AGENDA

SCHOOL DISTRICT OF NEW GLARUS
FACILITIES, TRANSPORTATION & TECHNOLOGY COMMITTEE MEETING
MONDAY, AUGUST 25, 2025
HIGH SCHOOL LIBRARY/MEDIA CENTER, ROOM 183 JOIN ZOOM MEETING USING LINK HTTPS://US02WEB.ZOOM.US/J/88957098398?PWD=95SOCYC3KI35CMZSUA2BANDMZAL2AJ.1 BY PHONE USING 1-646-568-7788 MEETING ID 889 5709 8398 & PASSWORD 811417
1701 2ND STREET
NEW GLARUS, WISCONSIN 53574
6:30 PM

I. **Call to Order**
II. **Bus Shelter Update**
III. **Bus Parking Surfacing Bids** **2**

Proposal

New Glarus Concrete LLC
P. O. Box 798
New Glarus, WI. 53574
Cell # (608)-558-0630 or (608)-214-7071 Office # (608)-527-5028

To: New Glarus School District
1402 2nd St.
New Glarus, WI. 53574

Done At; Same

Date: Aug. 26, 2025

Item	Description	Unit Price	Hourly Rate	Total
Shed Floor	120' X 24" = 2880 sq. ft.5 in thick 6 bag mix & fiber mesh	$6.50 sq. ft.		$18,720.00
Thickend Edge	288' of 16" X 11" edge	$12.00 a ft.		$3,456.00
Wire Mesh	35 sheets wire mesh	$26.50 a sheet		$927.50
Rerod	1/2" rebar go around edge 25 sticks 20' long	$11.00 a stick		$275.00
Gravel	3/4 in. gravel if needed 48 tons	$16.50 a ton		$792.00
Drive Apron	120' X 12" = 1440 sq. ft.5 in thick 6 bag mix & fiber mesh	$6.50 sq. ft.		$9,360.00
Gravel	3/4 in. gravel if needed 24 tons	$16.50 a ton		$396.00
	Subject to change if there is a price increase in concrete			

New Glarus Concrete Is Not Responsible For Any Damage Incurred By Getting Concrete Into Jobs!

Subtotal	$ 33,926.50
Tax 5.5 %	
Total	$ 33,926.50

AS REQUIRED BY THE WISCONSIN LIEN LAW. NEW GLARUS CONCRETE HERBY NOTIFIES OWNERS THAT PERSONS OR COMPANIES FURNISHING LABOR OR MATERIALS FOR THE CONSTRUCTION ON OWNERS LAND MAY HAVE LIEN RIGHT ON OWNER LAND & BUILDING IF NOT PAID THOSE ENTITLED TO LIEN RIGHTS, IN ADDITION TO THE UNDERSIGNED. NEW GLARUS CONCRETE ARE THOSE WHO CONTRACT DIRECTLY WITH THE OWNER OR THOSE WHO GIVE THE OWNERS NOTICE WITHIN 60 DAYS AFTER THEY FIRST FURNISH LABOR OR MATERIALS FOR THE CONSTRUCTION, ACCORDINGLY. OWNERS PROBABLY WILL RECEIVE NOTICE FROM THOSE WHO FURNISHED LABOR OR MATERIALS FOR THE CONSTRUCTION , AND SHOULD GIVE COPY OF EACH NOTICE TO MORTGAGE LENDER IF ANY. NEW GLARUS CONCRETE AGREES TO COOPERATE WITH THE OWNERS AND LENDER, IF ANY. TO SEE THAT ALL POTENTIAL LIEN CLAIMANTS ARE DULY PAID. (NEW GLARUS CONCRETE CAN'T GUARANTEE CRACKING)

All material is guaranteed to be as specified. All work to be done in a work like manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over & above estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance.

Authorized
Signature_____Trevor Pernot_____
This proposal maybe withdraw
by us if not accepted within__30__days

A 1.5% per month service charge is added to account not paid within 30 days of billing date. A charge of __5%_ for heated concrete & _5%_ for winter additives.

Any extra labor not quoted in bid will be $80.00 per hr.

Signature _____

Conditions are satisfactory and herby accepted. You are authorized to do work as specified. Payment to be made as work completed.

