineering reviewed the bids received for the project with the low bidder being R & T Voegeli Excavating, LLC. Stieve explained this would be a unit price contract.

- Trustee Wreh asked if there were concerns about unit pricing being higher than anticipated. Stieve explained that portions are lump sum pricing and these should not fluctuate. He also explained that bidders commit to the prices they submit. Therefore, they would be required to adhere to those prices submitted.
- Trustee Wreh asked if there were restrictions within the contract related to delays. Stieve explained that these construction projects are more rigid and more guardrails are in place related to delays.
- Fischer asked how long it would take for the water to clear after construction is complete. Stieve stated he is unsure but would clarify with Dane County for an estimate.
- Taber asked how the Village's experience was with R & T Voegeli. Stieve and Igl responded that the recent project was flawless.

Motion by President Clow, seconded by Waldera, to recommend approval to the Village Board regarding the award of contract to R & T Voegeli Excavating, LLC of Monroe for an amount of \$154,896 for the 2023 McDaniel Park beach improvements project including the base bid with additional expenses for engineering and contingency for a total project cost in an amount of \$200,000. Motion carries 6 - 0 - 0.

b. Discussion regarding the upcoming Arbor Day event

Larson provided a review of last year's Arbor Day event. Larson explained that this year's Arbor Day event is scheduled for April 28 at Lewis Park. Committee members discussed various ways to boost attendance at this event.

5. SCHEDULE NEXT MEETING DATE.

a. Wednesday, April 19, 2023 at 6:00 p.m.

6. ADJOURNMENT.

Motion by President Clow, seconded by Fischer, to adjourn at 6:35 p.m.

Pursuant to law, written notice of this meeting was given to the public and posted on the public bulletin board in accordance with Open Meetings Law.

Respectfully submitted,
Aimee Irwin
Assistant to the Public Works Director

**VILLAGE OF
McFarland
SUMMARY SHEET**

MEETING DATE: Wednesday, April 19, 2023

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Sayer Larson, Parks Superintendent

AGENDA ITEM: Discussion regarding public information meetings held for conservancy management plan

PREVIOUS ACTION:

ISSUE SUMMARY:

The Village held two informational public input meetings (PIM) in early March for the new conservancy management plan. Prior to the meetings, the draft conservancy management plan was made available to the public for review. Public notices were posted on the Village website along with social media. An informational letter was mailed to all adjacent property owners with information on meetings and how to access the draft plan.

The meetings were well attended. We had 12 in attendance for the first PIM, which included Indian Mound Conservancy, School Forest, Siggelkow Road Park, Taylor Road Conservancy, Thrun Marsh Conservancy, and Woodland Commons Conservancy. The second PIM had 25 in attendance, which included Babcock Conservancy, Grandview Conservancy, Marsh Woods Conservancy, Urso Park, and Yahara River Conservancy.

The meetings provided an educational component to start the presentation led by the Village consultant RES. Plant species, habitat types, historical aerial imagery, soil types, and topography were all discussed as these provided information as to what the properties were historically. Techniques, equipment and materials were then discussed about the process of restoration ecology and what it would look like. Each property was then gone over briefly with highlights of restoration activities recommended by the consultant.

The approach taken by the consultant was to take questions after providing an overview of each property. Below is a summary of comments made by attendees.

Siggelkow Road Park:

Resident would like to see the turf area of the park converted to prairie as there seems to be a lack of use of the provided green space.

Marsh Woods Conservancy:

Residents expressed to not have any further trees planted in the upland section of the conservancy,



Babcock Conservancy:

Resident asked how restoration activities would impact the local wildlife population.
Resident asked about timelines of disturbance and vegetation establishment.
Resident stated many trees had been lost and asked about replacements.
Resident asked about creating habitat and what would be done with fallen trees in waterways.

Grandview Conservancy:

Resident asked what would be done about the pond north of Creamery Rd. as it seems to be expanding.
Resident asked about chemical usage in restoration activities.
Resident stated there was a sedge meadow historically on the southwest portion.
Resident stated ditch running through conservancy was dugout years ago.
Residents stated the water table is getting higher and expressed concerns about homes on Pheasant Run and flooding.
Resident asked if the old farmstead foundation would be removed.
Resident expressed concerns about tree griddling.
Residents expressed concerns about tree removal behind homes happening all at once.
Resident stated that the water issue should be resolved prior to doing any listed restoration activities.

