

VILLAGE OF MCFARLAND **Sustainability & Natural Resources** *NOTICE OF PUBLIC MEETING*
Committee

Monday, November 10, 2025

6:00 PM

McFarland Municipal Center
5915 Milwaukee St, McFarland
Community Room

AGENDA

The public may attend in-person or remotely through the Zoom webinar or telephone options listed below. *Please Note: Virtual attendance is offered as a convenience, but technical difficulties beyond the Village's control may prevent or limit its availability at any meeting. The public is encouraged to attend the meeting in person to assure full access to the proceedings.*

PLEASE CLICK THE LINK BELOW TO JOIN THE ZOOM WEBINAR:

<https://us02web.zoom.us/j/86843249644>

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

Webinar ID: 868 4324 9644

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 October 16, 2025 Sustainability & Natural Resources Committee meeting.
4. BUSINESS.
 - a. Discussion on Net Zero Energy Measurement and Verification Audit of the Public Safety Center.
 - b. Discussion on seed library.
5. SCHEDULE NEXT MEETING DATE.
 - a. Monday, December 8, 2025, 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.

Minutes
Sustainability & Natural Resources Committee Meeting
October 16, 2025

Committee Members Present: Miguel Pena, Alisa Leamy, Lori Whitman, Kaci Coconate, Christine Mania, Michael Allen (5:50 p.m.)

Committee Members Absent: Nathan Berg,

Staff Present: Lee Igl, Public Works Director; Andrew Bremer, Community and Economic Development Director; Kong Thao, Associate Planner; Sayer Larson, Parks Superintendent; Phil McDade, Utility Clerk

1. CALL TO ORDER

Committee Chairman Miguel Pena called the joint meeting to order at 5:30 p.m.

2. PUBLIC APPEARANCES.

No public appearances.

3. APPROVAL OF MINUTES

a. Motion to approve the minutes of the September 8, 2025 Sustainability & Natural Resources Committee meeting.

Motion by Pena, second by Leamy, to approve the minutes of the September 8, 2025, Sustainability & Natural Resources Committee meeting. Motion carried 5-0.

4. BUSINESS

a. Discussion and action to make a recommendation to the Village Board regarding the award of contract for installation of a photovoltaic system for Lift Station #2.

Igl presented information on a contract to be bid for installation of a solar power system on the roof of a newly constructed lift station near Fox Run and the Grandview Conservancy in the village. The project's budget was \$55,000, and the lone bid for the project came in at \$45,206.45. Installation of the solar panels should be completed by spring 2026. Leamy motioned, Whitman seconded, to recommend to the Village Board awarding the contract to Arch Solar for installation of a photovoltaic system at Lift Station #2 for \$45,206.45. Motion approved 5-0.

b. Discussion and action to make a recommendation to the Village Board regarding award of contract for installation of a battery energy storage system at the Public Safety Center.

Bremer discussed a contract for a proposed battery energy storage system for the Public Safety Center. The proposed storage system is smaller than initially planned due to costs of a larger battery storage system exceeding the budgeted amount for the project. Bremer added that the smaller battery storage system will also need approval from the state Public Service Commission (PSC). The storage system cost will be offset in part due to a \$250,000 grant from the state PSC's Office of Energy and Innovation, which finances energy conservation projects statewide. Motion by Pena, seconded by Leamy, to recommend to the Village Board awarding of the contract to All Energy Solar for installation of a battery energy storage system at the Public Safety Center for \$366,929, conditioned on pre-approval by the Public Service Commission that the proposed products will meet the ARRA by American requirements, and battery size requirements, of the Village's project grant. Motion approved 6-0.

c. Discussion on Seed Library.

Thao led the committee in a discussion of seed libraries in the area, including those associated with the Madison Public Library system and the Oregon Public Library. McFarland's E.D. Locke Public Library ran a seed library from 2015-18 which terminated due to staffing and seed reliability issues. The committee discussed partnering with the McFarland Community Garden for collecting and storing seeds. Village staff will discuss with McFarland library staff whether equipment and supplies used for the terminated seed program are still available. Committee member Mania said she would reach out via community Facebook pages to gauge interest in community volunteers helping with a seed library program.

5. SCHEDULE NEXT MEETING DATE.

- a. Monday, November 10, 2025 at 6 p.m.

6. ADJOURNMENT.

Pena motioned to adjourn; Leamy seconded. Motion carried by unanimous consent. Meeting adjourned at 6:29 p.m.



VILLAGE OF
McFarland
SUMMARY SHEET

MEETING DATE: Monday, November 10, 2025

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion on Net Zero Energy Measurement and Verification Audit of the Public Safety Center.

PREVIOUS ACTION:

March 10, 2025, HGA presented the Commissioning Report of the Public Safety Center to the Sustainability & Natural Resources Committee

April 14, 2025, Sustainability & Natural Resources Committee recommended to Village Board approval of HGA for energy audit of Public Safety Center.

April 22, 2025, Village Board approves HGA for energy audit of Public Safety Center.

ISSUE SUMMARY:

HGA Architects will present initial findings of the energy audit on the Village's Public Safety Center. Previously, at the March 10, 2025 S&NR meeting, HGA presented a commissioning report of the building's energy usage after one year of occupancy and found the actual baseload energy use of the PSC was higher than compared to the preconstruction design models. Refer to the [meeting packet](#) and [meeting video](#) for more information. HGA takeaways from their March presentation included:

- Building energy performance far exceeds a code baseline building - using 86% less energy.
- Actual solar generation for year 2024 was inline with pre-construction modeling and generated the equivalent of the annual electrical usage of 67 homes.
- To achieve net-zero energy certification, additional energy savings are required as the actual base load energy use in 2024 was higher than pre-construction modeling. Or alternatively, additional on-site solar panels may be needed to generate more renewable energy.
- Building energy optimization is a normal part of the Measurement & Verification process for a new building.

The energy audit is intended to:

1. Further investigate what may be contributing to the higher electricity usage (baseload energy usage). HGA Staff coordinated with the Village's IT team and onsite Staff to review various energy loads for the building in October 2025, such as IT loads, HVAC loads, Plug loads, and other miscellaneous loads. This included both daytime and nighttime site assessments.



2. Develop strategies and recommendations to reduce baseload energy use.
3. Document findings and magnitude of savings via presentation or report.
4. Review findings with the Village to determine next steps.
5. Implement selected recommendations, and
6. Re-evaluate building energy usage as it relates to the net zero energy goal 3, 6 and 12 months after the measure implementation.

Next steps:

The November meeting is an opportunity for the S&NR Committee to discuss items 1-4 above with HGA to further inform recommendations for additional energy saving implementation measures.