Signature_____

Date of Acceptance:_____

Signature_____

Long Term Facilities Plan	Project Description	Notes
Remodel/Replacement Considerations		
	HS South and West Parking Lots	Summer 2025
	ES Parking South and West Parking Lots	Summer 2025
	ES Roofing Replacement	Roofing Study Being Conducted
	MS Roof Replacement	Est. 2030
	MS Rooftop HVAC Units	Est. 2030
	Pave Bus Parking Lot	Summer 2025
	HS Bathrooms - New Flooring, Toilets, Dividers	
	Boiler replacement plan	
	Painting Rotation	
	Remodel HS Classrooms	
	Motion Sensors for Lights in Gyms and Commons	
	Cages for Lights Switches in Gym	
	Clean up MS playground area, possibly expand MS parking lot and continue driving land around NW corner	
	Repair/replace concrete sidewalks etc. as needed	
	Tennis Courts	
Addition/New Building Considerations		
	Storage Building at Athletic Complex	Summer 2025
	Bathrooms	
	Larger Updated Auditorium	
	Choir Room	
	Larger Lunch Room	
	IT Work Area	
	MS Teacher Workroom	Done
	Add Ticket Area and Concessions	
	Bus Barn and/or Paved Lot for Busses	For Consideration - Summer 2025
	Larger Fitness Area With Outside Entrance	
	Indoor Pool	

100 kW Photovoltaic System Proposal - Existing Building

Prepared For

New Glarus Elementary School
608-214-5642
thomson@tds.net

Full Spectrum Solar was founded by two Madison area brothers, Burke and Mark O'Neal, in 2002 and has installed over 800 solar pv systems in southern WI. With over 50 years of combined experience, our office staff consists of mechanical engineers, master electricians, and NABCEP certified installers. One of our core values is running a business in an environmentally friendly and sustainable manner which guides all aspects of our business.