Adjustments to the conservancy management plan will be made from the received comments.

FINANCIAL/BUDGET IMPACT:

None.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

No action on this item. Discussion only.

ATTACHMENTS:

None

McFarland
SUMMARY SHEET

MEETING DATE: Wednesday, April 19, 2023

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Sayer Larson, Parks Superintendent

AGENDA ITEM: Update regarding the upcoming Arbor Day event.

PREVIOUS ACTION:

None.

ISSUE SUMMARY:

The Village of McFarland will again be hosting an Arbor Day event at Lewis Park in 2023. The event will take place on Friday April 28th from 5:30 - 7:30pm. Currently, the event will have up to two presentations to include: An Update of the Village Tree Inventory by the Village Forester and a Tree Care/Health Topic from a certified arborist. There will be craft tables, library books on trees, bucket truck demonstrations, and tree give away.

Staff is seeking assistance in planning and assisting during the event.

FINANCIAL/BUDGET IMPACT:

None.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

No action is required at this time.

ATTACHMENTS:

None

**VILLAGE OF
McFarland
SUMMARY SHEET**

MEETING DATE: Wednesday, April 19, 2023

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Kong Thao, Associate Planner

AGENDA ITEM: Discussion on No Mow May website and registration

PREVIOUS ACTION:

November 10, 2022 - Village Board approved \$500 budget for operating expenses for No Mow May/Low Mow May

November 14, 2022 - Discussion by the S&NR committee favored No Mow May Ordinance.

February 13, 2023 - S&NR Committee recommended to the Village Board adoption of Ordinance 2023-02, amending Sec. 20-25 noxious weeds and lawn height

February 28, 2023 - Village Board approved adoption of Ordinance 2023-02, amending Sec. 20-25 noxious weeds and lawn height

ISSUE SUMMARY:

Staff to provide a summary of the No Mow May website, where residents may register, and find additional educational materials.

- www.mcfarland.wi.us/NoMowMay

FINANCIAL/BUDGET IMPACT:

The Village Board approved an operating budget of \$500 for yard signs in November 2022. One sign per property per person will be available for pickup at the Community & Economic Development Office at no cost to participants who registered on the Village's No Mow May page. Signs are only available while supplies last on a first come first serve basis.

VILLAGE PLAN REFERENCE:

Sustainability Plan, 2021 - Identified in the Land Use & Development category for Near-Term Actions as stated, Amend Village ordinances to allow for a no-mow May.

ORDINANCE REFERENCE:

Sec. 20-25. - Regulations concerning noxious weeds and lawn height

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

This item is for discussion only.

ATTACHMENTS:

None

McFarland
SUMMARY SHEET

MEETING DATE: Wednesday, April 19, 2023

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Kong Thao, Associate Planner

AGENDA ITEM: Discussion on OEI Grant Application Update

PREVIOUS ACTION:

January 9, 2023 - S&NR recommended approval to the Village Board to submittal of two OEI Energy Innovation Grant Program Applications

January 24, 2023 - Village Board approved submittal of two OEI Energy Innovation Grant Program Applications

ISSUE SUMMARY:

The Public Service Commission of Wisconsin Office of Energy Innovation (OEI) accepted applications for their Energy Innovation Grant Program (EIGP) for 2022 on November 2, 2022 to January 30, 2023. The EIGP supports the mission of OEI by providing funding for local and statewide energy projects. Annually, the Commission determines the scope of the program, including eligible applicant types and activity categories. The three activities in grant funding are listed below. OEI received 135 grant applications for a total funding request of \$42 million. They funded a total of 28 projects within their total \$10 million budget.

- Activity 1: Renewable Energy and Energy Storage
- Activity 2: Energy Efficiency and Demand Response
- Activity 3: Comprehensive Energy Planning

The Community & Economic Development Department submitted an application for Activities 1 and 3. The grant application in Activity 3 was a partnership with the McFarland School District for a comprehensive energy plan. The second grant application for Activity 1 was for a Level 3 Microgrid Community Resilience Center with battery storage systems at the Public Safety Center. On March 15, 2023, the PSC announced the list of awarded applications. One of our two applications received funding. The Village was awarded \$350,000 in project funding for the Activity 1: Level 3 Microgrid Community Resilience Center with battery storage systems at the Public Safety Center.

