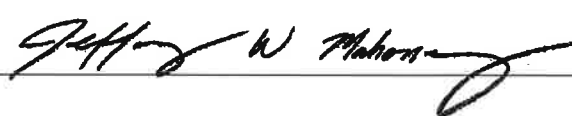




Public Service Commission of Wisconsin  
Office of Energy Innovation  
Energy Innovation Grant Program



## ATTACHMENT A - COVER SHEET

<b>SECTION I - Provide information summarizing the project proposal.</b>			
<b>Project Title:</b>		McFarland School District Comprehensive Energy Plan	
<b>PSC Grant Request (\$):</b>		<b>Applicant Cost Share (\$):</b>	<b>Project Total (\$):</b>
\$50,000		\$5,000	\$55,000
<b>Choose one Eligible Activity</b>			
<input type="checkbox"/> Renewable Energy & Energy Storage	<input type="checkbox"/> Energy Efficiency & Demand Response	<input checked="" type="checkbox"/> Comprehensive Energy Planning	
<b>Acknowledgement of ARRA Applicability. Check all that apply.</b> (See Section 1.3 of Application Instructions)			
<input checked="" type="checkbox"/> Buy American: Alteration, maintenance or repair of a public building or public work.			
<input checked="" type="checkbox"/> Davis Bacon and Related Acts: Use of laborers or mechanics employed by contractors and subcontractors.			
<input type="checkbox"/> Historic Preservation: Project involves historical (over 50 years old), archeological or cultural resources.			
National Environmental Policy Act (NEPA): Review the list of covered activities in Attachment C (also discussed in Section 1.3.4) of the Application Instructions.			
<input type="checkbox"/> Environmental Questionnaire <b>is attached</b> . Project activity <b>is not</b> covered.			
<input checked="" type="checkbox"/> No Environmental Questionnaire needed. Project activity <b>is</b> covered.			
<b>SECTION II - Provide information for your organization, signatory, and primary contact for the project.</b>			
<b>Applicant Type:</b>	<input type="checkbox"/> City	<input type="checkbox"/> Village	<input type="checkbox"/> Town
<input type="checkbox"/> County	<input type="checkbox"/> Tribal Nation	<input type="checkbox"/> Manufacturer	<input checked="" type="checkbox"/> K-12 School District
<input type="checkbox"/> University of Wisconsin System	<input type="checkbox"/> Wisconsin Technical College System	<input type="checkbox"/> 501(c)(3) nonprofit	
<input type="checkbox"/> Municipal Utility (water, wastewater, electric, natural gas)		<input type="checkbox"/> Hospital (public or nonprofit)	
<b>Name (on W-9):</b>		McFarland School District	
<b>Address (on W-9):</b>		5101 Farwell Street, McFarland, WI 53558	
<b>County or Counties Served by Project:</b>		Dane	
<b>DUNS Number or CAGE Code:</b>		100585215	
<b>NAICS Code:</b>		611110	
<b>FEIN</b>		39-0992998	
<b>Authorized Representative/Signatory</b> (Person authorized to submit applications and sign contracts)		<b>Primary Contact</b> (if different from Authorized Representative)	
<b>Name:</b>	Jeffery Mahoney	<b>Name:</b>	
<b>Title:</b>	Director of Business	<b>Title:</b>	
<b>Phone:</b>	608-838-4520	<b>Phone:</b>	
<b>E-mail:</b>	MahoneJ@mcsfd.org	<b>E-mail:</b>	
<b>Signature of the Authorized Representative</b>			

# McFarland School District Comprehensive Energy Plan

## Summary of Project Budget

Line	Description	PSC Grant Request	Applicant Cost Share	Total Project Cost
1	Personnel			\$0
2	Fringe			\$0
3	Equipment			\$0
4	Supplies			\$0
5	Travel			\$0
6	Contractual	\$50,000	\$5,000	\$55,000
7	Other			\$0
8	Indirect			\$0
<b>Totals</b>		\$50,000	\$5,000	\$55,000
<b>% of Total</b>		<b>91%</b>	<b>9%</b>	

**Applicant Comments:** The contractual amount is the dollar amount that will be used for our engineering consultant, HGA, to perform the technical aspect of the Comprehensive Energy Study.



## MCFARLAND SCHOOL DISTRICT COMPREHENSIVE ENERGY PLAN

Submitted through the PSC Wisconsin and the Office of  
Energy Innovation's "ENERGY INNOVATION Grant Program  
2021"

DOCKET ID: 9709-FG-2021

January 2022

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## 3.3 APPLICATION EXECUTIVE SUMMARY

The School District of McFarland impacts the lives of approximately 2,400 students daily. McFarland High School, Indian Mound Middle School, Waubesa Intermediate School, and Conrad Elvehjem Primary School are currently the four schools that embody the District. In addition, the District collaborates with (3) community childcare facilities to provide 4K education. The Wisconsin Department of Public Instruction recently recognized all McFarland's schools as "Exceeding Expectations" or "Significantly Exceeding Expectations."

### 3.3.1 PROJECT DESCRIPTION

The McFarland School District has boundaries that encompass the entire Village of McFarland, parts of the City of Madison, and the Towns of Blooming Grove, Cottage Grove, Dunn, and Pleasant Springs. Our suburban area is growing, and as a result, we are building, renovating, and expanding the schools within our District. As we accommodate more students, we are working to provide sustainable solutions to our community. The District has upgraded most of the lighting to LED and upgraded boilers to provide more energy-efficient solutions in the last few years.

The McFarland School District is a long-standing advocate of attaining energy efficiency goals to reduce operating costs and emissions impact. Several student and community stakeholders have expressed interest in furthering these efforts by drafting a sustainability resolution. The study goals outlined in this application are to:

- Obtain an improved understanding of our current and future energy carbon footprint of the District-owned buildings
- Review necessary technologies required to reduce our energy-related carbon emissions
- Provide feedback to the stakeholders at the District in shaping the goals and timeline of the sustainability resolution

The proposed comprehensive energy plan will evaluate each school for energy efficiency, solar PV, battery storage, electrification of heating loads, and community resilience microgrids. In addition, a roadmap to achieve carbon emissions goals would be created to support our resilient and sustainable school district.

As the District continues to renovate and build new facilities, this energy plan will provide a foundation for creating a resilient energy community and reducing carbon emissions. In addition, this grant would provide the School District of McFarland with the opportunity to improve our community and apply the lessons learned to future schools and similar communities.

### 3.3.2 KEY PARTNERS AND STAKEHOLDERS

The comprehensive energy plan for McFarland School District will be achieved with the support of key stakeholders and partners. A summary of project partners and stakeholders is identified in Table 1 below.

The McFarland School District team will be led by Jeffery Mahoney, Director of Business, and William Foust, Building and Grounds Director.

Jeffery Mahoney provides leadership and assumes management responsibility for the direction, coordination, integration, and implementation of business across all school district buildings and departments of HR, Finance, Transportation, B&G, Food Service, Technology, and Community Programming. He has served two other school districts in similar capacities since 1998.

Bill provides direct leadership in the Building and Grounds Department management with over 630,000 square feet of structures and 97 acres of grounds. Bill leads a dedicated team of staff daily. Their work provides a safe, secure, and comfortable environment for over 2,400 students and 300 staff members. In addition, Bill has served the District for over 30 years and is a leader in reducing energy waste.

Our 2,400 students, their families, and our faculty and staff members hope for renewable energy sources for our District. In addition, the project would provide educational opportunities to our students and create a more energy-resilient district.

Students in the Eco Club at McFarland High School have documented their desire for a more sustainable future in a sustainability resolution. This resolution is planned to be presented to the School Board for approval. In addition, the students state, "all future MSD building projects will be planned with sustainability in mind, including water and resource conservation, renewable materials, and power by renewable energy."

Also, the Village of McFarland is vested in the energy decisions of the school district. In October 2020, the Village had a committee begin developing the McFarland Sustainability Plan. The Village plans to create a more efficient, sustainable, and resilient community, including reducing the local energy use derived from fossil fuels and working towards a 100% clean energy future.

The School District of McFarland is a Red Cross location. We are responsible for providing a safe place for our community and region during disastrous events. We need our facilities to be resilient. Red Cross supports our initiative to create a resilient energy community.

HGA Architects and Engineers will be the lead consultant on the project. HGA has partnered with McFarland School District on previous projects. Our teamwork would create a unified approach to the feasibility study. HGA has performed numerous solar feasibility studies and is well-suited to help the McFarland School District succeed in its energy goals. The qualifications of HGA are included in the Reference Materials.

The School District of McFarland continually collaborates with our utility partners, Alliant Energy, and MG&E. Alliant Energy has provided a letter of interest for our comprehensive energy plan.

During the implementation of the comprehensive energy plan phase, the District will partner with Focus on Energy. Focus on Energy has an established relationship from working with them on our previous energy efficiency projects. A letter of support has been provided from Focus on Energy and is included in the reference materials.

Electrical Solutions, Inc. is a McFarland-based electrical group with extensive knowledge of the McFarland Schools. This team member will assist with the cost and feasibility of the opportunities identified in the comprehensive energy study.

**Table 1: Project Team and Partners**

<b>Company</b>	<b>Role</b>	<b>Team Member</b>
McFarland School District	Director of Business	Jeffery Mahoney
McFarland School District	Building and Grounds Director	William Foust
HGA Architects and Engineers	Energy Planning Lead	Alex Harris
Electrical Solutions, Inc.	Service Partner	Craig Ball
Alliant Energy	Utility Liaison	Jason Price

### 3.3.3 PROJECT OBJECTIVES AND METRICS

The comprehensive energy plan for McFarland School District will outline the steps required to successfully reduce the carbon footprint for the District and the community. To achieve desired outcome, the following objectives and metrics will be in place to evaluate the project's performance.

- Objective 1: Planning & Energy Benchmarking (May – June 2022)
  - Set goals for desired energy consumption
  - Review available drawings and submittals
  - Analyze current and past utility consumption
  - Evaluate the condition of energy-intensive equipment.
- Objective 2: Projections (July – September 2022)
  - Develop future trends of energy consumption and needs (electrification, electric vehicles, population growth)
  - Review school district growth estimates and estimates how this will affect the energy usage and carbon footprint of the District
- Objective 3: Develop District Carbon Reduction Goals (October – November 2022)
  - Work with district stakeholders to define carbon reduction goals
  - Create a district roadmap to achieve carbon reduction goals

- Develop a capital investment schedule that applies life cycle cost analysis for Energy, utility, and greenhouse gas savings
- Objective 4: Plan Recommendations (December 2022 – Spring 2023)
  - Develop performance opportunities for each building
    - Energy efficiency
    - Solar PV
    - Backup Power - battery storage vs. existing fossil fuel generators
    - Electrification of heating loads
    - Electric vehicle chargers
    - Community resilience hub/microgrid- red cross location impact
  - Implement timeline of steps necessary to reach energy goals using available technologies
  - Create a budget with available incentive programs and capital replacement planning
- Objective 5: Plan implementation (Spring 2023 - Future)
  - Discuss opportunities, actions, and payback with all team members to develop an implementation plan
  - The comprehensive energy plan will be sent for approval with the board of directors at McFarland School District

### 3.3.4 REFERENCE MATERIAL LIST

The list below identifies the reference material included with this grant application to assist the readers in understanding the scope of the project.