Prepared By

8/20/2025

Burke O'Neal
608-284-9495
burke@fullspectrumsolar.com

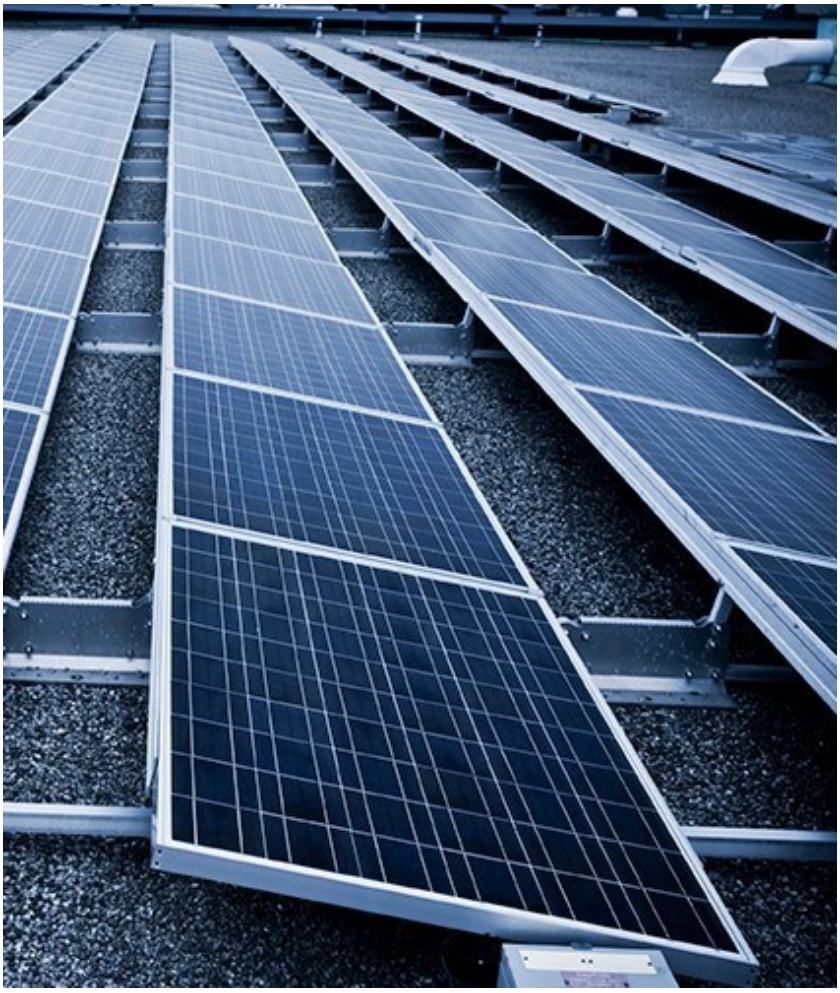
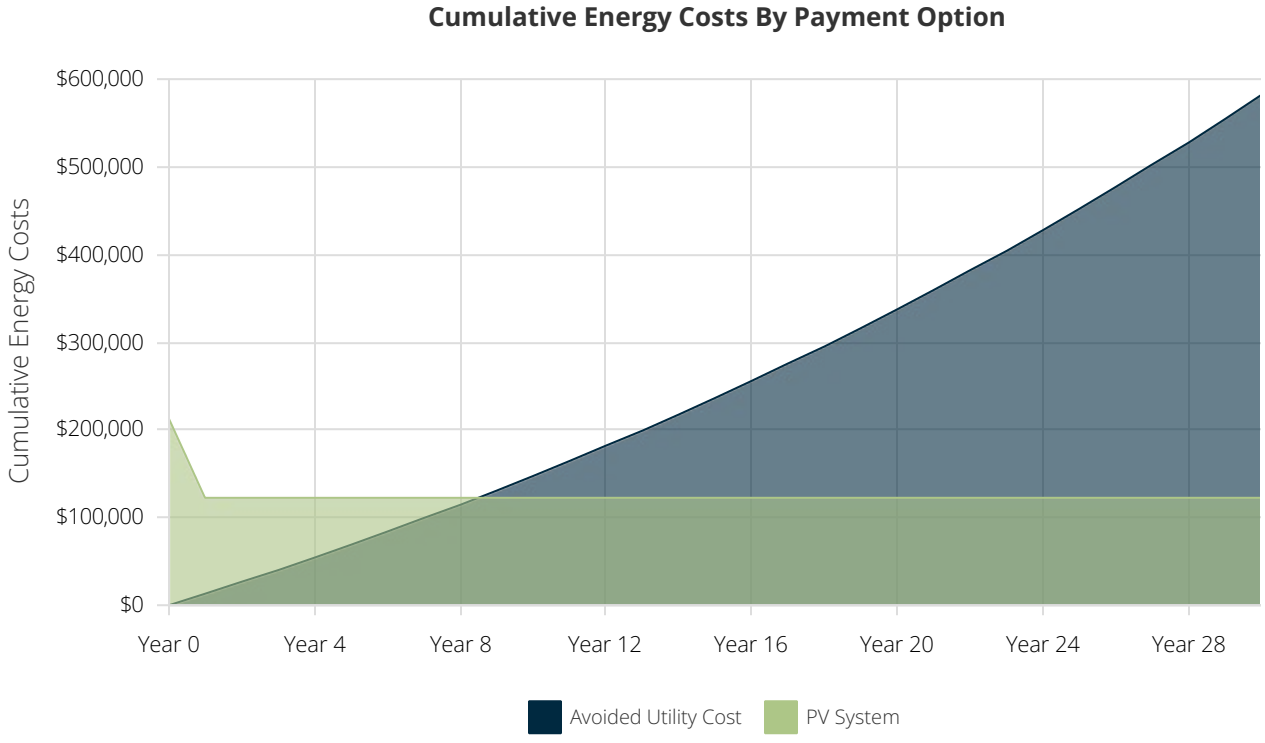


Table of Contents

1 Project Summary

Payment Options	PV System
Contract Amount	$212,500
Price per Watt	$2.11
Total Incentives	$90,031
Net Cost	$122,469
Return on Investment	8.5 Years
Total Electric Bill Savings over 30 Yrs	$581,758
Net Savings over 30 Yrs	$459,289