See [9709-FG-2022 EIGP Awards Memorandum \(PSC REF#: 462043\)](#) for the full report.

Next steps. The grant committee will host an onboarding webinar meeting for awardees, expected to be at the end of April, which Village Staff will attend. Before then, additional documentation will be received and can be discussed at the meeting if needed.

**FINANCIAL/BUDGET IMPACT:**

Public Safety Center Battery Storage - Within the OEI EIGP's Activity 1: Renewable Energy and Energy Storage Systems, installation or upgrade of a battery storage system includes a maximum grant request limit of \$750,000. The Village energy consultant for the Public Safety Center, HGA, provided a cost estimate for a battery system size of 100 KW/200 KWh at \$360,000. With the microgrid system, an additional estimated \$240,000 was needed for a project total of \$605,000, including \$5,000 of in-kind Village personal and fringe costs associated with management of the project. To meet the project total, the application included a Village local contractual match of \$250,000 and \$350,000 in grant funding request. The Village intends to fund its local cost share utilizing a combination of unallocated construction contingency funds under the Village's current project borrowing, additional Focus on Energy Incentives received, and the 2023 Capital Budget.

VILLAGE PLAN REFERENCE:

Sustainability Plan, 2021 - The grant applications submitted are consistent with what is included in the Energy Actions, Near-Term Actions, page 15.

- *Conduct energy audits of all municipal facilities to identify potential energy efficiency improvements.*
- *Establish a policy requiring all major remodeling of municipal buildings and any new municipal buildings include energy efficiency measures.*

Both grant applications also support the following energy goal from page 14:

- *Municipal Percentage of Total Energy Consumed Generated from Renewables per Year: 50% by 2030 & 100% by 2040.*

ORDINANCE REFERENCE:**BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:**

This item is for discussion only to update the Committee members on the results of the grant applications. No action is required.

ATTACHMENTS:

None

VILLAGE OF
McFarland
SUMMARY SHEET

MEETING DATE: Wednesday, April 19, 2023

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and possible action to make a recommendation to the Village Board regarding approval of a proposal from HGA for Comprehensive Energy Planning and Predesign Net Zero Energy Services for the Community Center.

PREVIOUS ACTION:

ISSUE SUMMARY:

Within the packet is a proposal from HGA to complete Comprehensive Energy Planning and Predesign Net Zero Energy Services for the future Community Center.

Although the Village was unsuccessful in obtaining grant funding through the Wisconsin Office of Energy Innovation for the Comprehensive Energy Planning project, the Village did budget funding for this project as part of the 2023 capital budget. The Scope of Services provided by HGA mirrors what the Village and School District had submitted as part of our grant applications, with a couple of noted revisions based on additional consultation with HGA. Note, School District staff indicated that they were not able to pursue the project without the OEI grant funding; therefore, the scope of services is limited to only Village facilities. The purpose of this part of the scope of services is to obtain a better understanding of our current energy consumption (renewable and non-renewable) for Village-owned buildings, lighting, and vehicles; assess individual sites for potential solar photovoltaic installations; and develop strategies to improve energy efficiency and reduce dependence on non-renewable sources of energy, including estimated project costs, energy savings, payback periods, and identification of funding incentive programs. The final plan can then be utilized by staff, committees, and the Village Board when preparing annual strategic plans, capital improvement plans, and budgets. This work will help position the Village to leverage federal funding available through the Inflation Reduction Act and provide technical support to enhance future grant applications the Village may pursue to meet our renewable energy goals.

The second part of the project includes more detailed analysis to determine the feasibility of converting the Municipal Center into a net zero building as part of the redevelopment of the building into a new Community Center. This is similar to the services HGA provided for the new net zero Public Safety Center, which served to inform the Village Board's decision regarding the final design of the building. The timing of that project occurred after the Village had selected an architect for the project. In this case, Village staff's goal is to complete the NZE study prior to engaging with an architect on detailed construction designs so that the information



from the study can be provided to the architect at the beginning of the project.

The goal is to complete the entire project by the end of this Summer.

FINANCIAL/BUDGET IMPACT:

The 2023 Capital Improvement Budget includes \$25,000 in C&ED Department funds for Comprehensive Energy Planning. The balance of the project costs (\$23,500) will be allocated to funding budgeting in 2023 for Facility Management within the capital budget for the design of the Community Center.