FINANCIAL/BUDGET IMPACT:

The estimated fee for this work is \$15,000; however, there is no out-of-pocket expense to the Village as the costs associated with the work will be covered as part of the IRS 179D assignment to HGA. On March 26, 2024 the Village Board approved an allocation of energy tax deductions to HGA. Under this IRS program, eligible renewable energy design consultants are able to claim a tax deduction for renewable energy projects for municipal projects if the municipality enters into a 179D agreement with the consultant. Government entities are not eligible to directly receive the tax deduction. In return for the Village agreeing to allow HGA to obtain the IRS 179D tax deduction, HGA agreed to provide the Village with up to \$32,033 of in-kind services to be used for future renewable energy planning, audit, and design work.

VILLAGE PLAN REFERENCE:

2021 Sustainability Plan. Includes the goal of achieving 50% of total municipal energy consumed per year generated from renewables by 2030 and 100% by 2040.

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

This item is for discussion only.

ATTACHMENTS:

1. McFarland MV Updates 11_10_2025

HGA

Measurement and Verification Updates
McFarland Public Safety Building
November 2025

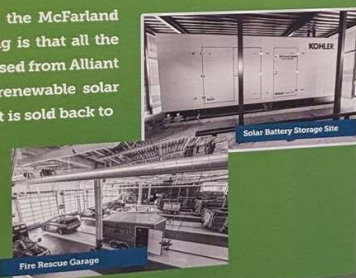


VILLAGE OF
McFarland

NET ZERO ENERGY

The U.S. Department of Energy defines net zero energy as the following: "An energy-efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the on-site renewable exported energy".

What this means for the McFarland Public Safety Building is that all the energy that is purchased from Alliant Energy is offset by renewable solar photovoltaic (PV) that is sold back to the grid. At the end of each year, the amount of energy purchased and sold equals zero.



Solar Battery Storage Site

Fire Rescue Garage

SOLAR PV

To achieve net zero energy, the building energy use must be offset with energy produced through onsite renewable generation. The easiest method for producing renewable energy at the building is with a rooftop solar photovoltaic (PV) systems.

The roof mounted solar PV system at the McFarland Public Safety Building consists of 1,146 solar PV panels with a total maximum power output of 470 kW DC combined. This is converted to power the building can use with seven solar inverters at the top of the stairwell.



Solar Panel Field



Solar Inverters

GEO THERMAL

To make the building as energy efficient as possible, the McFarland Public Safety Building uses a geothermal heating and cooling (HVAC) system. A geothermal system is composed of a borefield, heat pumps and a glycol fluid loop. The fluid is circulated between the ground and the building to provide heating, cooling and ventilation with water source heat pumps.



At the Public Safety Building, we have a field of 51 geothermal bores that are 400-feet deep under the front parking lot. These are connected to heat pumps and the gasque radiant heated floor system through a piping system that is filled with a glycol heat exchanger fluid.



Radiant Heat Floor Piping

ENERGY EFFICIENCY

The high performance envelope includes additional roof insulation (minimum 5-inches of board insulation, spray foam insulated walls (3-4-inches thick) and high performance glazing. LED lighting throughout the building provides a low power usage solution that works with daylighting from the windows. The clerestory windows in the lobby and police station also provide natural light to offset lighting power, as well as overhang to minimize solar heat gain and glare.



Additional Quality Windows to Challenge in the Lobby

Waterproofing the Park Garage

LED Lighting in the Lobby

LED Lighting in the Police Station

LED Lighting in the Fire Station

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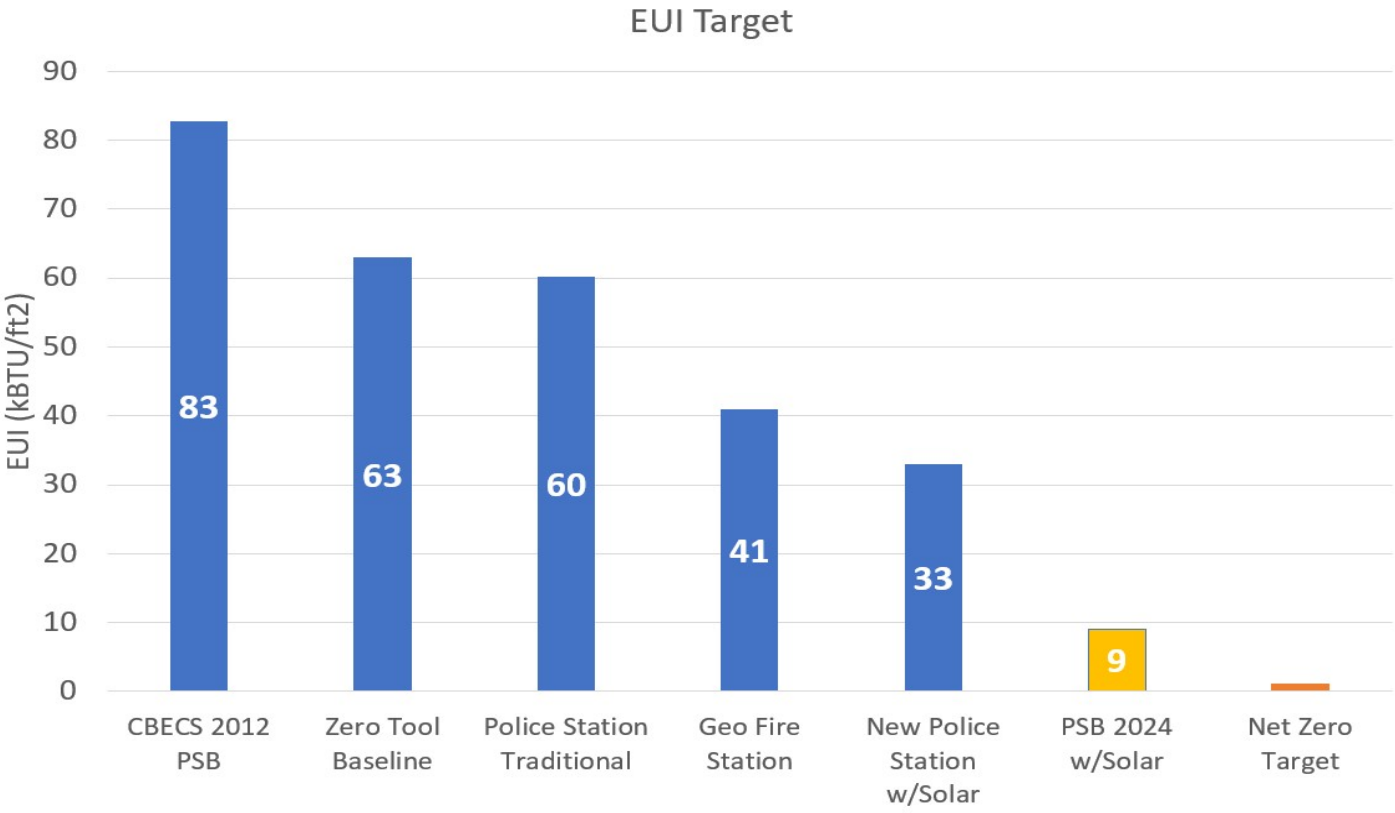
M&V TIMELINE