Combined Solar PV Rating
Power Rating: 100,620 W-DC



2.1.1 PV System Details

General Information
Facility: 430300-00
Address: 420 2nd St New Glarus WI 53574

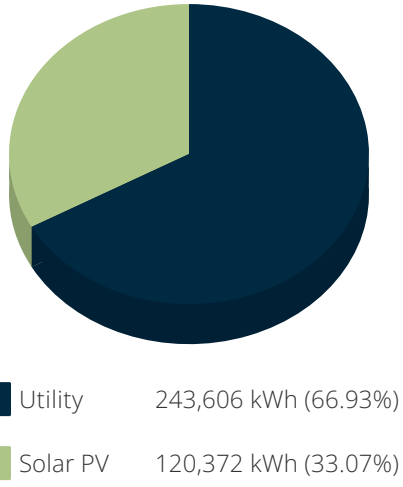
Solar PV Equipment Description
Solar Panels: (234) Silfab SIL-430 QD
Inverters: (4) Fronius Symo 20.0-3-480 (2014)

Solar PV Equipment Typical Lifespan
Solar Panels: Greater than 30 Years
Inverters: 15 Years

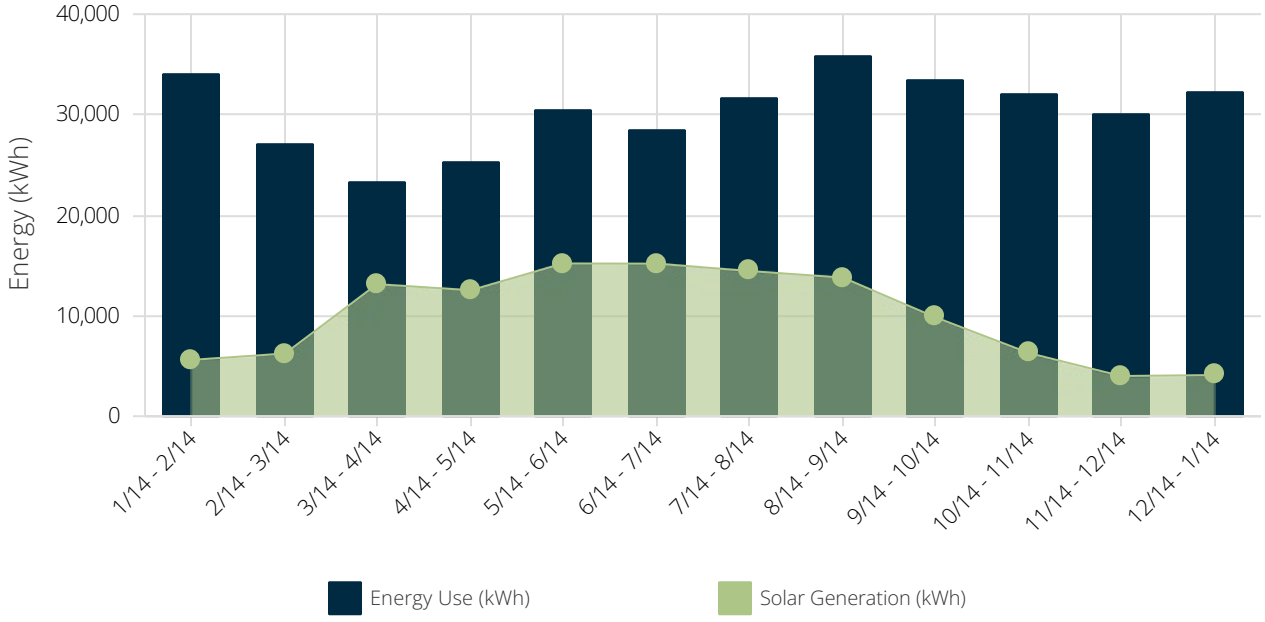
Solar PV System Cost and Incentives	
Solar PV System Cost	$212,500
Direct pay - 30% ITC	-$85,000
(FOE) Business Incentive	-$5,031
Net Solar PV System Cost	**$122,469**