- Letter of Support –Alliant Energy
- Focus on Energy Program Letter of Support
- HGA Qualifications
- HGA Proposal for Comprehensive Energy Study
- Draft Sustainability Resolution
- Village of McFarland Sustainability Plan
- Red Cross Facility Information

A reference list is also located in Section 3.5 per the grant application instruction. That list is a duplicate of this one.



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## 3.4 NARRATIVE AND MERIT REVIEW CRITERIA

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### 3.4.1 ELIGIBILITY AND ABILITY TO ACHIEVE THE OBJECTIVES

McFarland School District is a public School District achieving high academic standards for over 2,400 students. McFarland School District staff are committed to providing financial information, utility data, defining desired goals and objectives, and educational and community needs.

Jeffery Mahoney has been with the District for 18 years. His expertise in Financial Management, Long Term Planning, and visionary leadership of multiple departments will allow the project to be successful. Jeffery will be responsible for implementing the grant and monitoring the progress along the way. He will also lead the School Board in these objectives and guide the community in possible referendums to achieve Energy Sustainability.

William Foust is knowledgeable in all the systems and components for each school in the McFarland School district. He has been working with these systems for over 30 years. William's extensive understanding of the District will assist HGA in determining the best compatible solutions to reduce the carbon footprint of each school.

HGA Architect and Engineers will develop and create a comprehensive energy plan with McFarland staff. The consulting team's lead will be Alex Harris. Alex is a certified energy manager specializing in facilities' energy performance and analyzing solutions to reduce consumption cost-effectively. In addition, HGA brings extensive technical knowledge in energy efficiency, solar PV systems, energy storage, electrification of heating loads, and microgrid systems.

Our relationships within the community will allow us to engage utility representatives, contractors, manufacturers, and community partners as needed. For example, the District has a long-standing relationship with Energy Performance Lighting and Electrical Solutions, Inc. These connections will enhance the cost analysis and plan recommendations within the comprehensive energy plan.

Students in the Eco Club at McFarland High School have documented their desire for a more sustainable future in a sustainability resolution. This resolution is planned to be presented to the School Board for approval. In addition, the students state, "all future MSD building projects will be planned with sustainability in mind, including water and resource conservation, renewable materials, and power by renewable energy."

The project's study phase will be American Recovery and Reinvestment Act (ARRA) compliant where possible. McFarland School District intends to partner with local representatives. The ARRA requirements will be carried forward as the project proceeds into the implementation phase. All possible materials will be sourced in the US and installed under prevailing wages.

### 3.4.2 BUDGET JUSTIFICATION AND COST-SHARE

The total project budget is \$55,000. McFarland School District is requesting OEI grant funds of \$50,000. McFarland School District will match about 10% of the estimated project expenditure.

The School District of McFarland has worked with HGA to determine a reasonable estimate for the comprehensive energy study. HGA based the project budget on prior experience on similar projects. HGA plans to conduct reoccurring meetings with the District to determine realistic sustainability goals, perform energy audits for each school, analyze the data and results, share, and document performance opportunities, and develop a schedule for capital investments with the grant money. A proposal for their work has been provided in the reference materials.

### 3.4.3 SAVINGS AND PAYBACK

McFarland School District buildings consume approximately 6,187,700 kWh and 295,037 therms from utility sources per year. We plan to use the grant funding to evaluate new technologies and opportunities available to reduce our energy consumption and decrease our scope one facility's carbon footprint (direct sources). The savings and payback will be achieved when our comprehensive energy plan is implemented. Energy efficiency measures typically have a payback period of around 1 to 10 years. Renewable energy sources usually have a 10-to-20-year payback, depending on grant and tax incentives.

The utility data for McFarland School District has been analyzed to develop preliminary energy use intensity per school. Table 2 below displays the site and source EUI for each school. This project will create a more in-depth review of each school, the savings, and opportunities to reduce our energy consumption.

**Table 2: McFarland School District Energy Use Intensity Per School**

School	Site EUI	Source EUI
Conrad Elvehjem Primary School	56	94
Waubesa Intermediate School	58	120
Indian Mound Middle School	38	78
McFarland High School	106	183

The comprehensive energy study will evaluate each measure and rate the paybacks. The District will implement the standards that best suit our sustainability goals and use the plan to advocate for additional funding sources. Projects with the fastest payback will most likely be prioritized and have the most significant direct impact on scope one carbon footprint. The

utility budget money saved on the first measures may then be reinvested into additional opportunities and achieve more substantial energy savings.

### 3.4.4 ENERGY SAVINGS AND ENVIRONMENTAL IMPACT

One of our main goals from the comprehensive energy study is to understand better our current and future energy scope 1 carbon footprint of the District-owned buildings. The District currently has a total carbon footprint of approximately 13,917 metric tons per year from all the school's utility meters combined. The study would provide goals and a plan for reducing our environmental impact.

The study will give feedback to those groups setting the savings/environmental impact goals for the District. Will include the magnitude of impact from proposed projects and the budget needed to achieve this. These goals could consist of a renewable energy offset or carbon neutrality target.

### 3.4.5 EQUITY AND ENERGY JUSTICE

Our District is focused on enabling students and all community members with the resources necessary to meet their social and economic needs and deconstruct barriers. In 2020, McFarland School District was awarded the community impact grant to change the conditions, perpetuate racial disparities, and create a learning environment that ensures equity.

The grant would support the diversity and equity resolution for the School District of McFarland. The study will identify opportunities to reduce our energy costs. As these opportunities are implemented throughout the District, the extra funding available can now be used to improve academic resources. Technology resources can be expanded, additional social services can be provided for low-income students, extra multicultural texts could be purchased, professional development and curriculum could be enhanced to serve our students of color and low-income.

### 3.4.6 FINANCIAL LEVERAGE AND ECONOMIC IMPACT

OEI grant funding is necessary for this project to be successful. Our annual budget limitations have made achieving our District's sustainability goals difficult. Budget priorities are often given to academic resources, equity involvement, student social services. The ongoing freeze on new revenues from the State of Wisconsin for the 21-22 and 22-23 Fiscal Years make it challenging for the District to divert resources from these areas. While our annual maintenance budget has resources that constantly update equipment, lighting, and other energy reduction opportunities, this grant will help identify a road map for current

administration and school board members to educate future stakeholders in the plans to reduce our footprint by engaging in meaningful and well thought out energy initiatives.

### 3.4.7 EXISTING ENERGY PLANNING EFFORTS

The McFarland School District allocates a maintenance budget each year that has resources for minor improvements. The District has updated equipment to more energy-efficient solutions in the past five years. The projects have included switching lighting to LED, upgrading to HE boilers, installing a new pool, add humidification, and currently, we are working on a chiller replacement project. The first-year kWh and therms saved from implementing these projects at the District are 1,192,217 and 25,330, respectively.

The comprehensive energy study will develop a measurable and achievable sustainability goal for the District which will be the basis of all our planning efforts in the future. In addition, we will create a roadmap that outlines the best Energy efficiency measures and renewable energy solutions to implement for the coming years. As a result, our annual budget will be able to be optimized for Energy-efficient outcomes more strategically. The grant will allow us to increase our Energy saved, decrease our carbon footprint, and lead the Village of McFarland in its sustainability initiative.

### 3.4.8 ENERGY RESILIENCY

Our school district plays a vital role for the community during emergencies by identifying as a Red Cross location. McFarland High School will house up to 1,200 individuals during a disaster. Currently, the high school has two emergency generators for critical loads during grid power loss.

The comprehensive energy plans will identify opportunities to enhance our energy resiliency during a grid outage. The study will consider our solar PV options and battery storage solutions to reduce downtime after an event. Battery storage paired with our existing generators would enhance energy production capacity and therefore increase the community resiliency if access to fuel is restricted during a disaster. Our District needs to have resources available for all community members to create a more equitable environment.

### 3.4.9 EDUCATION AND AWARENESS

The McFarland School District curriculum provides comprehensive STEAM and Science Exploration as early as Kindergarten. The students are involved in discussions related to energy use and conservation practices. For example, 6<sup>th</sup>-grade students explore global warming, climate, and heat energy in their Save the Penguins unit. High School students currently engage in weather impacts from our everyday activities, climate change, and energy sources. The grant would be incorporated into the STEAM and Science Exploration curriculum

for students to investigate the differences made at their school through our action plan. Our District wants to lead our students into the future of sustainability.

Eco Club is a student-led club that focuses on educating students and staff about environmental issues, mainly promoting ecological responsibility in our school and community. They have worked on many sustainable projects, such as increasing awareness about what items can be recycled and how to minimize the contamination of our recycling bins. They have picked up pumpkins from community members and delivered them to the yard waste facility, where they were composted instead of thrown in a landfill. They would like to do more with energy conservation and renewable Energy to reduce GHG emissions. The Eco-Club could provide community outreach opportunities to teach our Village about items we are doing to reduce our carbon footprint and simple improvements that we could make at home.

This project would serve as an example for our Village. As the Village of McFarland takes the initiative to increase awareness and make our community no longer dependent on fossil fuels. The District would lead the community through example. We would promote the new technologies available, and the best practices learned from the process. The District would also share our story with the Red Cross community to expand the resiliency of all locations across the United States.

### 3.4.10 INNOVATION

The District is hopeful our actions will motivate other businesses and homeowners to reconsider their energy use and carbon footprint. This investment will demonstrate the importance of exploring the feasibility of solar, battery storage, and other available technologies. Our students will be able to investigate the green energy impacts we are making and carry this forward into their future decisions.

The District, our students, families, and staff members have shown their interest in continuing to make our community more sustainable. Our students have been innovative in designing and implementing a sustainability resolution in partnership with the facilities and business teams at the District. This comprehensive energy plan will demonstrate the student/faculty partnership, and by working together, we can overcome limitations and create a cleaner future.