- August 2023 – Owner Move-in
- October 2023 – Ribbon Cutting
- January 2024 – Begin Initial M&V Period
- December 2024 – End Initial M&V Period
- February 2025 – Data Review and Next Steps
- October 2025 – On-site tests and recommendations



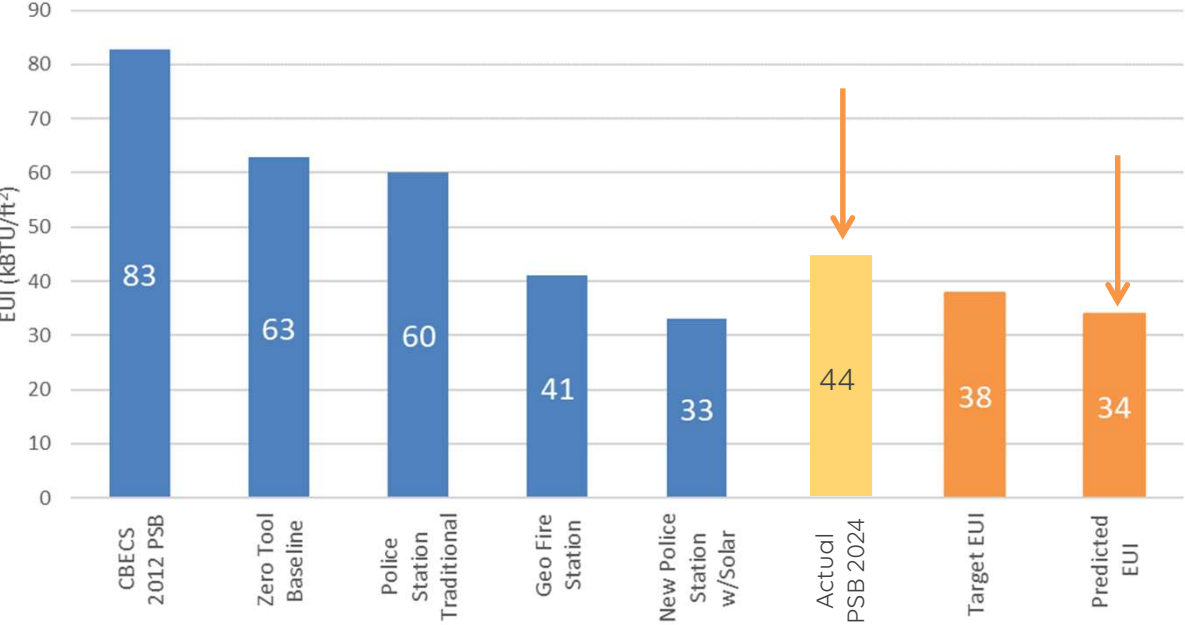
Solar PV System Tour

Building Energy Use Performance - EUI



Net EUI takes into account solar PV production

Building Energy Use Performance - EUI



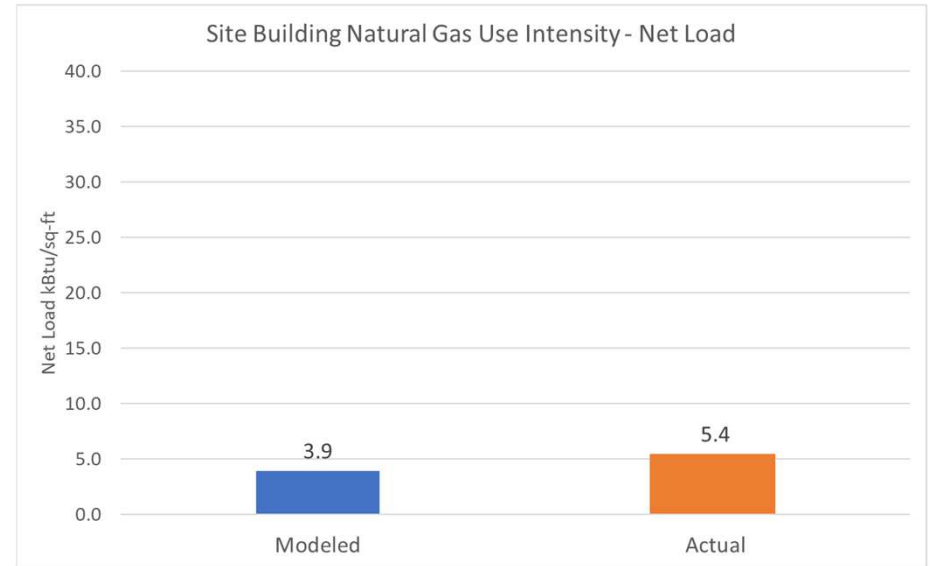
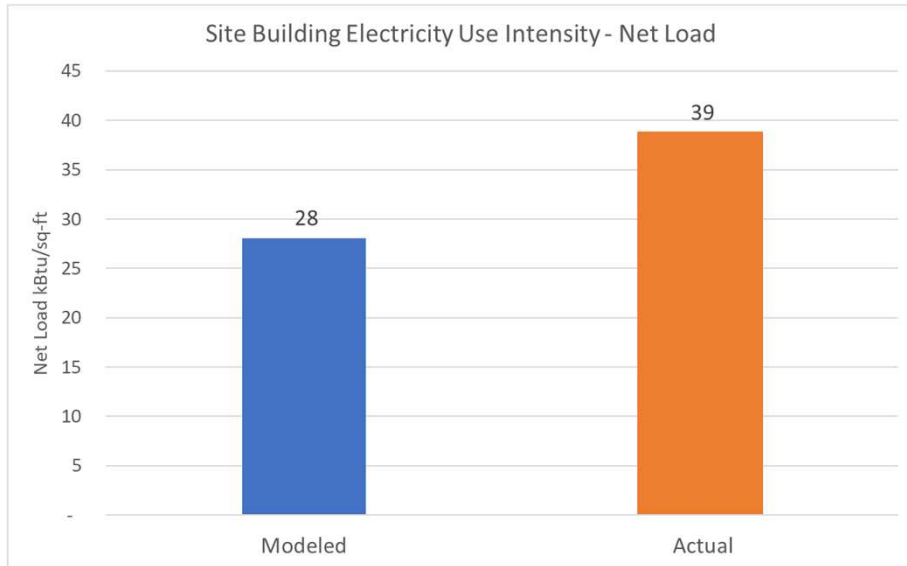
What is Energy Use Intensity?