Solar PV System Rating
Power Rating: 100,620 W-DC

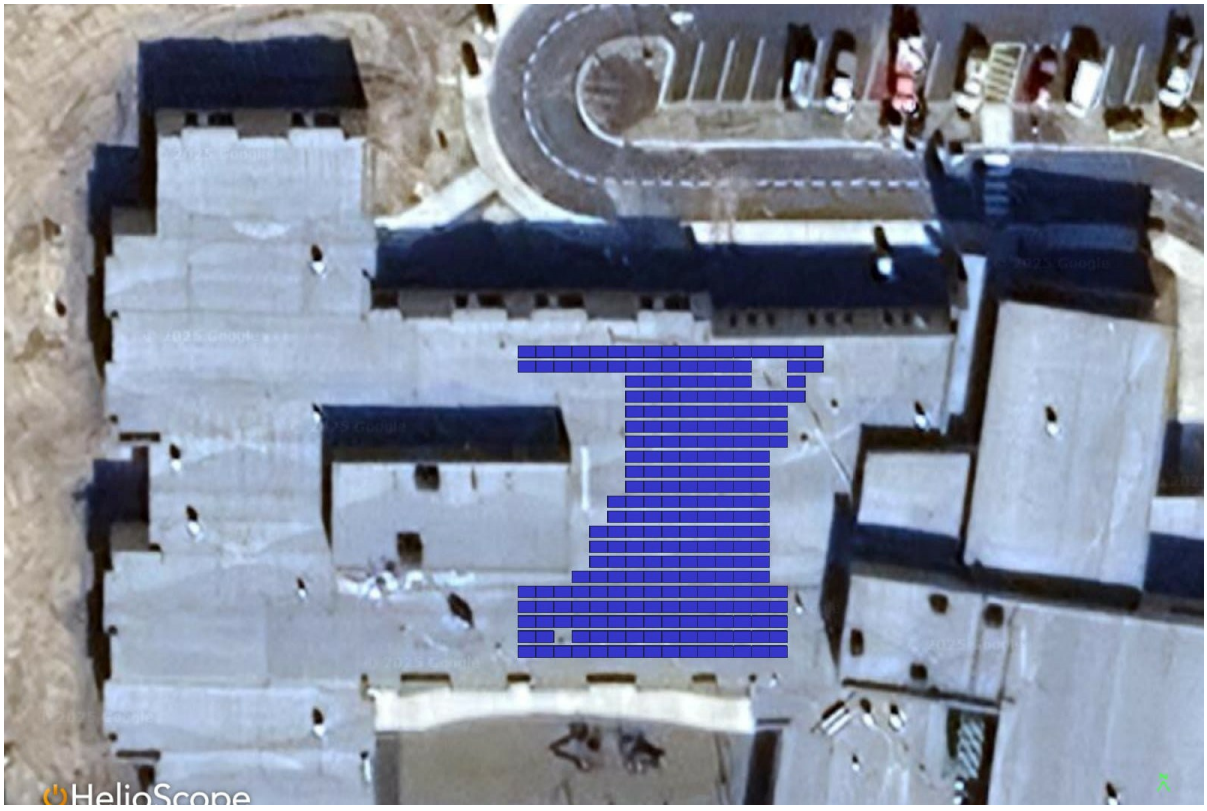
Energy Consumption Mix
Annual Energy Use: 363,978 kWh



Monthly Energy Use vs Solar Generation



2.1.2 PV System Layout



2.1.3 Rebates and Incentives

This section summarizes all incentives available for this project. The actual rebate and incentive amounts for this project are shown in each example.

Focus on Energy 2025 Business/Non-Profit/Municipal PV Incentive

Focus On Energy Business Customer PV Incentive up to 500+ kW (DC) or $25,000 cap for the installation of Solar Electric (PV). $50 per kW with max incentive $25,000. This incentive is available to commercial properties (e.g. any property outside of a 1-3 unit home), and applies also to municipalities, non profits, and/or any entity on a commercial utility rate structure.

Total Incentive Value: $5,031

Direct Pay, Investment Tax Credit (ITC) - 40%

The Inflation Reduction Act (IRA) of 2022 contains a "direct pay" provision that enables certain tax-exempt customers, including state and local government, to receive a direct cash payment in lieu of an investment tax credit (ITC). Entities that qualify for direct pay are eligible to receive a 30% direct payment, assuming they meet the IRA established prevailing wage and apprenticeship requirements in order to qualify for the full 30% “increased rate”, rather than a 6% “base rate”. The IRA states that direct pay is only available for entities, including: an entity exempt from the tax, any State government (or political subdivision thereof), the Tennessee Valley Authority, an Indian tribal government, an Alaska Native Corporation, any corporation operating on a cooperative basis which is engaged in furnishing electric energy to persons in rural areas. These entities may take direct pay for solar and storage in the ITC and PTC as well as the ITC/PTC when tech neutral starts after 2025.