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## 3.5 REFERENCE MATERIALS

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Per application, additional reference materials not part of the 15-page limit are included below:

- Letter of Support –Alliant Energy
- Focus on Energy Program Letter of Support
- HGA Qualifications
- HGA Proposal for Comprehensive Energy Study
- Draft Sustainability Resolution
- Village of McFarland Sustainability Plan
- Red Cross Facility Information





Alliant Energy  
4902 North Biltmore Lane  
P.O. Box 77007  
Madison, WI 53707-1007

1-800-ALLIANT (800-255-4268)  
alliantenergy.com

1/13/2022

Dear Jeff Mahoney,

I am writing you in support of the McFarland School District's application for the **Energy Innovation Grant Program**. This grant will help fund a research study to determine renewable energy solutions that can help the district reduce their overall carbon footprint.

McFarland School District is Alliant Energy's largest consumer of energy in the village of McFarland. As a utility provider, we have a long history of working with the district to identify solutions that help reduce their energy use. This study would also show the McFarland SD as a leader in the greater community (both public and private businesses) by showcasing cost effective means of reducing the environmental impact of their facilities and highlighting consumer/utility partnerships.

The proposed research study, with its focus on identifying alternative energy sources, is directly complimentary to our Clean Energy Blueprint, our roadmap for accelerating our transition to cleaner, renewable energy in Wisconsin. Whether the study identifies on- or off-site solutions, Alliant Energy is committed to support the path forward.

Below are programs that can help increase the use of renewable resources and reduce the need for coal power:

- **On-site solutions:** A wind turbine, solar photovoltaic system, micro turbine or fuel cell are examples of how the McFarland School District could connect to the Alliant Energy distribution system.
- **Off-site solutions:** When considering investing in renewable energy, we offer several options that will support the district's sustainability initiatives:
  - **Alliant Energy® Community Solar** – Buy upfront into a renewable resource and receive credit for the solar generation located nearby. This program is a simple way to reach sustainability goals with the retirement of the renewable energy credits on behalf of the program.
  - **Alliant Energy® Customer-Hosted Renewables** – With this program, school buildings or property could be an additional source of income. We will pay you monthly to place renewables on your property. Your enrollment will promote local renewable energy in your community.
  - **Alliant Energy® Renewable Energy Partner** – A portion of the district's energy usage will be credited monthly at market price from a dedicated renewable source, no matter how many buildings you own or operate in our service area. For customers with multiple locations, this is a solution way to meet sustainability goals.

Alliant Energy strongly supports the McFarland School District's **Energy Innovation Grant**. We appreciate the leadership and innovation of your organization in creating this opportunity.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Alalam".

Director Customer, Community & Economic Development, Alliant Energy



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January 13, 2022

Public Service Commission of Wisconsin  
Office of Energy Innovation  
Energy Innovation Grant Program

Re: Letter of Support for the McFarland School District

Focus on Energy is pleased to provide this letter of support for McFarland School District's Energy Innovation Grant application to complete a Comprehensive Energy plan.

McFarland School District has been a close Focus on Energy partner for eight years, doing numerous energy conservation projects – lighting, HVAC, etc. We look forward to supporting their continued energy conservation efforts. In this case, a plan to create a Comprehensive Energy plan with the goals of:

- Obtain an improved understanding of the current and future energy carbon footprint of the district owned buildings
- Review necessary technologies required to reduce energy related carbon emissions
- Shaping the goals and timeline of sustainability resolutions

Focus on energy will support the planning process by participating in and offering feedback upon request for key plan elements. We will also assist in quantifying energy efficiency opportunities as related to Focus on Energy services and incentives.

Sincerely,

*Chris Seitz*

Energy Advisor  
Schools and Government Offering  
Focus on Energy



HGA

ENGINEERING EXPERIENCE  
FOR K-12 SCHOOLS





## ABOUT HGA

HGA is a national interdisciplinary design firm committed to making a positive, lasting impact for our clients and communities through research-based, holistic solutions. We believe that great design requires a sense of curiosity—forming deep insight into our clients, their contexts, and the human condition. As a collective of design professionals working together across diverse backgrounds and disciplines, we seek to understand and optimize all aspects of each unique environment: human experience, cultural significance, technical rigor, systems performance, and resiliency.

With over 800 engineers, architects, interior designers, planners, researchers, and strategists, HGA has built a network of expertise and a culture of knowledge-sharing to address the increasing complexities faced by our clients. With a history of working as an interdisciplinary practice, we have developed a truly integrated approach that yields inventive, efficient, and humane responses to the profound challenges of our time. Founded in Minneapolis in 1953, HGA now has 11 locations coast to coast. Our practice spans multiple markets, including corporate, local and federal government, education, cultural, healthcare, and science and technology.



Our goal is to improve building performance and occupant comfort while reducing resource consumption and environmental degradation.

HGA Madison is a group of specialized engineers who lead building owners to long-term sustainability and energy efficiency. Sustainability is fully integrated into our culture; from our office's net zero energy status to supporting our team members' environmentally conscious lifestyles, we create a working environment that fosters the sustainable mindset and inspires transformational change.

# BEST IN CLASS ENGINEERING

Clients realize that facilities play an important role in supporting their mission and the people and processes that go on within their facility. To address the highly competitive business, HGA Engineers have a firmwide commitment to elevate both our work and the industry itself.

We strive to be national leaders, not just for ourselves, but so that we can provide the best design solutions. We are proactively leveraging the fact that great things and advancements are happening across the nation and internationally, and not just in the traditional disciplines. Our clients have complex challenges and we must bring the most current knowledge, regardless of where it comes from, to their projects.

In the past 5 years, our Engineering team and our clients' facilities have won several awards; our clients have been able to utilize their staff in new ways, and they have chosen to look differently into how and where they spend their project budgets to their advantage today and tomorrow. Along with our

architectural partners, we focus on finding ways to support business outcomes, operational efficiencies, and the human experience. Suffice it to say, together we are in the thick of innovating for tomorrow.



**[HGA] is highly capable, technically competent and very cooperative with all parties to produce energy efficient and trouble free projects for owners.**

KERRY HORNER, PROJECT ENGINEER  
US ARMY CORPS OF ENGINEERS



**Actively Participating on Codes & Standards Committees**



**15+** Professional Societies Where We Serve as Leaders



**17+** Presentations Regional Conf



# FUELED BY CURIOSITY. DRIVEN BY INSIGHT.



Advocating for recognition for our clients' projects, as well as for our engineers.



Educating our clients and peers through presentations at national and local levels and by publishing articles and design guidelines.



Engaging in the development of industry codes and standards – bringing that foreshadowing of future codes to the design table.



Embracing adjacent expertise such as the Internet of Things and technologies intertwined with both infrastructure and how people work.



Understanding the importance and varying needs of the growing number of engaged stakeholders.



Seeking out global best practices and fresh ideas through leadership in national industry organizations.

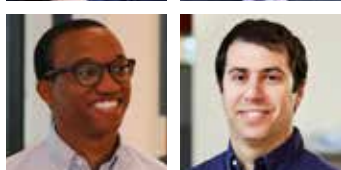


**85+**  
Awards for  
Engineering  
Excellence



**32+** Presentations at National Conferences

at  
ferences



**4**  
Authored Trade  
Design Guides





Forest Edge Elementary School | Oregon, WI  
*First Net Zero Energy School in Wisconsin*

# FORWARD THINKING FOR A CHANGING WORLD

HGA has a long history working with School Districts across the country to create spaces that inspire learning, stimulate creativity, support health and wellness, and strengthen our communities. We offer a full range of services that can add significant value to both new and existing construction projects. As industry leaders in energy engineering and sustainable design, we help clients set viable energy goals and achieve high performance facilities that operate at peak efficiency—applying our specialized expertise deliver solutions with measurable cost-saving benefits.



Lake Mills Elementary School | Lake Mills, WI



Verona Area High School | Verona, WI

## SUSTAINABLE DESIGN

HGA offers a wide scope of professional services aimed at providing a building system that achieves our clients' sustainable design targets while maximizing occupant health and comfort. Central to our success in creating sustainable buildings is the early-on involvement with the owner and design team to establish "Green Goals" and to maintain these goals throughout the design and construction process. The LEED certification system is often used as a means of ensuring that these goals are maintained.

[Geothermal Systems](#) | [Ground Source Heat Pumps](#) | [Solar Hot Water](#) | [Solar Electric](#) | [Wind Analysis](#) | [Carbon Management](#) | [Natural Ventilation](#) | [Battery Storage](#) | [Microgrids](#) | [Innovative Energy Solutions](#)

## ENERGY ENGINEERING

Energy efficiency and improved indoor environmental quality (IEQ) is achieved by analyzing the design and operation of the building's energy-consuming systems and by reviewing the applicability of building systems and equipment options. We evaluate the life cycle costs of these alternatives to help owners justify the additional investments aimed at enhancing the performance of the building. These enhancements will lead to reduced utility bills as well as helping minimize the building's environmental impact.

[Energy Modeling](#) | [Feasibility Studies](#) | [Energy Tax Credit Analysis](#) | [Measurement & Verification](#) | [Net Zero Energy Building Analysis & Consulting](#) | [Energy Auditing](#) | [Energy Benchmarking](#) | [Energy Star Certification](#) | [Daylighting Analysis](#) | [Orientation & Massing Analysis](#)

## LEED CERTIFICATION

The LEED rating system was developed by the United States Green Building Council to measure a building's sustainable qualities. LEED certification requires commissioning to be provided by a commissioning expert. HGA has a proven track record of providing these commissioning services to many LEED projects. Our team also has extensive expertise in helping achieve the "Optimize Energy Performance" and "Measurement & Verification" credits.

[LEED Commissioning](#) | [LEED Energy Modeling](#) | [LEED Building Certification Assistance](#) | [LEED Specifications Development](#) | [LEED Workshops/Design Charrettes](#)

“

HGA was on top of every aspect of the project, from the smallest of items to the largest insuring that we received what we payed for.

DAVE HOH  
OSKHOSH AREA SCHOOL DISTRICT



## COMMISSIONING

Commissioning of new construction and major renovations will ultimately enhance the operation of a building. Effective planning and communication techniques applied from project conception through completion and beyond are part of the tools our team of experts use to cost effectively achieve reduced utility bills, lower maintenance costs, and a more comfortable and healthy indoor environment. This is most successful when introduced to the project as early as possible – producing the highest building performance at the lowest cost, reducing change orders and RFI, dramatically reducing the need for contractor callbacks, improving occupant productivity.