Energy Use Intensity (EUI) measures a building's energy usage relative to its size, expressed in kBtu per square foot per year. These numbers exclude solar generation.

Current Building Performance (2024 Data):
47% decrease in EUI compared to average PSB type building
30% decrease in EUI compared to zero tool baseline

2024 ANNUAL NET LOAD ANALYSIS – SEPARATED ELECTRIC AND GAS

- Biggest impact to annual being EUI greater than modeled was predominately due to greater electricity use.



*Kitchen and domestic hot water utilize natural gas onsite

ELECTRICITY REDUCTION TO GET TO NET-ZERO

Last 12 months Energy Use, in kWh

Electricity from Utility	394,137
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Gas from Utility (equivalent kWh)	+ 88,130
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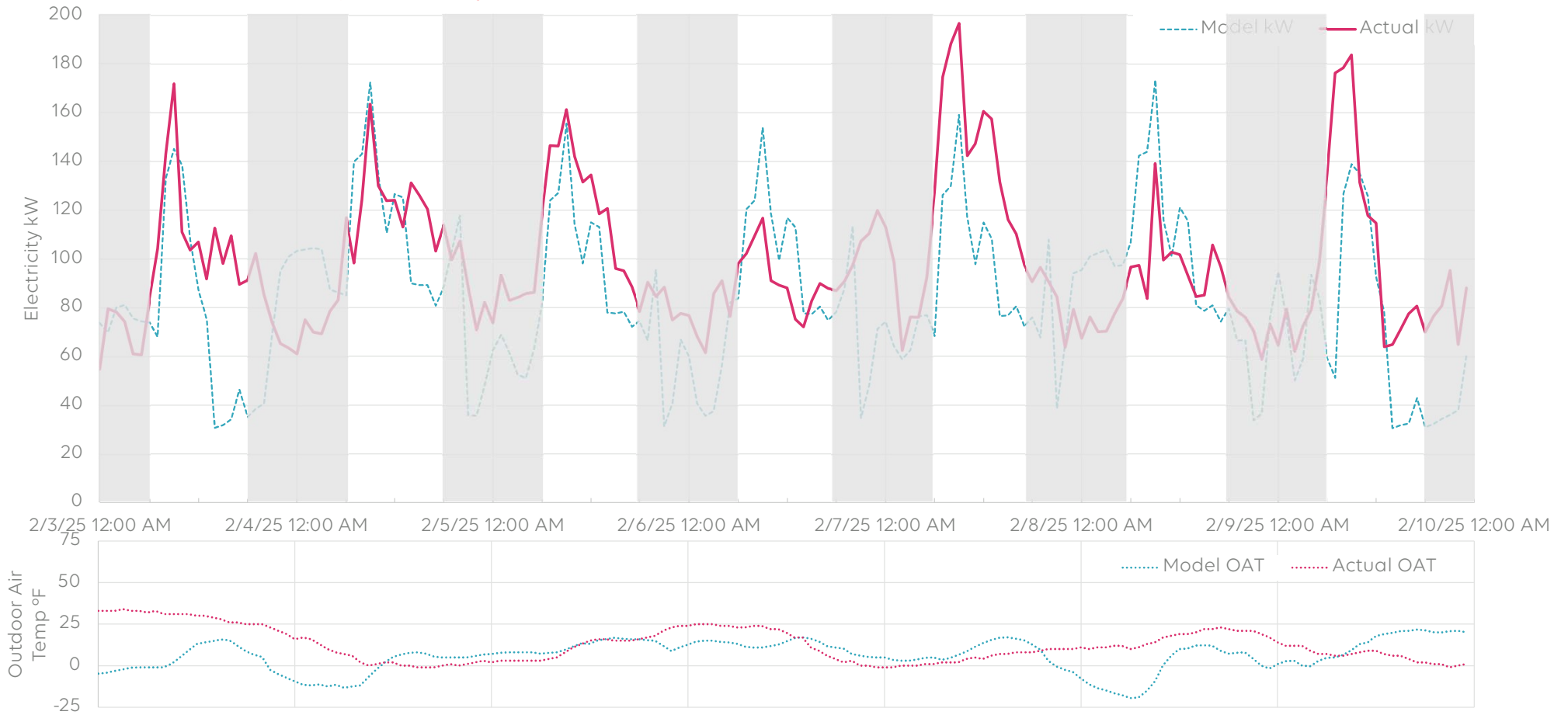
Solar Power delivered to Utility	- 342,075
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Net-Energy	+ 140,192
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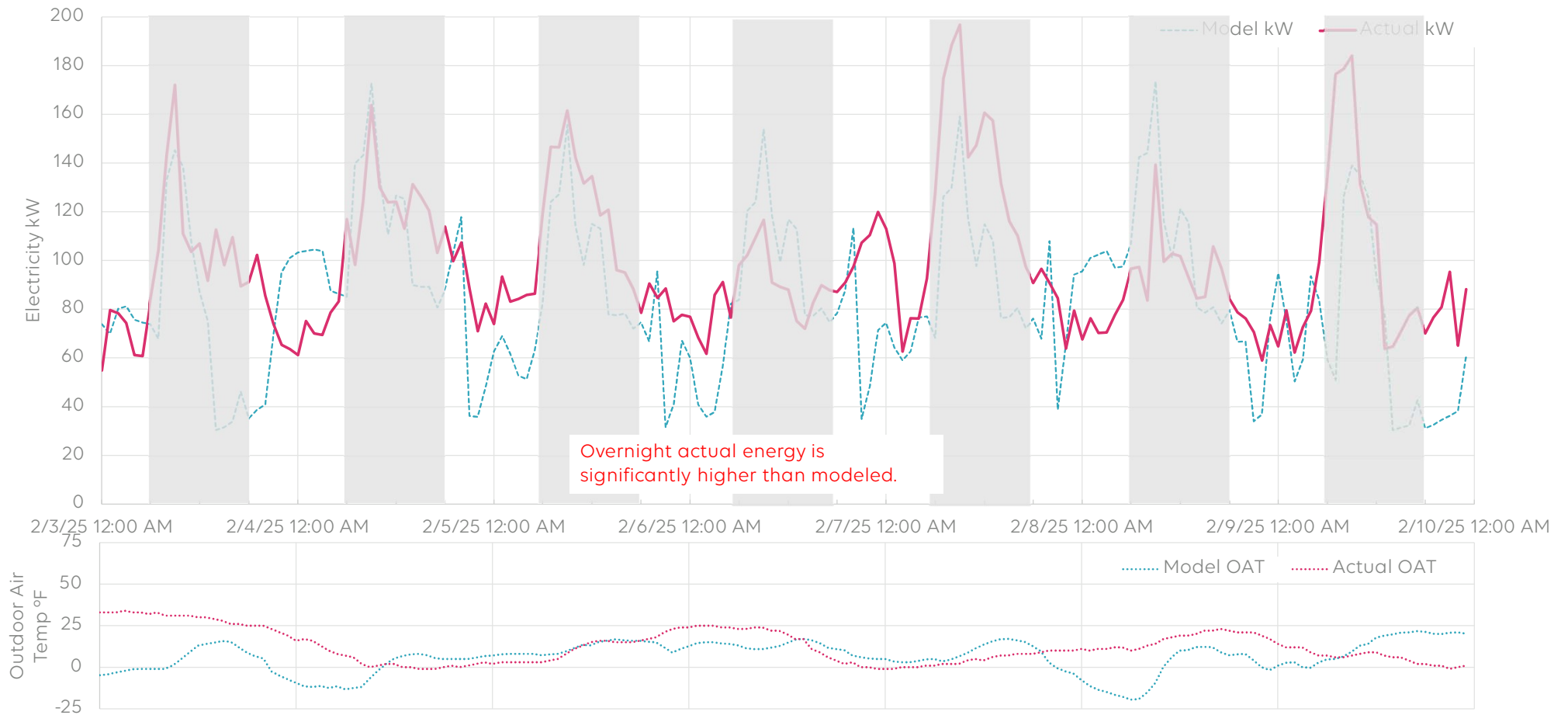
HOURLY PROFILES – FEBRUARY 2025 – OPERATING HOURS