VILLAGE PLAN REFERENCE:

2022-2023 Strategic Plan, Goal B Public Infrastructure, Action IV - Completion of a Village wide energy audit and planning to implement energy efficiencies within operations.

2021 Sustainability Plan, Near-Term Energy Action - Conduct energy audits of all municipal facilities to identify potential energy efficiency improvements.

2021 Sustainability Plan, Energy Goal - Municipal percentage of total energy consumed generated from renewables per year = 50% by 2030 and 100% by 2040.

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Motion, and second, to recommend to the Village Board approval of the proposal from HGA for Comprehensive Energy Planning and Predesign Net Zero Energy Services for the Community Center.

ATTACHMENTS:

1. McFarland_Energy_Plan_and_Net Zero_Community_Center_4-12-23

HGA

Alex Harris

608-554-5329

aharris@hga.com

7475 Hubbard Avenue Ste. 201

Middleton, WI 53562

HGA

4-12-23

Proposal for Comprehensive Energy
Planning and Predesign Net Zero
Energy Services for the Community
Center



INTRODUCTION

HGA is a national multi-disciplinary design firm rooted in architecture and engineering. Founded in 1953, we believe that enduring, impactful design results from deep insight into the people and passions that animate each unique environment. Our ten offices from coast to coast offer specialized practices in the energy, healthcare, corporate, government, arts, community, and education markets.

Our responsibility is both inspiring and humbling: to create a positive impact for our clients, their patients, and our communities. To us that means leading with empathy and curiosity in the design process, as well as integrating and advancing the most progressive and innovative sustainable practices. To that end, in July 2018, HGA acquired Sustainable Engineering Group (SEG), a leading engineering firm focused on energy optimization and sustainable design, to broaden our existing expertise in energy and infrastructure planning for leading national clients across all of our markets.

In support of McFarland's sustainability goals, HGA proposes to complete a comprehensive energy plan and a pre-design net zero energy feasibility study for the Community Center renovations.

The comprehensive planning effort will be provided as detailed in the language included in the 2022 PSC OEI grant application and reproduced in this proposal.

HGA also proposes to provide a pre-design net zero energy feasibility for the Community Center renovations. As part of this study HGA will evaluate the current mechanical and electrical systems and determine how the new facility can be designed to net zero energy standards utilizing electrified heating systems, such as air or ground source (geothermal) heat pumps, on-site solar production and integrated battery storage.

As part of this work HGA will summarize potential to incorporate state and federal incentives including but not limited to the Inflation Reduction Act, Bipartisan Infrastructure Bill, 179D tax deduction, Focus on Energy and OEI grants.

Comprehensive Energy Planning Services

HGA will provide services as detailed in the McFarland Comprehensive Energy Planning grant submission. These services will include only the scope associated with the Village of McFarland (VOM). McFarland School District will not be included.

Variations from the PSC grant language are indicated in red.

HGA Scope of Services:

- 1) Develop Baseline Energy Use Profiles, **CO₂ Emissions** & Benchmarks. Develop a baseline energy use profile (kWh, therms), **emissions (ton CO₂)** and benchmarks for VOM operations, including buildings and fleet. VOM buildings include the Municipal Center, Library, Public Works Building, sanitary lift stations (#1-5), well houses (#1, 4, & 5).
- 2) Building Assessments & Strategies. Complete energy assessments of VOM buildings and energy intensive equipment, and identify potential energy efficiency improvements. The measures identified may include equipment upgrades, electrification of heating loads, backup power modifications (battery storage vs. existing fossil fuel generators), scheduling changes, or control upgrades.
- 3) Solar Assessments & Strategies. Assess the potential for solar photovoltaic installations on VOM properties, **including reviewing the existing system on the Public Works building to identify if there is capacity to add to the system based on the analysis in Task 1.** The inclusion of battery storage and microgrid on select PV systems will also be considered. **Preliminary solar PV layout will be included for applicable sites.**
- 4) Exterior Lighting Assessments & Strategies. Complete assessments of VOM park shelter, recreation, and off-street parking lot lighting for potential LED conversions.
- 5) Fleet Assessments & Strategies. Identify the age, mileage, and energy use of all VOM owned fleet vehicles. Provide an estimated cost to replace existing vehicles with electric, hybrid, or low-carbon alternatives, estimated energy savings, greenhouse gas reductions, and payback period over conventional gas powered vehicles. Provide an analysis of the feasibility, cost and payback period for the installation of EV charging stations at Municipal Center, Library, Public Works Building and **public parking lot Downtown on the south side of the railroad.**
- 6) Implementation & Funding. Consolidate the assessments and strategies into concise implementation plans for VOM. For each recommended improvement, provide an estimated cost, estimated energy savings, greenhouse gas reductions, and estimated payback period. For each strategy identify eligible funding incentive programs including agency, fund name, application deadlines, available funding, and local matching requirements. Work with VOM stakeholders to prioritize proposed strategies to create a 10-year capital improvement plan for each entity.