Owners' Project Requirements Workshop | Planning Assistance & Design Reviews | Quality Control Contractor Checklists | Contractor Submittal Review | System Performance Testing | Electronic Systems Manuals | Staff Training for Maintenance | Post-Occupancy Warranty Reviews

## RETRO-COMMISSIONING

The performance of building systems degrades over time. Often the building systems no longer function as intended. Our retro-commissioning services involve rigorous analysis of the building operations, functional testing and analysis, identifying deficiencies and presenting opportunities for substantial operational savings, improved air quality and enhanced occupant comfort with very attractive payback.

Energy Auditing & Benchmarking | Building System Investigation | Implementing Energy Reduction Measures | Incentive & Grant Applications | Life Cycle Cost Analysis



I was amazed at how HGA's team of experts handled the commissioning of our large project. Their work contributed in a large way to the project's successful outcome.

DENNIS KUCHENMEISTER  
SCHOOL DISTRICT OF FORT ATKINSON

# What Value Does Commissioning Bring to Our Clients and Their Projects?



Lowers Operating Costs



Enhances Occupant Comfort & Productivity



Saves Energy



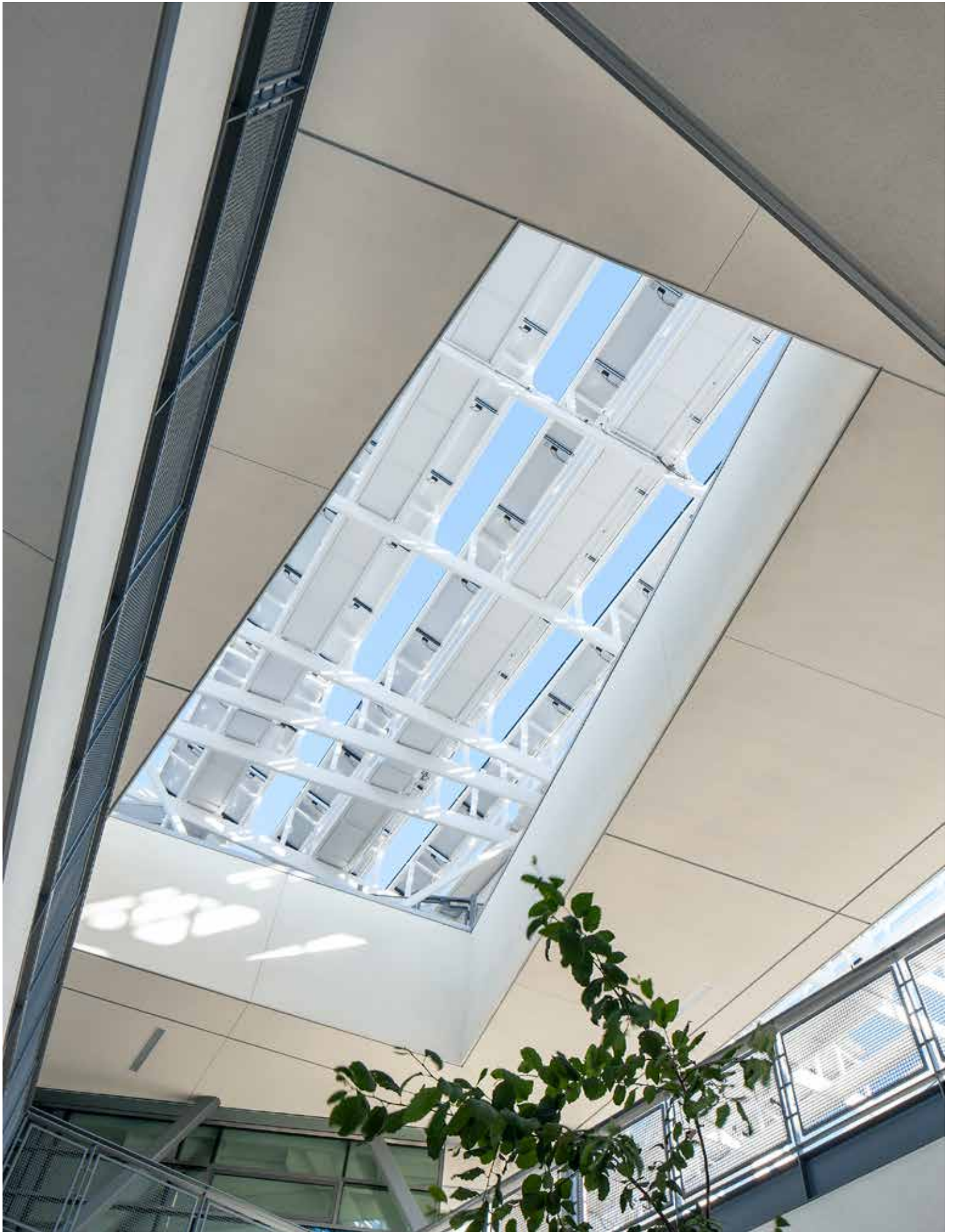
Facilitates Proper Systems Training & Documentation



Offers Confidence of Fully Functional Building on Day 1



Reduces Nuisance Calls





## HGA SUSTAINABILITY STATS

202

**LEED PROJECTS**  
certified and  
registered

17

**NET ZERO  
ENERGY PROJECTS**  
in-progress, planned  
and complete

01

**LIVING BUILDING  
CHALLENGE**  
in progress

04

**WELL PROJECTS**  
certified and  
registered

657

**PROJECTS  
REPORTED TO  
ARCHITECTURE  
2030**

# DESIGN FOR OUR CLIENTS AND THE PLANET

In recent years, the world has seen exponential rates of change in technology, energy supply, climate, and business models—all of which impact the human experience. We help our clients prepare for an evolving future. We design for change.

As a founding signatory of AIA2030 and a signatory of SE2050, we are committed to meeting our clients' sustainability goals and challenging our industry. Our holistic approach to design integrates sustainability, resilience, research, and equity into the design process. We are committed to leaving a positive impact on the world through sophisticated, sustainable, and human-centered design responses to the profound challenges of our time.

At the beginning of a client relationship, we actively listen to understand the client's goals, culture, and any future changes they anticipate will impact their

business, campus, or community. This process shapes a sustainability vision that embodies the client's values. The vision is realized through ideas that reflect our deep understanding of all aspects of a project's performance: human experience, cultural significance, technical rigor, and systems efficiency.

Our goal is to design buildings that are embraced by the owners, operators, users, and community members who live, work, and gather inside and around them. A beloved building—one so treasured it lasts for generations—is both beautiful and sustainable.

# ENERGY & INFRASTRUCTURE

Sustainability, energy efficiency, and cost savings are the trifecta of our energy and infrastructure group. Carefully designed systems and processes to support all three can have a significant impact on both buildings and campuses.

As engineering specialists within a multidisciplinary practice, we have a more holistic understanding of the impact of our work; we are able to integrate our technical solutions with other important elements of a project, from the elements that are critical to quality of healthcare to higher education to corporate campus design.

Whether tackling small projects like energy audits or designing significant new facilities, we are industry leaders in optimizing and implementing systems that best fit current and future needs. We deliver reliable,

resilient, effective, and sustainable infrastructure systems that are integrated into their environments, enabling our clients to:

- **Reduce** use of energy and resources, decreasing environmental impact and operating costs
- **Protect** financial resources by limiting exposure to energy market volatility
- **Optimize** current physical resources by assessing them for energy efficiency and reliability
- **Seek** LEED Certification





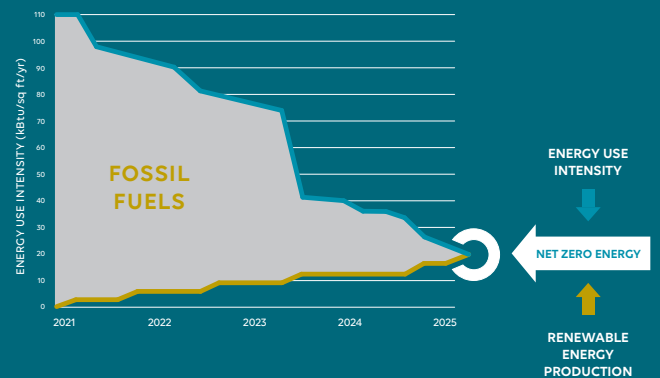
# A CLIMATE POSITIVE FUTURE WITH NET ZERO ENERGY

We are committed to meeting our clients' goals as well as challenging our industry. This means developing the expertise and research to push beyond net zero energy to net positive energy; from a neutral effect on health, safety, and resources to a positive one. As the need and desire for sustainable environments grow, so does the focus on high-performance buildings with sound data that we can share back with clients and our design teams.



HGA has design experience with various generation resources and energy storage—microgrid, combined heat and power, internal combustion engine generation, biomass facilities, biodigesters, building mounted solar thermal and photovoltaics, photovoltaic building skin design, geothermal systems, and more. Alternative equipment options can improve energy efficiency and reduce maintenance and operational costs. We consider the complexities of energy supply, energy generation, and building loads in the context of our clients’ facility needs—present and future—and evaluate the feasibility and life-cycle cost of these alternatives to help owners justify the investment.