Generally similar energy use from 6 am to 6 pm on weekdays

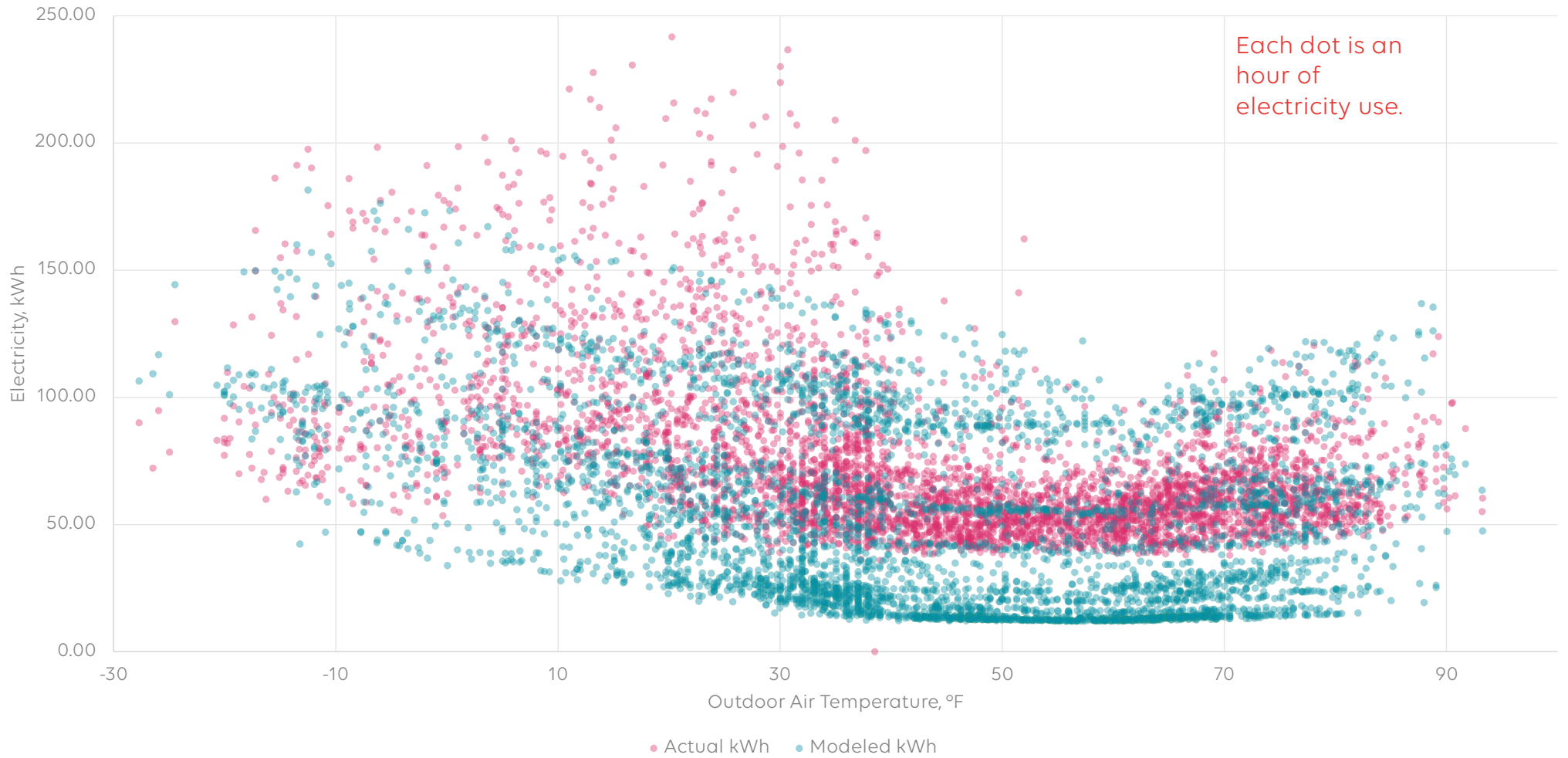
More variance at the end of the week



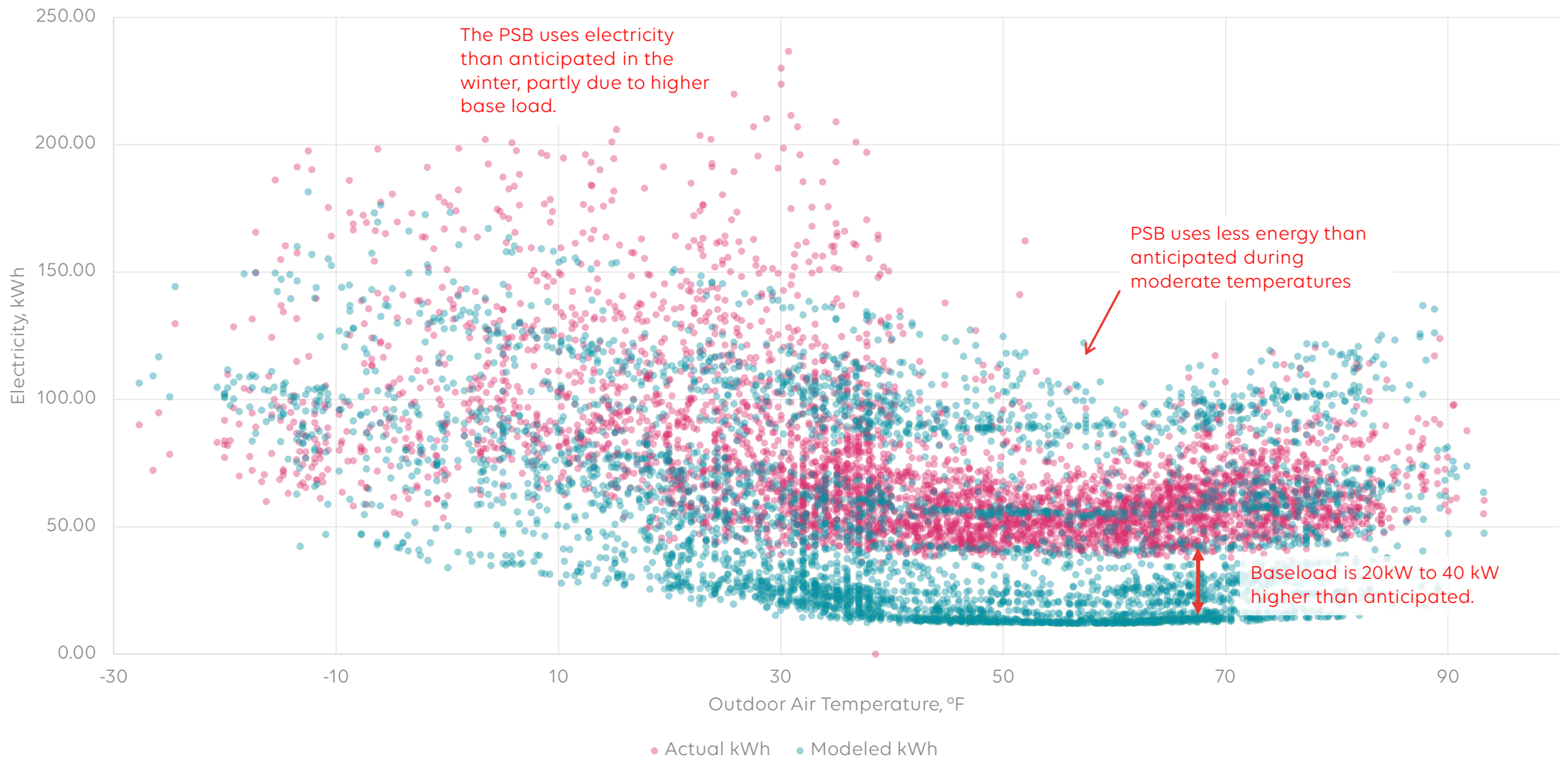