- 7) Final Report & Adoption. Summarize the project tasks into final reports for presentation and adoption by VOM. The report will be accompanied by the baseline energy profile and **CO₂ emissions** tracking spreadsheet. The spreadsheet will allow VOM staff to update energy use annually to track progress towards their goals. The CEP will be developed to support existing VOM sustainability goals by providing a roadmap for VOM facilities to becoming more energy efficient and increasing on-site renewable energy generation. **HGA will also provide recommendations for implementation of carbon emissions accounting and reporting standards consistent with nationally accepted standards by ICLEI and the Greenhouse Gas Protocol.**

Net Zero Energy Pre-Design Services

The net zero energy (NZE) pre design services will include scope items 1, 2 and 3 as identified in the comprehensive plan. Additionally, the NZE pre design services will include the items identified in the table below.

HGA Scope of Services:

- 1) HVAC Feasibility Services
 - a. Review SEH condition assessment dated 8/8/2022
 - b. Perform site walk to review existing conditions
 - c. Benchmarking of existing facility energy use and early energy simulation for proposed space uses
 - d. Develop energy use targets based on proposed space use
 - e. Develop HVAC options consistent with NZE goals
 - f. Perform life cycle cost analysis comparisons for multiple options available to base energy systems
- 2) Solar Feasibility Services
 - a. Determine rooftop solar PV potential
 - b. Determine suitability of solar canopies or other ground mount arrays
 - c. Model annual solar production
 - d. Perform life cycle cost analysis for solar PV
 - e. Determine feasibility of net zero energy facility
 - f. Evaluate options for additional solar beyond the behind the meter potential such as utility partnership or innovative community solar system through utility or existing solar coop to optimize system economics
- 3) Geothermal Bore Field Feasibility Services
 - a. Determine concept level estimations of peak heating and cooling loads for the building based on available architectural and mechanical drawings, existing equipment and existing BAS trend studies
 - b. Perform concept level analysis of the existing HVAC system to determine compatibility with geothermal system
 - c. Early opinion on size of bore field
 - d. Identify bore field location and potential pipe routing options
- 4) Onsite Battery and Microgrid Feasibility
 - a. Determine feasibility of battery storage and microgrid installation
 - b. Provide first costs and potential energy savings associated with battery storage system
- 5) EV DC Fast Charging Feasibility
 - a. Identify options to partner with EV charge operators, such as third party or utility, to install DC fast chargers and/or level 2 chargers on site through NEVI or OEI funding.
- 6) Reporting and Presentations
 - a. Summary report

- b. Virtual meeting with village staff to review preliminary results
- c. In person meeting with village board / sustainability committee to review results

Summary of Meetings for All Scope:

Meeting #	Meeting Name	Location	Participants	Notes
1	Project Kickoff	Virtual	Village staff, committee leaders	Staff to determine attendees
2	Site Visits	In-person or virtual	Staff related to operation and maintenance of buildings	Likely be multiple visits focusing on 1 building or site per visit
3	CEP / NZE Draft Review	Virtual	Staff	
4	CEP / NZE Draft Report Review	In-person or virtual	S&NR Cmte, staff	Staff to determine attendees
5	CEP / NZE Draft Final Review	Virtual	Staff	
6	CEP / NZE Final Review	In-person or virtual	Staff	
7	Final Report Review- CEP and NZE	In-person or virtual	Village board and public	Staff to determine attendees

Professional Service Fees

This Agreement for Professional Services ("Agreement"), effective as of the date signed by the Client below, is between Hammel, Green and Abrahamson, Inc. ("HGA") and Village of McFarland (the "Client").

Compensation to HGA for energy consulting services will be on a Stipulated Sum basis in the following amounts.