## POTENTIAL PATHWAY TO NET ZERO ENERGY

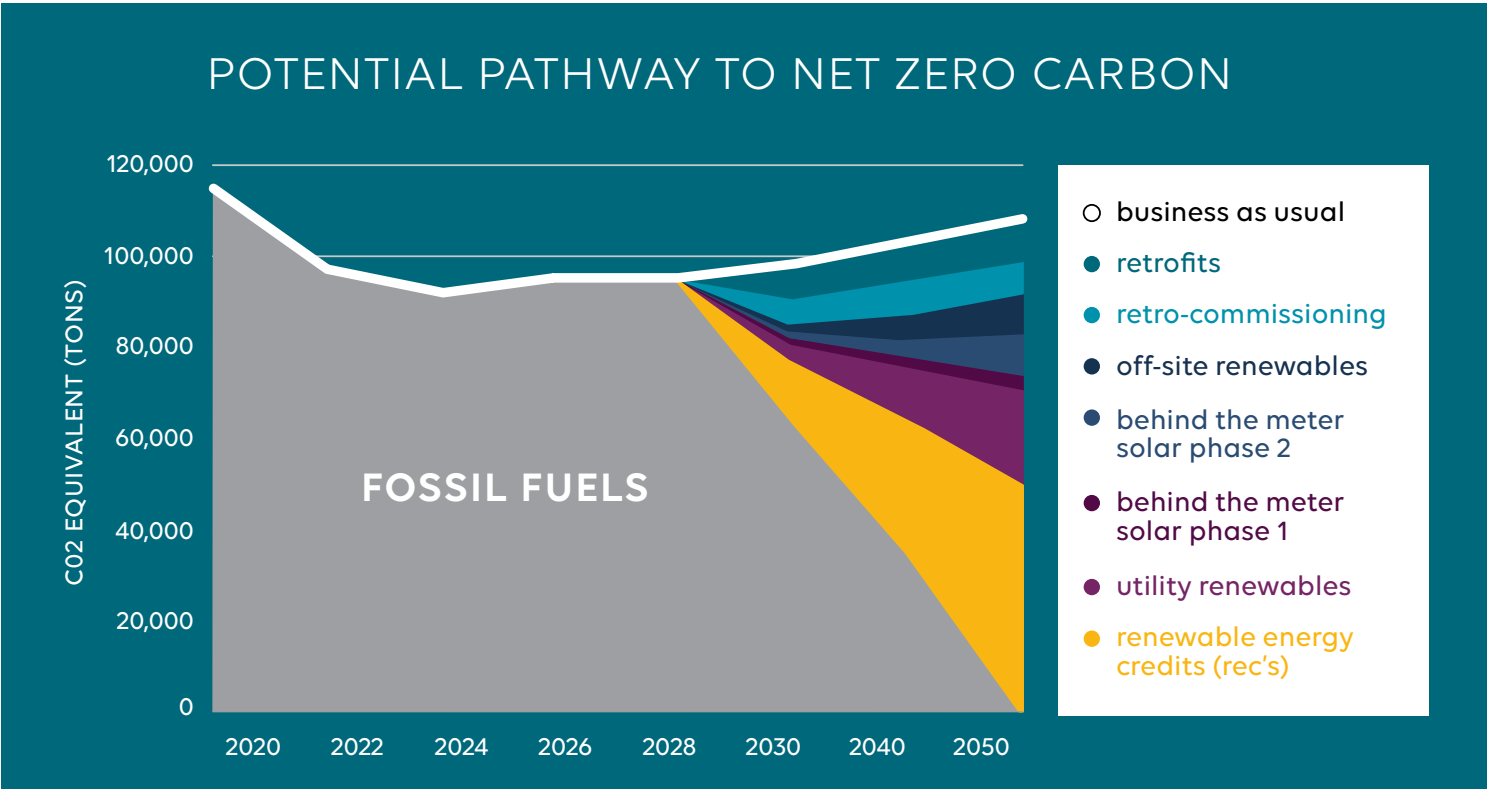


# DEFINING A ROADMAP FOR A RESILIENT, RENEWABLE AND SUSTAINABLE FUTURE

HGA is a catalyst for positive change, applying intelligent thinking and industry expertise to projects across all of our markets—from initial advisory services to working on design and operation projects. Our approach offers tools and documentation on the advantages, disadvantages and economics of key options to help you make informed and educated decisions.

### ENERGY MASTER PLANNING

HGA brings focus to energy projects by asking the right questions. We work closely with clients to understand their unique needs and goals, using the insight we gain to inform integrated planning strategies. The drive for deep understanding shapes the way we collaborate with each client and deploy the diverse resources within our firm. It's how we deliver unexpected solutions that deliver added value.



## CARBON MASTER PLANNING

A well-designed carbon master plan brings together a set of principles and goals to form a sustainable roadmap that is strong and flexible—meeting current needs while envisioning the future. We deliver comprehensive, high-value planning solutions that serve economic, technical and social objectives—enabling our clients to be proactive, instead of reactive, in the long term. Whether it's reaching carbon neutrality or 100% renewable energy, or simply decreasing your carbon footprint, HGA helps cities, communities and institutions create a positive, lasting impact.

## NET ZERO ENERGY MASTER PLANNING

HGA employs an holistic approach to energy projects. We help clients understand their energy costs and set viable energy goals for the future. We assess the design and operation of current systems, identify opportunities to reduce the use of energy, and deliver forward-thinking energy plans that enable our clients to take cost-effective and strategic action. Our experience allows us to develop creative and viable solutions that align capital investments with long term costs and minimize your building's environmental impact.



## STRATEGIC PLANNING FOR THE BOTTOM LINE



### STEP 1: ASSESS

- Assemble stakeholders
- Benchmark energy use
- Condition assessments on all major HVAC, lighting, and electrical equipment



### STEP 2: UPDATE & IMPROVE

- Stakeholder engagement and community out-reach
- Determine energy reduction measures
- Cost analysis and capital spending plan
- Design standards



### STEP 3: EVALUATE RENEWABLE OPTIONS

- Work with client on implementation of measures
- Plan details carbon reduction outcomes, costs, benefits, paybacks, risks



### STEP 4: CONTINUOUSLY RE-TUNE

- Commissioning of all projects
- Ongoing energy monitoring and updating benchmarking metrics







# FIRST NET ZERO ENERGY SCHOOL IN WISCONSIN

**OREGON SCHOOL DISTRICT | FOREST EDGE  
ELEMENTARY SCHOOL | OREGON, WI**

HGA has worked with Oregon School District for the past ten years, providing a variety of energy consulting, commissioning, retro-commissioning and engineering design services—continuing their long history of sustainable construction practices.

In response to a growing student population and capacity challenges, the District is constructing a fourth elementary school to serve its students and flourishing community. The new two-story, K-6 school will be the first net zero school in Wisconsin. Reflecting this progressive commitment of the District, the school will be an innovative, sustainable building that sets a precedent for schools of the future.

With net zero energy as a driving factor, HGA's Madison Office was engaged as a net zero energy/net zero carbon expert in order to help to achieve that goal. Our team provided energy consulting, energy modeling, and design services for renewable energy systems. We helped the district establish energy targets early in the design process to make sure efforts aligned with net zero energy "best practices". The scope includes state-of-the-art energy efficiencies, such as a highly innovative system design for on-site microgrid/battery storage, a 740kW solar PV system, and a geothermal heating/cooling system. HGA is also providing commissioning to confirm the building is constructed to meet the design criteria and achieve the client's goals for sustainability.

# SUSTAINABLE DEVELOPMENT FOR A GROWING COMMUNITY

**SUN PRAIRIE SCHOOL DISTRICT | NEW  
ELEMENTARY SCHOOLS | SUN PRAIRIE, WI**

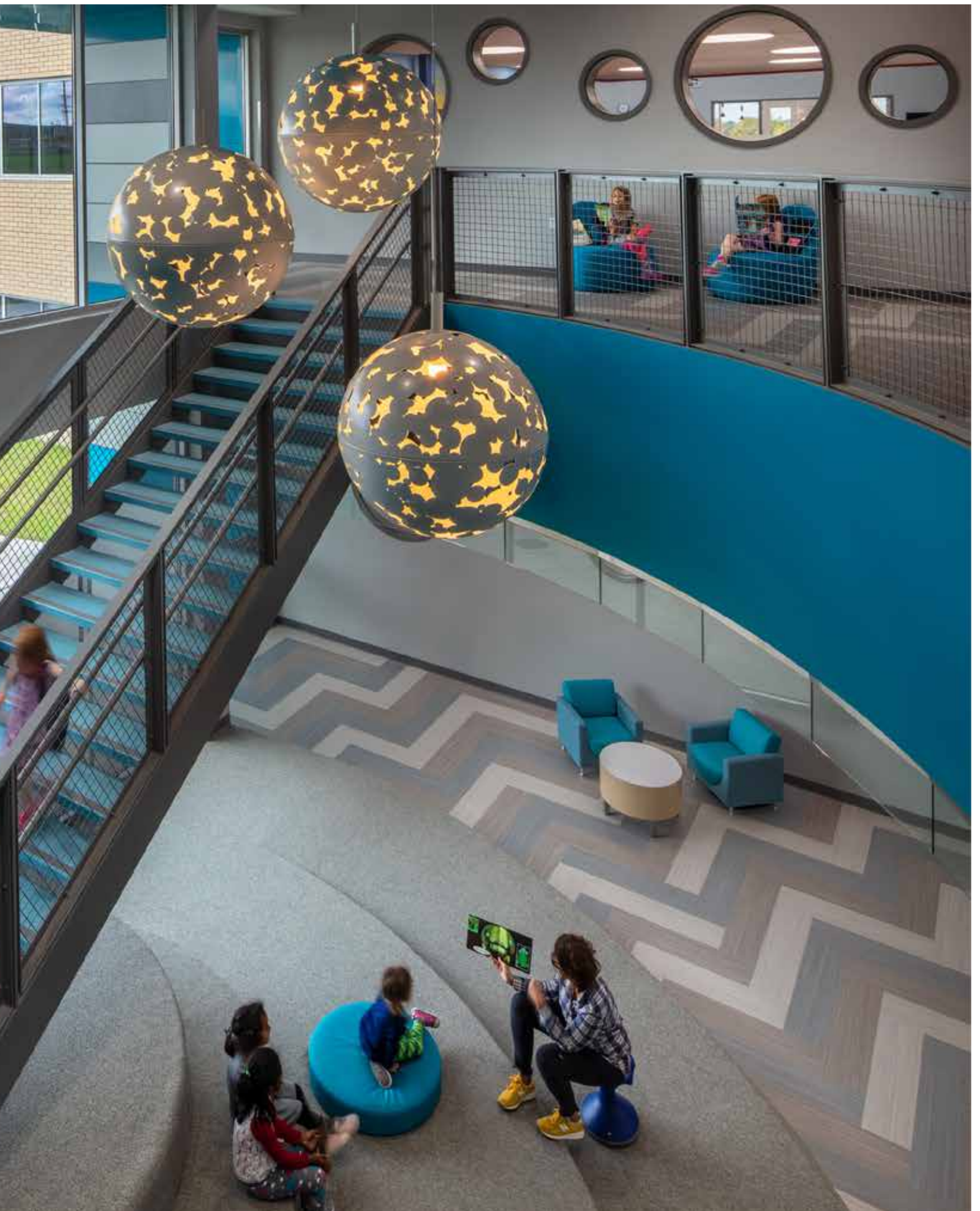
Sun Prairie School District's new elementary schools resolve growing space needs and create a model of sustainability for students and the community.

HGA provided design assistance for energy efficiency, solar PV design, commissioning, measurement & verification, a LEED equivalence analysis, and administration for multiple utility incentive programs. Energy simulations were performed to optimize HVAC system efficiencies and inform design selections, while daylighting simulations to identify glare risk and determine appropriate areas for automatic dimming daylighting sensors.

Commissioning (equivalent to LEED Enhanced Cx) was undertaken to confirm the building would be designed and constructed to meet the district's goals and expectations. HGA commissioned the HVAC systems, building automation system, renewable energy systems, lighting systems, and domestic hot water systems.