HOURLY PROFILES – FEBRUARY 2025 – OVERNIGHT HOURS



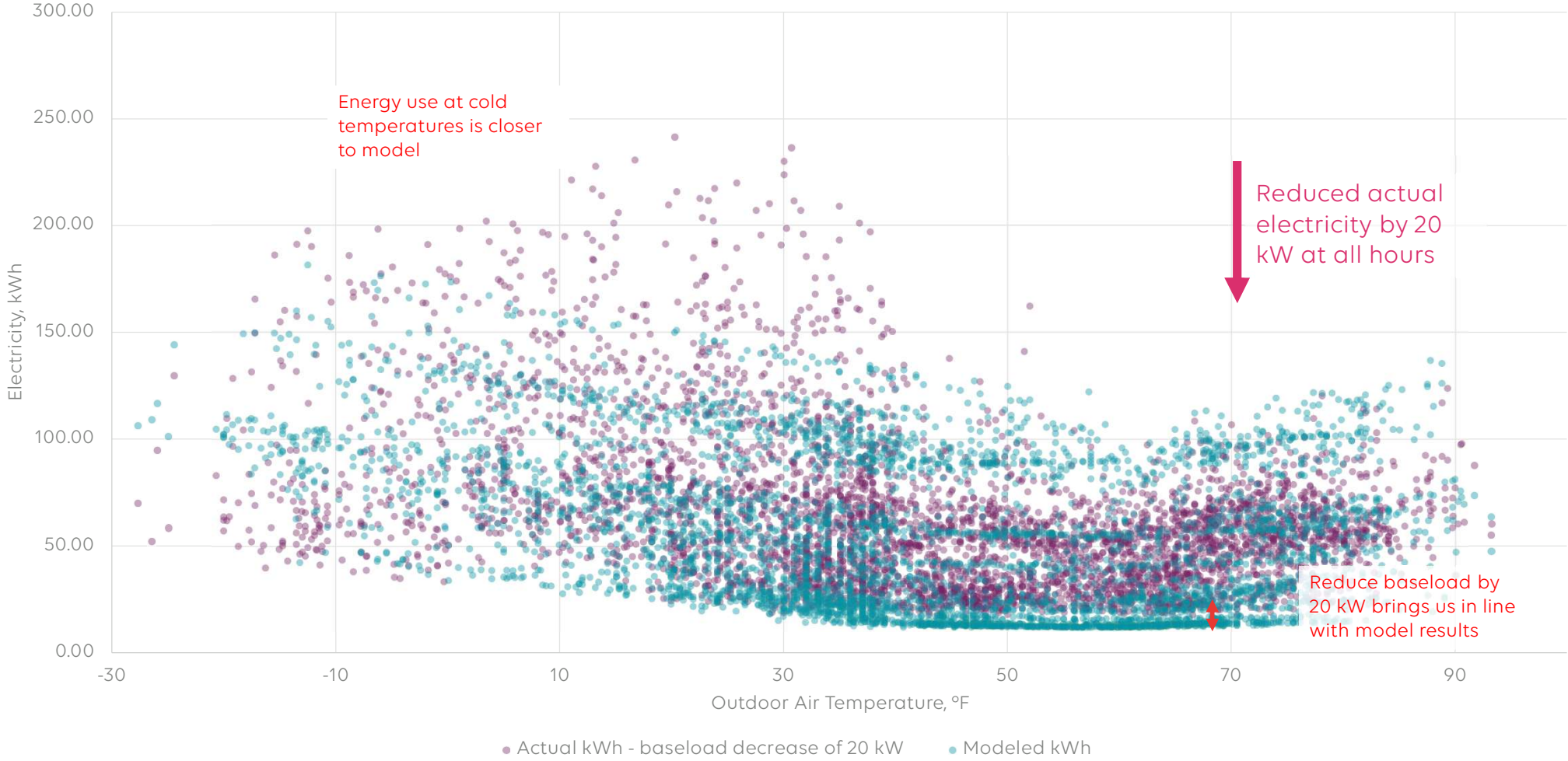
ACTUAL AND MODELED ELECTRICITY BY OUTDOOR TEMPERATURE