- Comprehensive Energy Planning: \$ 29,000
- Net Zero Energy Pre-Design Services: \$ 19,500

This compensation for the Services includes Reimbursable Expenses.



HGA

7475 Hubbard Avenue, Suite 201
Middleton, WI 53562

608.554.5333
HGA.COM

MAKING A POSITIVE IMPACT

Every act of sustainable design, engineering, planning, and construction contributes to our common future. At HGA we embrace this as both a responsibility and an opportunity. As we build physical environments that positively impact our planet, we also build relationships with other leaders and change-makers in the form of clients, employees, and partners.

GREAT DESIGN IS SUSTAINABLE DESIGN

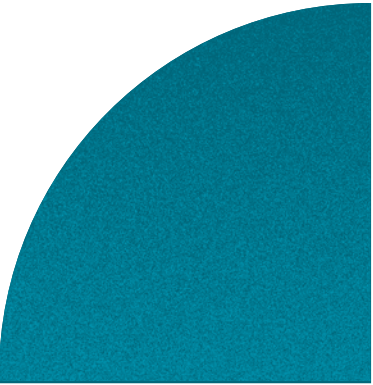
A beloved building—one so treasured it lasts for generations—is beautiful and sustainable. It supports the health and well-being of the community and inhabitants and reaches the highest levels of building performance. In 2021 we experienced a welcome growth in demand for sustainable design. This is not surprising, as the evidence of our impact on climate change has never been so clear: in 2020, the building sector generated nearly 50% of global carbon emissions from operations and construction materials.¹

In the past year we have made progress toward our sustainability commitments, completed projects with innovative and elegant solutions, and aligned our internal structure and processes to position our company and clients to create the greatest possible impact.

¹ "Why the Built Environment?" *Architecture 2030*.

SUSTAINABLE DESIGN SERVICES

- CARBON NEUTRAL PLANNING & DESIGN
- CLIMATE ACTION PLANNING
- CLIMATE ADAPTATION
- DECARBONIZATION
- MASS TIMBER
- MICROGRIDS
- NET ZERO ENERGY
- RENEWABLE ENERGY & POWER GENERATION
- RESILIENCE PLANNING & IMPLEMENTATION
- SUSTAINABILITY MASTER PLANNING
- THIRD PARTY CERTIFICATIONS (LEED, WELL, ETC.)



160
LEED PROJECTS
CERTIFIED
& REGISTERED



1ST
FULLY CERTIFIED
LIVING BUILDING
CHALLENGE
RENOVATION PROJECT
WORLDWIDE



13
WELL ACCREDITED
PROFESSIONALS
ON STAFF



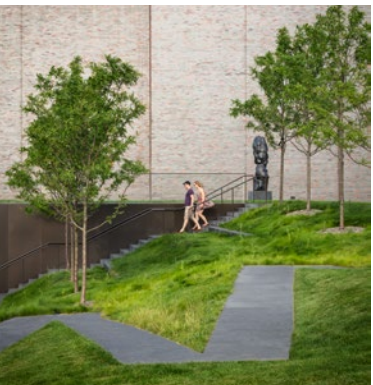
“
It is our responsibility to shape the future through design. We are inspired by the world we can build when our industry steps up to mitigate the devastating effects of climate change. We must reduce the carbon impact of our projects as quickly as possible—our clients, our children, and our communities depend on it.
TIM CARL, CEO



66
LEED GOLD
CERTIFIED
PROJECTS



197
LEED ACCREDITED
PROFESSIONALS
ON STAFF



801
PROJECTS
REPORTED TO
ARCHITECTURE
2030



6
NET ZERO ENERGY
PROJECTS
CERTIFIED
& REGISTERED



4
WELL PROJECTS
CERTIFIED
& REGISTERED





DEEP EXPERTISE IN BUILDING PERFORMANCE

HGA's Building Performance Group is a team of subject matter experts specializing in third-party certifications and energy. Their expertise includes:

- Certification administration, including: LEED, WELL, Living Building Challenge, Minnesota B3, and SITES
- Commissioning and retro-commissioning
- Decarbonization strategies and net zero energy
- Environmental analysis and energy modeling
- Integrated renewable and high-performance systems such as geothermal and solar PV
- Microgrid design
- Utility energy programs