The buildings incorporate numerous green features, including the District's first major solar PV installation, automatic dimming daylighting sensors, DOAS high efficiency ventilation, and a geothermal system with high efficiency distributed heat pumps. The geothermal system is exposed with a glass wall and a hallway of color-coded pipes and ducts, serving as a learning tool for students.





# HGA

PROPOSAL TO PROVIDE

COMPREHENSIVE ENERGY STUDY

FOR

MCFARLAND SCHOOL DISTRICT

5101 FARWELL STREET

MCFARLAND, WI 53558

JANUARY 13, 2022



Contact:

Svein Morner, PhD, PE

HGA

Phone: 608-554-5342

E-mail: [smornert@hga.com](mailto:smornert@hga.com)

## SUMMARY OF COMMISSIONING SCOPE AND COST

The McFarland School District consists of four schools, McFarland High School, Indian Mound Middle School, Waubesa Intermediate School, and Conrad Elvehjem Primary School. Over the last few years, McFarland School District has worked on upgrading their schools with more energy efficient solutions. McFarland School District is looking to advance their sustainability initiatives and develop a comprehensive energy study. The goals of the study would include:

- Obtain an improved understanding of our current and future energy carbon footprint of the district owned buildings
- Review necessary technologies required to reduce our energy related carbon emissions
- Provide feedback to the stakeholders at the district in shaping the goals and timeline of the sustainability resolution

The proposed comprehensive energy plan will evaluate each school for energy efficiency, solar PV, battery storage, electrification of heating loads, and community resilience microgrids. A roadmap to achieve carbon emissions goals would be created to support our resilient and sustainable school district.

HGA proposes to provide energy planning services to identify opportunities that exist to reduce the energy consumption and at the same time improve the operation of the systems. HGA will also include a roadmap of the desired energy goals and necessary capital investments to achieve the preferred greenhouse gas savings.

The scope of work will include the following:

### **Comprehensive Energy Study**

- Set goals for the district for desired energy consumption
- Review the available record drawings and submittals
- Access the Building Automation System (BAS) remotely and on site to review HVAC system operation
- Analyzing current and past utility consumption
- Evaluate the condition of energy intensive equipment
- Develop future trends of energy consumption and needs (electrification, electric vehicles, population growth)
- Review school district growth estimates and estimate how this will affect the energy usage and carbon footprint of the district
- Create a district roadmap to achieve carbon reduction goals
- Develop a capital investment schedule that applies life cycle cost analysis for energy, utility, and greenhouse gas savings.
- Develop performance opportunities for each building:
  - Energy efficiency
  - Solar PV
  - Backup Power: battery storage v. existing fossil fuel generators
  - Electronification of heating loads
  - Electric vehicle chargers
  - Community resilience hubs/microgrid – red cross location impact

## AGREEMENT FOR PROFESSIONAL SERVICES

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 McFarland School District (the “Client”).

The scope of services (the “Services”) to be provided by HGA under this Agreement is described in the attached Proposal.

Compensation to HGA for the Services will be a fixed cost of \$55,000. In addition to compensation for the Services, HGA will be reimbursed for its Reimbursable Expenses at 1.05 times their cost to HGA, estimated to be approximately \$500.

## **McFarland School District Sustainability Resolution**

WHEREAS, in acknowledgment of the threat that climate change poses to our world and way of life, specifically that it is already negatively affecting our lives and will continue to have harmful long-term effects on the livability of our planet; and

WHEREAS, climate change disproportionately affects young people and our futures; and

WHEREAS, confirming that there is a limited amount of time to address climate change before it becomes irreversible; and

WHEREAS, in hopes that McFarland School District will serve as a leader in the community on the advancement of sustainability and clean energy; and

WHEREAS, the current levels of waste generated by the district are unsustainable and harmful to the environment; and

WHEREAS, climate change disproportionately affects marginalized groups, of which there are a number of residing in the district and attending McFarland schools; and

WHEREAS, to uphold our district's promise of preparing students for a better future; and

WHEREAS, there is strong support within the community and student body for action to be taken to address climate change .

NOW, THEREFORE IT BE RESOLVED, all future MSD building projects will be planned with sustainability in mind, including water and resource conservation, renewable materials, and power by renewable energy.;

BE IT FURTHER RESOLVED, MSD will reach 100% renewable energy by 2040;

BE IT FURTHER RESOLVED, MSD will reduce net waste by 20% by 2025, focusing specifically on the cafeteria and classrooms;

BE IT FURTHER RESOLVED, MSD will find sustainable methods to dispose of all waste by 2040; these may include, but are not limited to, recycling, composting and reusing;



BE IT FURTHER RESOLVED, MSD will provide educators with guidance and resources on how they can reduce waste in the classroom and make plans with sustainability in mind;

BE IT FURTHER RESOLVED, MSD will work towards creating a culture of waste reduction within our schools;

BE IT FURTHER RESOLVED, MSD will ensure all students, staff, and other faculty members have access to climate education;

BE IT FURTHER RESOLVED, MSD will identify partnerships and grants that would allow the district to achieve its goals;

BE IT FURTHER RESOLVED, MSD will create a sustainability committee of administrators, community members, teachers, and students to collaborate on achieving all goals.

# Sustainability Plan

## VILLAGE OF **McFarland**

Sustainability: *“Meeting the needs of the present without compromising the ability of future generations to meet their own needs.” (Bruntland Report, 1987)*

ACCEPTED: July 26, 2021



PREPARED BY:  
MSA PROFESSIONAL SERVICES



PREPARED FOR:  
VILLAGE OF MCFARLAND, WI

## EXECUTIVE SUMMARY

On January 13, 2020, the McFarland Village Board of Trustees adopted Resolution #2020-04, which created a Sustainable McFarland Ad-Hoc Committee for the purpose of studying and creating a plan for sustainability within the Village. The Board tasked the Committee with the following:

1. Work with the public, Village staff, consultants and others to draft and develop a sustainability plan for implementation in McFarland.
2. Evaluate and make recommendations on the Village joining the WI Department of Natural Resources Green Tier Program.
3. At the conclusion of all work, make a recommendation to the Village Board regarding the Ad-Hoc Committee being established as a standing committee.

On September 14, 2020, the Village Board adopted Resolution #2020-16 approving participation in the Wisconsin Department of Natural Resources Green Tier Legacy Community Program. The mission of the Green Tier program is to help communities across the state of Wisconsin move continuously toward a sustainable future through initiatives that promote environmental stewardship, economic growth, public health, and social equity. Also in September, the Village joined Sustain Dane. Sustain Dane's mission is to inspire, connect, and support people to accelerate sustainable actions for community wellbeing. The missions of these organizations align with the purpose of the Sustainability Committee. Participation in these organizations provide motivation, structure, support, and educational resources to aid the Committee's efforts to study ways to improve sustainability within the Village and to take on actions that may not otherwise happen without the support gained through these agencies. The Green Tier program also provides additional benefits to the Village including receiving prioritization in applying for certain DNR grants and streamlining in certain DNR permitting processes through gaining access to a DNR staff liaison.

Beginning in October of 2020, the Committee began working on the McFarland Sustainability Plan: a systems approach to making the Village efficient, sustainable, and resilient. This summary explains the Sustainability Plan, as well as the public process through which the plan was developed.

The Sustainability Plan addresses six separate, yet interconnected aspects of life within the Village of McFarland: Energy, Transportation, Solid Waste, Water, Land Use & Development, and Community Health. For each of these six categories, the Village created a vision statement; identified indicators by which performance can be measured; selected desired performance trends; and prioritized a list of possible actions to accomplish these objectives.

### Guiding Plan Visions:



#### **Energy**

Village government, residents and businesses embrace energy efficiency strategies and renewable energy sources. Efforts are aimed at reducing the local use of energy derived from fossil fuels each year, making steady progress toward a 100% clean energy future.



#### **Transportation**

McFarland has an extensive multi-modal transportation network that is accommodating to the needs of all people, regardless of age, ability or income. Community members are enabled to make sustainable transportation choices when

traveling to and from work, school, and other daily activities. Village transportation infrastructure is sustainably designed and integrated with a regional system that combines timely, cost-effective public transportation options, like buses and light rail, with a safe and ubiquitous network of routes for walking and bicycling.



### **Solid Waste**

The residents, businesses, and government of McFarland utilize the most efficient and effective methods available to reduce, reuse, compost, and recycle waste. Village government uses incentives and policies to limit unnecessary waste and promote the lesser use and safe disposal of hazardous materials. Village residents and businesses are knowledgeable and responsible about waste management methods, and they value and celebrate the creative reuse of goods and materials.



### **Water**

McFarland has an abundance of clean water, including surface water and groundwater, for both recreation and drinking. Public and private users limit their use of groundwater while also seeking to optimize infiltration of stormwater through best practices. Village government, residents and businesses endeavor to keep groundwater and local waterways free of chemicals, salt, trash, soil, and excess nutrients.



### **Land Use & Development**

The Village of McFarland prioritizes the protection of environmentally sensitive areas and biodiversity in land use decisions and preserves land strategically for those purposes. The Village encourages diversity in both the built and business environments, seeking mixed-use developments, neighborhoods with a mix of housing types and price points, and a variety of business types in order to expand access to housing, jobs, services, recreation, social interaction, and other basic needs. Higher density and infill developments are encouraged so that land and infrastructure resources are used efficiently. Streets and development sites utilize resilient, native landscaping that enhances the aesthetic appearance and ecological health of the Village.



### **Community Health**

McFarland, including its government, residents, and businesses, embraces community health and wellbeing as an integral part of sustainability. McFarland is intentional about embracing diversity and inclusivity, such that all residents are able to live happy and satisfying lives. Healthy food, clean water, housing, jobs, recreation opportunities and health care are available and accessible to all residents regardless of age, ability, gender identity, sexual-orientation, income, or ethnicity. The community values social connections and civic participation and works together to meet the needs of its most vulnerable residents.

The Sustainability Plan is a living document and continual improvement and annual updates are an integral part of the system. This living Plan is designed to help the Village adapt and improve performance each year through incremental changes that will cumulatively result in increased efficiency, cost-savings, environmental benefits, and long-term resilience. Each year the Village will evaluate performance, adjust the desired targets if appropriate, and revise the action plan.

The process through which this Plan was developed included:

- Numerous public working meetings with the Village Sustainability Committee, November 2020 through June 2021
- A Public Visioning Session, February 11, 2021
- A Community Survey, May 2021
- A Business and Developer Focus Group, June 24, 2021
- Progress reports to the Village Board, periodically
- Review of the final draft and recommendation to the Village Board by the Ad-Hoc Committee, July 8, 2021
- Public presentation and acceptance by the Village Board, July 26, 2021

Through this intensive public process, the Village has made strides toward integrating sustainability and resiliency into all facets of municipal operations and influence. This plan enables future actions and investments toward improved environmental performance, continued fiscal prudence, and a high quality of life for all residents.