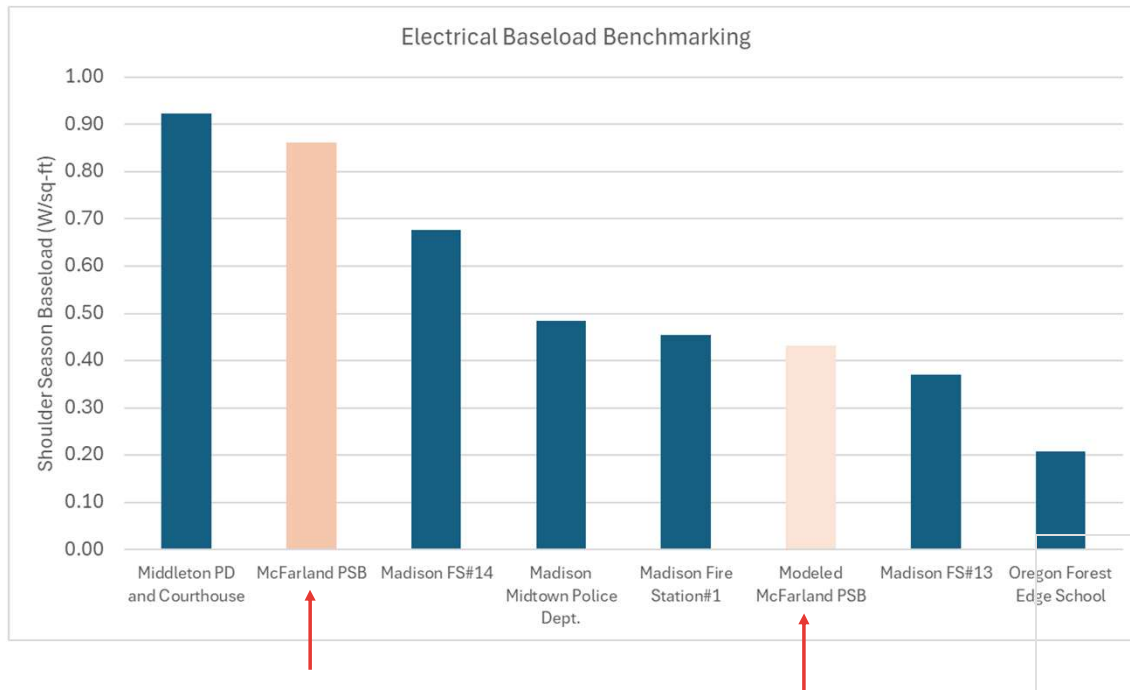
ACTUAL AND MODELED ELECTRICITY BY OUTDOOR TEMPERATURE



ACTUAL VS MODELED ENERGY IF 20 KW IS REDUCED FROM 5 PM TO 6 AM EVERY DAY



BASELOAD BENCHMARKING



- Reducing baseload by 50% would achieve net zero building
- Target baseload reduction is 22kW
- While target reduction is significant it is inline with other comparable buildings
- Baseload power sources need to be further investigated

What does "baseload" mean?

The minimum amount of electricity required over a given period. Baseload can also be thought of as the off-peak minimum power consumption of the building measured in Watts per square foot.

	Square Footage	Year Opened	Geothermal ?	Shoulder Season Baseload (kW)	Shoulder Season Baseload (W/sq-ft)	Annual Baseload (EUI, kBtu/sf, electric only)
Middleton PD and Courthouse	52,000	2010	-	48	0.92	27.6
McFarland PSB	58,000	2023	Y	50	0.86	25.8
Madison FS#14	19,232	2018	Y	13	0.68	20.2
Madison Midtown Police Dept.	31,000	2018	-	15	0.48	14.5
Madison Fire Station#1	55,000	2015	-	25	0.45	13.6
Modeled McFarland PSB	58,000	2023	Y	25	0.43	12.9
Madison FS#13	13,500	2014	Y	5	0.37	11.1
Oregon Forest Edge School	120,000	2021	Y	25	0.21	6.2

ON-SITE TESTING – 10/27/25



ON-SITE TESTING – 10/27/25

Observations:

- Chilly evening, 40°F outside.
- Fire department training outside in rear of building.
- Fire truck apparatus bay and police garage lights were all on.
- Turned off radiant floor heating system before testing.
- RERU-2 (fire department) and RERU-3 (police station) air handling units were both operating, along with some associated heat pumps. Per the BAS, RERU-3 operates 24/7.