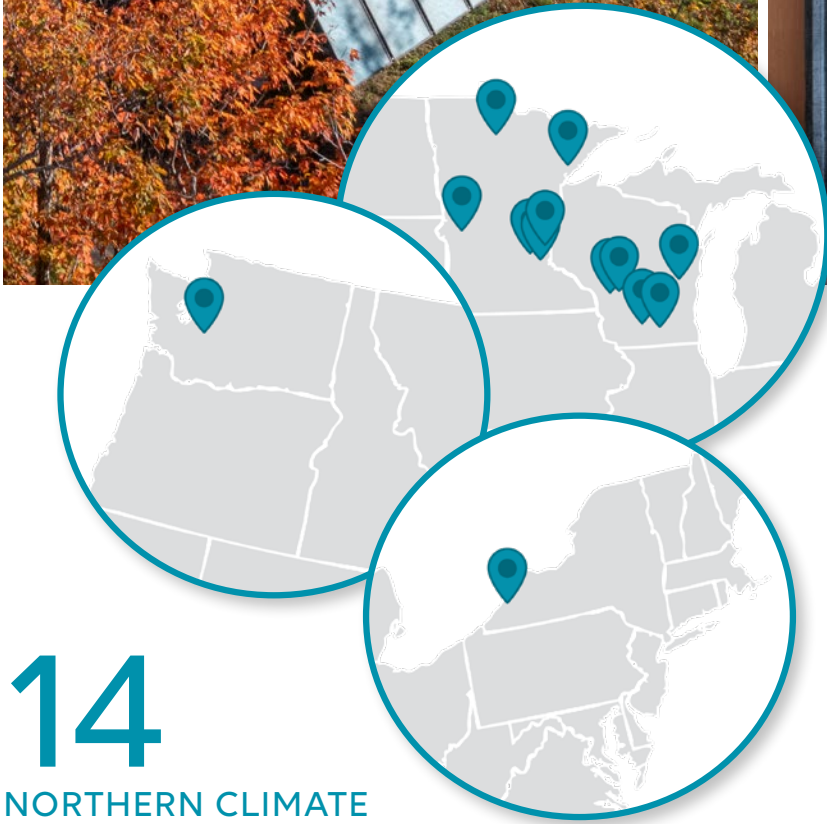
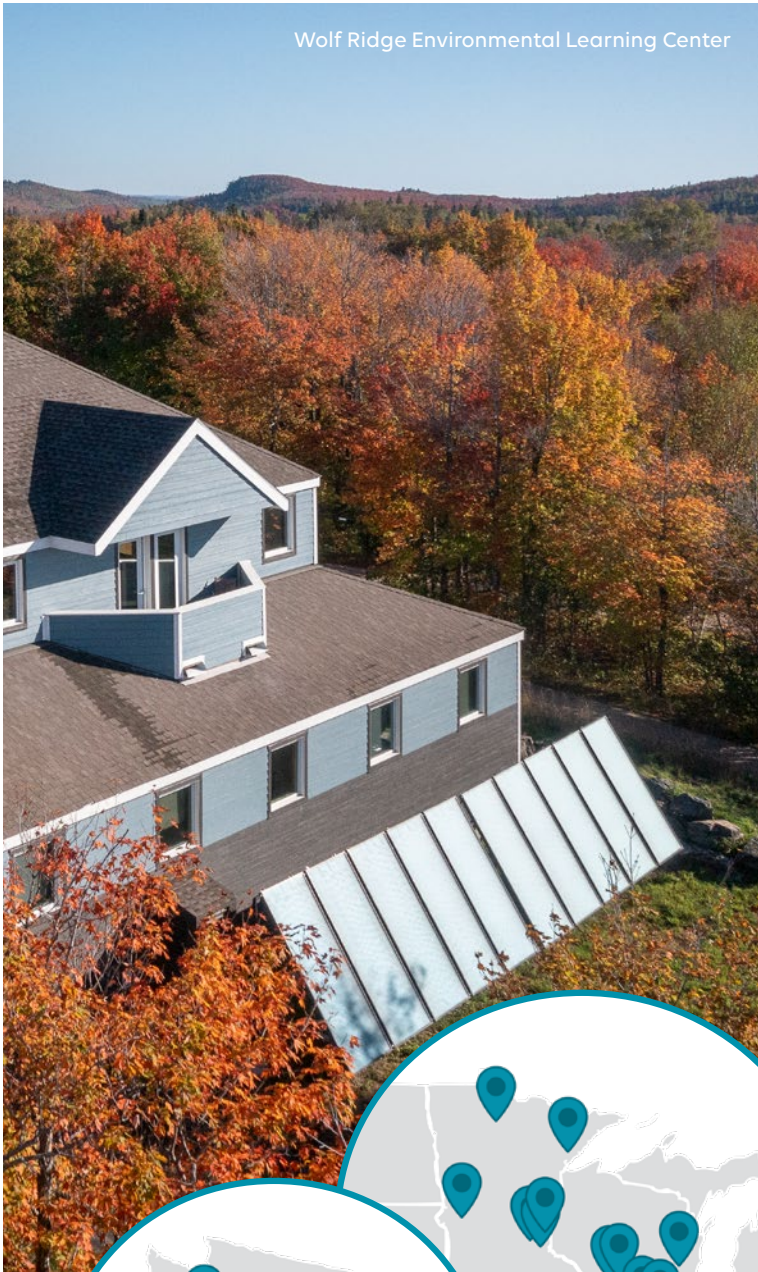