**American Red Cross  
Shelter Agreement**

The American National Red Cross ("Red Cross"), a not-for-profit corporation chartered by the United States Congress, provides services to individuals, families and communities when disaster strikes. The disaster relief activities of the Red Cross are made possible by the American public, as the organization is supported by private donations and facility owners who permit their buildings to be used as a temporary refuge for disaster victims. This agreement is between the Red Cross and a facility owner ("Owner") so the Red Cross can use the facility as an emergency shelter during a disaster.

DR#: \_\_\_\_\_ Facility: McFarland High School  
NSS ID #19010

**Parties and Facility**

**Owner:**

Legal name: McFarland High School  
Chapter: \_\_\_\_\_  
24-Hour Point of Contact:  
Name and title: Bill Foust Director  
Work phone: 608-838-4519 Cell phone/pager: 608-575-9342  
Address for Legal Notices:  
5103 Farwell Street  
McFarland, WI 53558

**Red Cross:**

Legal name: The American National Red Cross  
Chapter: Southwest WI  
24-Hour Point of Contact:  
Name and title: \_\_\_\_\_  
Work phone: 877-618-6628 Cell phone/pager: \_\_\_\_\_  
Address for Legal Notices:  
4860 Sheboygan Ave.  
Madison, WI 53705

*Copies of legal notices must also be sent to:*  
The American National Red Cross, Office of the General Counsel,  
2025 E Street, NW, Washington DC 20006  
and  
The American National Red Cross, Disaster Operations,  
2025 E Street NW, Washington, DC 20006.

**Shelter Facility:**

(Insert name and complete street address of building or, if multiple buildings, write "See attached Facility List" and attach Facility List including complete street address of each building that is part of this Agreement).

McFarland High School  
5103 Farwell Street  
McFarland, WI 53558

## Terms and Conditions

1. Use of Facility: Upon request and if feasible, the Owner will permit the Red Cross to use the Facility on a temporary basis as an emergency public shelter.
2. Shelter Management: The Red Cross will have primary responsibility for the operation of the shelter and will designate a Red Cross official, the Shelter Manager, to manage the sheltering activities. The Owner will designate a Facility Coordinator to coordinate with the Shelter Manager regarding the use of the Facility by the Red Cross.
3. Condition of Facility: The Facility Coordinator and Shelter Manager (or designee) will jointly conduct a pre-occupancy survey of the Facility before it is turned over to the Red Cross. They will use the first page of the Facility/Shelter Opening/Closing Form, available on CrossNet, to record any existing damage or conditions. The Facility Coordinator will identify and secure all equipment that the Red Cross should not use while sheltering in the Facility. The Red Cross will exercise reasonable care while using the Facility as a shelter and will make no modifications to the Facility without the express written approval of the Owner.
4. Food Services: Upon request by the Red Cross, and if such resources exist and are available, the Owner will make the food service resources of the Facility, including food, supplies, equipment and food service workers, available to feed the shelter occupants. The Facility Coordinator will designate a Food Service Manager to coordinate the provision of meals at the direction of and in cooperation with the Shelter Manager. The Food Service Manager will establish a feeding schedule, determine food service inventory and needs, and supervise meal planning and preparation. The Food Service Manager and Shelter Manager will jointly conduct a pre-occupancy inventory of the food and food service supplies in the Facility before it is turned over to the Red Cross.
5. Custodial Services: Upon request by the Red Cross and if such resources exist and are available, the Owner will make its custodial resources, including supplies and custodial workers, available to provide cleaning and sanitation services at the shelter. The Facility Coordinator will designate a Facility Custodian to coordinate the provision of cleaning and sanitation services at the direction of and in cooperation with the Shelter Manager.
6. Security: In coordination with the Facility Coordinator; the Shelter Manager, as he or she deems necessary and appropriate, will coordinate with law enforcement regarding any public safety issues at the Shelter.
7. Signage and Publicity: The Red Cross may post signs identifying the shelter as a Red Cross shelter in locations approved by the Facility Coordinator and will remove such signs when the shelter is closed. The Owner will not issue press releases or other publicity concerning the shelter without the express written consent of the Shelter Manager. The Owner will refer all media questions about the shelter to the Shelter Manager.
8. Closing the Shelter: The Red Cross will notify the Owner or Facility Coordinator of the closing date for the shelter. Before the Red Cross vacates the Facility, the Shelter Manager and Facility Coordinator will jointly conduct a post-occupancy survey, using the second page of the Shelter/Facility Opening/Closing Form to record any damage or conditions. The Shelter Manager and Facility Coordinator or Food Service Manager will conduct a post-occupancy inventory of the food and supplies used during the shelter operation.
9. Reimbursement: The Red Cross will reimburse the Owner for the following:
  - a. *Damage to the Facility or other property of Owner*, reasonable wear and tear excepted, resulting from the operations of the Red Cross. Reimbursement for facility damage will be based on replacement at actual cash value. The Red Cross will select from among

bids from at least three reputable contractors. The Red Cross is not responsible for storm damage or other damage caused by the disaster.

- b. Reasonable costs associated with custodial and food service personnel which would not have been incurred but for the Red Cross's use of the Facility for sheltering. The Red Cross will reimburse at per-hour, straight-time rate for wages actually incurred but will not reimburse for (i) overtime or (ii) costs of salaried staff.
- c. Reasonable, actual, out-of-pocket operational costs, including the costs of the utilities indicated below, to the extent that such costs would not have been incurred but for the Red Cross's use of the Premises (both parties must initial all utilities to be reimbursed by the Red Cross):

	Owner initials	Red Cross initials
Water	<u>WF</u>	<u>JW</u>
Gas	<u>WF</u>	<u>JW</u>
Electricity	<u>WF</u>	<u>JW</u>
Waste Disposal	<u>WF</u>	<u>JW</u>

The Owner will submit any request for reimbursement to the Red Cross within 60 days after the shelter closes. Any request for reimbursement for food, supplies or operational costs must be accompanied by supporting invoices. Any request for reimbursement for personnel costs must be accompanied by a list of the personnel with the dates and hours worked at the shelter.

10. Insurance: The Red Cross shall carry insurance coverage in the amounts of at least \$1,000,000 per occurrence for Commercial General Liability and Automobile Liability. The Red Cross shall also carry Workers' Compensation coverage with statutory limits for the jurisdiction within which the facility is located and \$1,000,000 in Employers' Liability.

11. Indemnification: The Red Cross shall defend, hold harmless, and indemnify Owner against any legal liability, including reasonable attorney fees, in respect to bodily injury, death and property damage arising from the negligence of the Red Cross during the use of the Premises.

12. Term: The term of this agreement begins on the date of the last signature below and ends 30 days after written notice by either party.

Owner (legal name)

*McFarland Schools*

By (signature)

*[Signature]*

Name (printed)

*William Forst*

Title

*Director*

Date

*9-25-2015*

THE AMERICAN NATIONAL RED CROSS  
(legal name)

By (signature)

*[Signature]*

Name (printed)

*Jacob Weinberger*

Title:

*Disaster Program Manager*

Date

*9-25-2015*





BASIC SHELTER INFORMATION

Site Name/ School District McFarland School District NSS ID# 19010 Date 09/25/2015

Name of building McFarland High school Building # \_\_\_\_\_ of \_\_\_\_\_

Phone # 608-838-3166 Fax # 608-838-4562 Website \_\_\_\_\_

Shelter address 5103 Farwell street

Town/ City McFarland County/ Parish Dane State WI Zip Code 53558

Mailing Address (if different) same

Town/ City \_\_\_\_\_ County/ Parish \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Agency operating shelter (check one)  Red Cross  FEMA  DHS  TSA  SBC  Other

Shelter agency type (check one)  Red Cross managed  Red Cross partner  Red Cross supported  Independent

Shelter type (check all that apply)  Evacuation  General  Medical  Other

General facility notes \_\_\_\_\_

Shelter Capacity

Use the calculations to calculate the capacity for sleeping space.

Total sq feet 270,000  Evacuation 24,048 usable sq ft + 20 sq ft/person = 1,202 person capacity

Sq feet usable for sleeping space 24,048  Post Impact 24,048 usable sq ft + 40 sq ft/person = 601 person capacity

Other \_\_\_\_\_ usable sq ft + \_\_\_\_\_ sq ft/person = \_\_\_\_\_ person capacity

Geographic Information

Use major landmarks (e.g. highways, intersections, rivers, railroad crossings, etc.) that will be easily recognizable in a disaster. Latitude and longitude coordinates can be found at online web sites, using a global positioning system device, or will auto populate when the address is entered into the National Shelter System.

Latitude 43.01173480 Longitude -89.29489000 Elevation \_\_\_\_\_

In storm surge/evacuation  Yes  No Hurricane category or evacuation area \_\_\_\_\_  No In flood plain  Yes  No year flood impact  No

Directions to facility \_\_\_\_\_



# Shelter Facility Survey

## Point of Contact to Authorize Use of Facility

Name Bill Foust Title Director of Building and Grounds Phone # 608-838-4519

24 hour # 608-575-9342 Fax # \_\_\_\_\_ Email foustb@mcfcd.org

Contact notes \_\_\_\_\_

## Point of Contact to Open Facility

Name Mike Swenson Title Head Custodian Phone # 608-220-0614

24 hour # 608-575-1581 Fax # \_\_\_\_\_ Email \_\_\_\_\_

Contact notes \_\_\_\_\_

## Alternate Point of Contact

Name Chuck Plank Title \_\_\_\_\_ Phone # 608-838-4500 ext. 4415

24 hour # 608-575-0816 Fax # \_\_\_\_\_ Email plankac@mcfcd.org

Contact notes \_\_\_\_\_

## Pet Shelter

Pet shelter space available on site  Yes *answer questions below*  No nearest location \_\_\_\_\_

Separate ventilation system  Yes  No Cement or tile floors with drains  Yes  No Outdoor space to relieve pets  Yes  No

Agency that will operate the pet shelter \_\_\_\_\_ Phone # \_\_\_\_\_ 24 hour # \_\_\_\_\_

## ADDITIONAL INFORMATION

Shelter agreement signed  Yes  No Date signed 9/25/15 Notes \_\_\_\_\_

Pre-designated shelter team assigned  Yes Team name \_\_\_\_\_  No

Current facility floor plans available  Yes Location of copies \_\_\_\_\_  No

International Association of Venue Managers (IAVM) facility  Yes  No

Use the *Standards for Selection of Hurricane Evacuation Shelters* to select hurricane evacuation shelters. In this document, you will find a planning process that involves many factors (e.g. technical information for storm surge and flood mapping). This process requires close coordination with local officials for technical information to make decisions about hurricane shelter suitability. Use the Facility Construction section to assist with determining whether this can be a hurricane evacuation shelter.