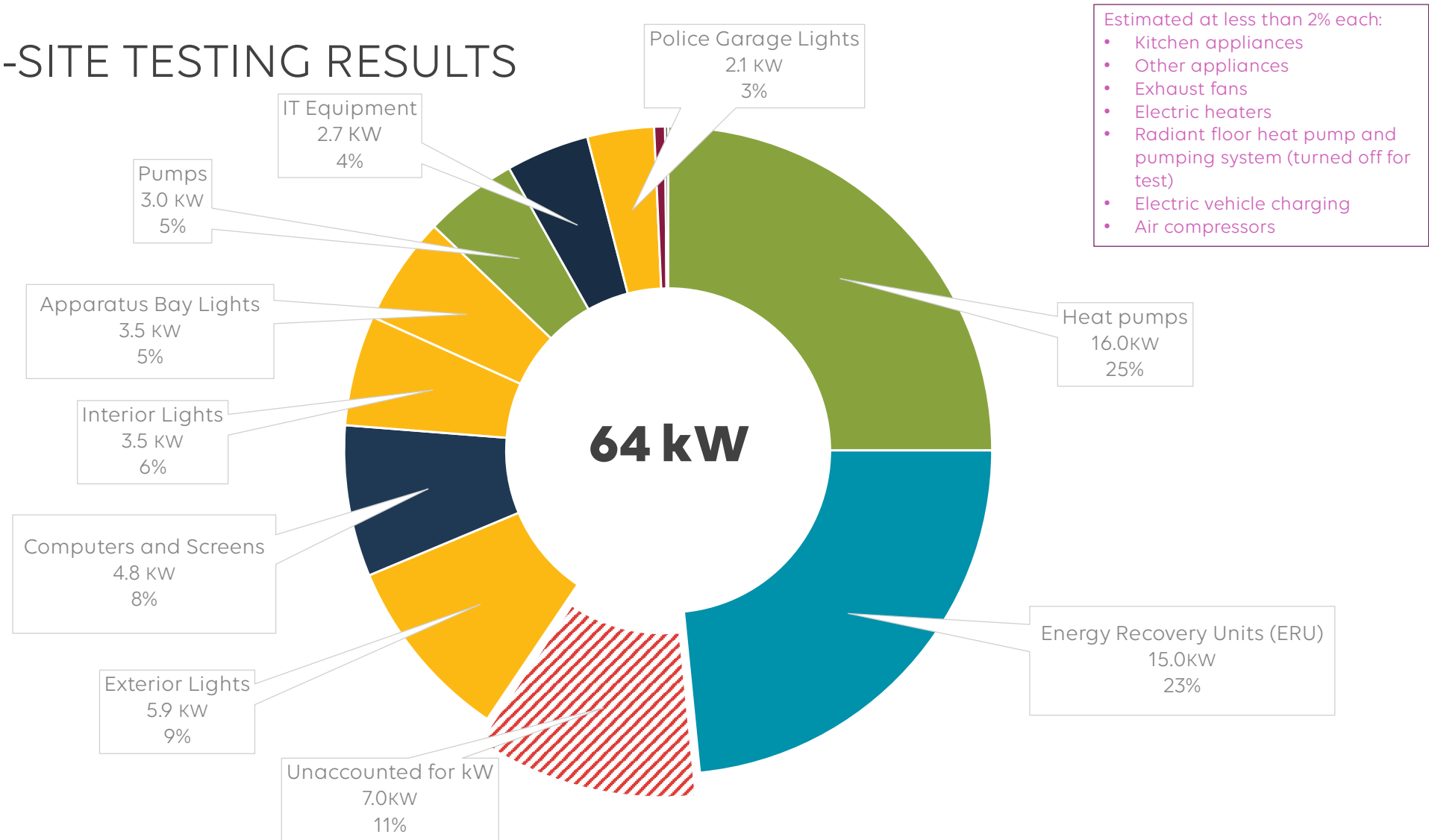


ON-SITE TESTING – 10/27/25

- Electric heaters were off.
- Almost all exterior lights were on. When HVAC system was shut down, most current draw in building was for the electrical site lighting panel (Panel K).
- Most interior lighting was off due to occupancy sensors.
- IT loads from the UPS units in main server room were similar to previously observed power draw.
- A/V server in court room A/V room was all on.



ON-SITE TESTING RESULTS



ENERGY REDUCTION MEASURE ESTIMATED SAVINGS

Item	Measure	Assumptions	Implementation Steps	kWh Reduced	Utility Cost	Cost to Implement	Simple Payback (years)
0.1	Review A/V loads						
0.2	Ensure most of the police parking garage lights are off at night.						
1	Sleep Timers for TVs and IT Power Management schedule for workstations.	Five TVs turned off from 7 pm to 7 am every night. Five Workstations turned to idle from 10 pm to 6 am every night.	TVs: Program sleep controls. Workstations: IT sleep schedule.	9,300	\$486	\$0*	0
2	Dim lights Fire Truck Apparatus Bay. Turn off exterior canopy lights from 10 pm to 6 am.	Reduce the 3 rows of lighting that are on at night by 50% from 10 pm to 6 am. Canopy lights off from 10 pm to 6 am.	Lighting controls technician programs lighting controls. Assumes entrance and rear exterior canopy lights are on interior lighting controls system.	5,300	\$277	\$800*	3
3	Reduce ERU-3 Fan Speeds at Night	Fans reduced by 33% at night from 10 pm to 6 am.	HGA to review room pressurization requirements and reprogram BAS schedule.	3,900	\$204	\$3,000 to \$4,000*	13
4	Reduce parking lot pole lights at night and install motion sensors	Dim parking lot lights by 75%, motion sensors raise 100% on detection and turn off after 10 minutes.	Retrofit 12 exterior pole lights with new dimmer controls and motion sensors.	2,800	\$146	\$5,000 to \$15,000	35
Total Energy Savings:				21,300	\$1,113	\$8,440	8

*HGA can investigate with 179D funds

RECOMMENDATIONS

1. Implement energy reduction ideas

- Reduce courtroom A/V equipment loads
- Ensure Police Garage and Sally Port lights at night when unoccupied
- Set up sleep timers or IT power management system for TV, monitors, and workstations in common areas
- Dim the Fire Truck Apparatus Bay lights at night
- Turn off exterior canopy lighting at night
- Reduce unneeded ventilation at night when building is in low occupancy (RERU-3)

2. Further Investigation

- Further quantify electric base load components
- Test strategies for impact on NZE goals
- Project ideas for advanced lighting controls

BIG PICTURE TAKEAWAYS

- Building energy performance far exceeds a code baseline building – using 86% less energy!!!
- Not “Net-Zero” but very close. 71% of the way to net-zero in 2024.
- Solar generation was inline with expectations, and generated the equivalent of the annual electric usage of 67 homes.
- To achieve net-zero energy certification, additional energy savings or renewable energy solutions are required.
- Building energy optimization is a normal part of the Measurement & Verification process.



McFarland Public Safety Building



BRAYARCHITECTS
HGA




VILLAGE OF
McFarland
SUMMARY SHEET

MEETING DATE: Monday, November 10, 2025

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Kong Thao, Associate Planner

AGENDA ITEM: Discussion on seed library.

PREVIOUS ACTION:

August 11, 2025 - S&NR committee discussed sustainability planning and initiatives.

September 8, 2025 - S&NR committee discussed Staff's initial findings on the discontinued Village Seed Library.

October 16, 2025 - S&NR committee discussed findings on operation of Seed Libraries from current programs.

ISSUE SUMMARY:

The Seed Library was previously discussed at the [September 8, 2025](#) and [October 16, 2025 Sustainability & Natural Resources Committee](#) meetings. The topics included findings on the previous seed library operations through the Village's Public Library, available from 2015-2018, and the operation of current programs including the City of Madison and the Village of Oregon's Seed Library program. The Committee requested additional information on the Village's Public Library operation and preliminary engagement on public interest.

Village Public Library

- Space used. The previous operation used the large meeting room in the Library for seed packing, which included 6 volunteers, accumulating to 4 hours total. The display was inside the main part of the library, beyond the detectors as the seeds had to be checked out. Staff avoided placing flyers or handouts in the lobby to avoid messes that would occur.
- Storage. During the program, seeds were available on display with the rest in storage to be refilled as needed. The seeds were not available between September–January, when there was little demand.
- Equipment. No equipment was leftover. Staff dispersed any leftover supplies to other libraries.

Public Interest

S&NR Committee member Christine Mania posted twice on social media to engage the level of interest in restarting a community-driven program. There were 15 people who expressed interest, with one person associated with the Walmart in Stoughton, offering to donate remaining seed packets from the season.



FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

This item is for discussion only.

ATTACHMENTS:

None