OPTIMIZING A MULTI-PLANT SYSTEM WITH MINIMAL MODIFICATIONS The University of Wisconsin-Madison campus includes 24 million GSF of buildings on 936 acres. Its central utility plants are the campus' lifeblood providing heating, cooling, power and other systems required for smooth operations. HGA developed a customized predictive software package that the plant uses as a tool to set its daily and weekly dispatch strategies for the manually dispatched plants—paving the way for up to \$1.3 million in annual operating savings.

CULTIVATING SUSTAINABILITY EXPERTISE

HGA is a learning organization that values curiosity and the continued growth of knowledge. Every team has the knowledge, tools, or connections to set and execute sustainability goals on all types of projects. Staying up to date is critical; we are continually adding to our robust program of education, knowledge sharing, and fieldwork training available to all employees. Recent efforts include:

- Developed strategy for filling knowledge gaps through education, mentorship, knowledge sharing, and hiring.
- Introduced employee self-assessment of sustainability knowledge to identify areas for training.
- Launched internal education on AIA Framework for Design Excellence, AIA 2030 Commitment, embodied carbon, and mass timber.
- Created employee onboarding video, "Introduction to Sustainability at HGA" to communicate our "why," to emphasize holistic project goals, and to introduce resources.
- Engaged in design competitions to elevate our practice, including the international ASHRAE LowDown Showdown, which HGA won in 2020, and the California-based Architecture at Zero Competition.



14 NORTHERN CLIMATE NET ZERO ENERGY PROJECTS

PLANNED & CERTIFIED PROJECTS IN NEW YORK, MINNESOTA, WASHINGTON & WISCONSIN

ACHIEVING NET ZERO ENERGY IN COLD CLIMATES

While great strides have been made in delivering net zero energy buildings throughout the country, this goal is still presumed to be a challenge in colder climates due to increased heating loads. In partnership with our clients, HGA has designed net zero energy and fossil fuel free projects by using proven energy reduction strategies, high performance systems, and renewable energy sources. The first HGA-designed fossil fuel free project opened in 1986 and interest in net zero energy has grown exponentially in decades since. With verified performance data, these three net zero energy projects demonstrate attainable high performance in northern climates:

-  **WOLF RIDGE ENVIRONMENTAL LEARNING CENTER (FINLAND, MINNESOTA)** The major renovation of the Margaret A. Cargill (MAC) Lodge dormitory in Minnesota's north woods is the first renovation project and the first in Minnesota to receive full Living Building Challenge (LBC) certification, including net zero energy.
-  **WESTWOOD HILLS NATURE CENTER (ST. LOUIS PARK, MINNESOTA)** Designed as a conservation teaching tool in a 160-acre park, this Zero Energy Certified urban nature center incorporates passive and active strategies for energy efficiency including a high-performance envelope, advanced lighting, and effective use of proven heat pump technologies.
-  **FOREST EDGE ELEMENTARY (FITCHBURG, WISCONSIN)** The first net zero energy school in Wisconsin, this 126,580 SF facility includes geothermal wells, a 1,700-panel solar PV array, 125kW battery, and electrochromic glass. A real-time energy dashboard helps students learn about energy efficiency.