Shelter can be a hurricane evacuation shelter  Yes  No Notes \_\_\_\_\_

**Survey Conductors** (List all who participated in the survey)

Name	Title	Organization	Phone #
FERMA Corps	mountain S	AmeriCorps	
mike Swenson	Head Custodian	McFarland S.O.	608-228-0614

**LIMITATIONS OF FACILITY USE**

Check one  This facility will be available for use at any time during the year  This facility is only available for use during the time periods listed below  This facility is not available for use during the time periods listed below

<p>Dates (mm/dd/yyyy) Times (hh:mm)</p> <p>From _____ <input type="checkbox"/> AM <input type="checkbox"/> PM</p> <p>To _____ <input type="checkbox"/> AM <input type="checkbox"/> PM</p>	<p>Dates (mm/dd/yyyy) Times (hh:mm)</p> <p>From _____ <input type="checkbox"/> AM <input type="checkbox"/> PM</p> <p>To _____ <input type="checkbox"/> AM <input type="checkbox"/> PM</p>
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List any recurring dates that the facility is not available (e.g. every sunday) \_\_\_\_\_

Areas of the facility that are restricted during use \_\_\_\_\_

**FACILITY CONSTRUCTION & SAFETY**

**Facility Construction**

Construction material  Wood  Masonry/Brick  Pre-fab  Bungalow  Concrete  Metal  Trailer  Pod  Other \_\_\_\_\_

# stories/floors 3 Notes \_\_\_\_\_

Elevator  Yes Location back southside  No Notes \_\_\_\_\_

Open roof-spans (see *Standards for Selection of Hurricane Evacuation Shelters* for current standards)  Yes Length \_\_\_\_\_  No

Windows in sleep area  Yes  No If yes, shatter protected  Yes  No If yes, protected with shutter  Yes  No

**Fire & AED Safety**

Some facilities may not meet fire codes based on building capacity. The questions below are a general reference. Contact your local fire department with questions or for more information.

Fire alarms & systems (check all that apply)  Working smoke detectors  Inspected fire alarm system  Functional sprinkler system  Functional direct fire department alert

Comments from fire department \_\_\_\_\_

AED(s) on site  Yes Location by pool entrance  No



# Shelter Facility Survey

## Facility Inspection Point of Contact

If requested, who would inspect this facility post-impact to determine it is safe to occupy?

Name \_\_\_\_\_ Title \_\_\_\_\_ Phone # \_\_\_\_\_

24 hour # \_\_\_\_\_ Fax # \_\_\_\_\_ Email \_\_\_\_\_

Contact notes \_\_\_\_\_

## SANITATION, FEEDING & UTILITIES

### Sanitation, Utilities & Power

The recommended ratio for toilet facilities is a minimum of 1 toilet for 20 people. The optimum scenario for showers is 1 shower for every 25 residents. Count all facilities that will be available to shelter residents and staff.

Showers available  Yes # of showers 93  No Toilets available  Yes # of toilets 62  No

Check all that apply Heating  Electric  Natural Gas  Propane  Fuel Oil Cooling  Electric  Natural Gas  Propane

Check all that apply Cooking  Electric  Natural Gas  Propane Water  Municipal  Well(s)  Trapped

Self-sufficient power  Yes Type \_\_\_\_\_  No

Note fuel requirements, generator capacity, facility areas supported by generator(s), and other relevant information.

Emergency generator on site  Yes  No Notes There are 2 emergency generators.

### Feeding

Food Prep (check all that apply)  Warming oven kitchen  Full service  Central kitchen (delivery)

Food stock stored on site  Yes # meal can be served 2,500  No Refrigeration units on site  Yes # units 3  No

Seating capacity  Cafeteria  Snack Bar  Other indoor seating \_\_\_\_\_ Total estimated seating capacity for eating 400

Notes on feeding \_\_\_\_\_

## ACCESSIBILITY

See accompanying Shelter Facility Survey-Accessibility Instructions.

### Facility Construction

Facility built in 1993 or later, or extensively altered in 1992 or later.  Yes  No

### Parking Areas

Parking available.  Yes  No

Answer below if parking is available

Accessible parking space(s)  Yes  No Notes 7 spaces

Van accessible parking space(s)  Yes  No Notes 7 spaces

### Drop-off/ Loading Area

Permanent drop-off area/loading zone with marked access aisle or space available to designate as temporary drop-off area/loading zone.  Yes  No

**Facility Entrance**

- Sidewalk connects parking area and any drop-off area to at least one facility entrance.  Yes  No
- Route from accessible parking spaces and any drop-off area/loading zone to at least one facility entrance has no steps or curbs without curb cuts.  Yes  No
- Where route crosses curb, curb cuts are at least 36" wide.  Yes  No
- Automatic doors or doors without knob hardware.  Yes  No
- Doorways at least 32" wide when door is open.  Yes  No
- Level landings on interior and exterior sides of entry door.  Yes  No
- No objects protrude from the side more than four inches into the route to the facility entrance.  Yes  No
- If the main facility entrance does not appear to be accessible, another entry is accessible.  Yes  No
- A sign identifies the location of the accessible entrance.  Yes  No

**Routes to Service Delivery Areas**

- A route without steps is available to access each service delivery area, as well as restrooms and showers or service can be provided in area that can be accessed by route with no steps.  Yes  No
- Using a yard stick held horizontally at your waist level, walk from the facility entrance to each service delivery area, as well as restrooms and showers. Except at doorways (which must be only 32" wide), no part of the route is less than 36" wide.  Yes  No
- Route has vertical clearance of at least 80".  Yes  No
- No objects protrude from the side more than 4" into the routes to the various service delivery areas.  Yes  No
- Automatic doors or doors without knob hardware.  Yes  No
- Doorways at least 32" wide when door is open along routes to each service.  Yes  No
- If a service delivery area is accessible only by elevator, there is back-up power for the elevator(s).  Yes  No

**Ramps**

- Ramps are at least 36" wide, have handrails on both sides 34"-38" above the ramp surface, and have level landings at least 60" long.  Yes  No
- If yes, type of ramp  Fixed  Portable  Not provided
- If ramps are longer than 30 feet, a level landing at least 60" long is provided every 30 feet.  Yes  No

**Restrooms**

- Area where person in a wheelchair can turn around (60-inch diameter circle or T-shape turn area).  Yes  No
- Doorways at least 32" wide when door is open.  Yes  No
- Doors without knob hardware.  Yes  No
- Toilet seat is 17"-19" high. Flush control is automatic or manual control on the open side of the toilet and no higher than 48".  Yes  No
- Toilet's centerline is 16"-18" from the nearest side wall.  Yes  No
- Stall at least 60" wide and 56" deep (wall-mounted toilet) or 59" deep for (floor mounted toilet).  Yes  No
- Space at least 9" high is provided beneath the front and one side of the stall.  Yes  No
- Appropriate grab bars.  Yes  No
- Toilet paper dispenser is within 36" of the rear wall.  Yes  No
- At least one accessible sink.  Yes  No

## Showers

Showers available.  Yes  No

*Answer below if showers are available*

At least one accessible shower stall with appropriate grab bars.  Yes  No

Stall type  Transfer stall  Roll-in shower  Not provided

Shower seat 17"-19" high. If in transfer stall, seat is on the wall opposite the shower controls. If in roll-in shower, seat is on wall adjacent to the shower controls.  Yes  No

Hand-held shower spray with ability to mount at 48" (typically via a mount that can be adjusted along a fixed vertical bar), or alternatively a fixed shower head at 48".  Yes  No

Controls do not require tight grasping, pinching or twisting and are mounted 38"-48" high and no more than 18" from the front of the shower.  Yes  No

## Eating areas

At least some tables have tops 28"-34" high and space underneath at least 27" high, 30" wide and 19" deep.  Yes  No

Serving line or counter no higher than 34".  Yes  No

## Assessment

Relevant areas of the facility are accessible to people with disabilities without adjustments.  Yes  No

Facility has at least one accessible entrance and one accessible restroom, and otherwise is capable of being made accessible during a disaster with minor adjustments.  Yes  No

Facility would require extensive adjustments to be accessible during a disaster.  Yes  No

**Adjustments for Accessibility** (*Identify any adjustments or enhancements that should be made to make the relevant areas of the facility accessible during a disaster*) \_\_\_\_\_

## OTHER CONSIDERATIONS

### Additional Facilities & Space

Isolated care areas  Yes  No Type of area  Rooms  Shelter area  Separate facility/area Shelter registration area  Yes  No

Laundry facilities  Yes  No # of washers 3 # of dryers 3 Who can access the laundry facilities  Shelter workers  Shelter residents

Special conditions or restrictions for laundry \_\_\_\_\_

### Available Materials

*One cot and two blankets per shelter resident is recommended. Note all available materials for shelter use in the notes section.*

Cots available  Yes # of cots \_\_\_\_\_  No Location \_\_\_\_\_

Blankets available  Yes # of blankets \_\_\_\_\_  No Location \_\_\_\_\_

Children's supplies (e.g. cribs & changing table)  Yes  No Chairs & tables available  Yes # of chairs 300 # of tables 15  No

Notes \_\_\_\_\_

## Facility Ownership & Proximity Considerations

- Does the entity that plans to manage the shelter own the building?  Yes  No  
If no, is there a current written plan?  Yes  No  
Is this facility within five miles of an evacuation route?  Yes  No  
Is this facility within ten miles of a nuclear power plant?  Yes  No

## Groups Associated with the Facility & Training

- Facility staff required when using facility?  Yes  No  
Paid feeding staff required when using facility?  Yes  No  
Church auxiliary required when using facility?  Yes  No  
Fire auxiliary required when using facility?  Yes  No  
Other required?  Yes  No Other \_\_\_\_\_

Will any of the above groups be trained or experienced in Red Cross shelter operations or support?  Yes  No

If yes, describe capabilities \_\_\_\_\_

Has the facility been trained in Red Cross sheltering (if not Red Cross managed)?  Yes  No

If yes, describe capabilities \_\_\_\_\_

Training requested by facility or group  Yes # of staff to be trained \_\_\_\_\_  No

## ADDITIONAL NOTES & INFORMATION

20 of the toilets are handicap accessible.  
2 of the showers are handicap accessible.  
  
There are 44 sinks in the facility.  
  
There are 15 fire extinguishers.  
  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