Total Incentive Value: $85,000

2.1.4 Utility Rates

The table below shows the rates associated with your current utility rate schedule (Cp-1). Your estimated electric bills after solar are shown on the following page.

Customer Charges				Energy Charges				Demand Charges			
Season	Charge Type	Rate Type	Cp-1	Season	Charge Type	Rate Type	Cp-1	Season	Charge Type	Rate Type	Cp-1
S1	Flat Rate	per billing period	$75.00	S1	On Peak	Import	$0.1033	S1	Flat Rate	Import	$2.00
S1	Flat Rate: Charges Vary With Units	per billing period	$1.00	S1	Off Peak	Import	$0.0744	S1	On Peak	Import	$10.50

2.1.5 Current Electric Bill

The table below shows your annual electricity costs based on the most current utility rates and your previous 12 months of electrical usage.

Rate Schedule: NGU - Cp-1

Time Periods	Energy Use (kWh)		Max Demand (kW)		Charges			
Bill Ranges & Seasons	On Peak	Off Peak	NC / Max	On Peak	Other	Energy	Demand	Total
1/14/2025 - 2/14/2025 S1	16,607	17,420	82	82	$75	$3,012	$1,175	$4,262
2/14/2025 - 3/14/2025 S1	13,173	13,945	75	75	$75	$2,398	$1,102	$3,575
3/14/2025 - 4/14/2025 S1	11,748	11,561	78	78	$75	$2,074	$1,133	$3,282
4/14/2025 - 5/14/2025 S1	14,836	10,500	106	106	$75	$2,314	$1,427	$3,816
5/14/2025 - 6/14/2025 S1	18,296	12,138	123	123	$75	$2,793	$1,606	$4,474
6/14/2025 - 7/14/2025 S1	15,093	13,462	140	140	$75	$2,561	$1,784	$4,420
7/14/2024 - 8/14/2024 S1	17,446	14,175	138	138	$75	$2,857	$1,763	$4,695
8/14/2024 - 9/14/2024 S1	22,258	13,573	157	157	$75	$3,309	$1,963	$5,347
9/14/2024 - 10/14/2024 S1	20,603	12,905	157	157	$75	$3,088	$1,963	$5,126
10/14/2024 - 11/14/2024 S1	19,364	12,586	136	136	$75	$2,937	$1,742	$4,754
11/14/2024 - 12/14/2024 S1	16,288	13,793	109	109	$75	$2,709	$1,459	$4,242
12/14/2024 - 1/14/2025 S1	14,241	17,966	103	103	$75	$2,808	$1,396	$4,278
Total	199,953	164,024	-	-	$900	$32,859	$18,510	$52,269

2.1.6 New Electric Bill

Rate Schedule: NGU - Cp-1

Time Periods	Energy Use (kWh)		Max Demand (kW)		Charges			
Bill Ranges & Seasons	On Peak	Off Peak	NC / Max	On Peak	Other	Energy	Demand	Total
1/14/2025 - 2/14/2025 S1	12,812	15,615	77	77	$75	$2,498	$1,099	$3,671
2/14/2025 - 3/14/2025 S1	8,401	12,482	69	69	$75	$1,813	$1,015	$2,902
3/14/2025 - 4/14/2025 S1	2,762	7,409	57	54	$75	$1,006	$857	$1,938
4/14/2025 - 5/14/2025 S1	6,139	6,661	89	89	$75	$1,239	$1,225	$2,538
5/14/2025 - 6/14/2025 S1	7,804	7,429	109	109	$75	$1,482	$1,435	$2,991
6/14/2025 - 7/14/2025 S1	5,153	8,221	116	113	$75	$1,316	$1,477	$2,868
7/14/2024 - 8/14/2024 S1	7,396	9,777	133	98	$75	$1,619	$1,319	$3,013
8/14/2024 - 9/14/2024 S1	12,236	9,810	135	129	$75	$2,101	$1,645	$3,821
9/14/2024 - 10/14/2024 S1	13,996	9,652	145	145	$75	$2,223	$1,813	$4,110
10/14/2024 - 11/14/2024 S1	14,372	11,293	103	103	$75	$2,340	$1,372	$3,786
11/14/2024 - 12/14/2024 S1	13,440	12,639	103	102	$75	$2,341	$1,361	$3,777
12/14/2024 - 1/14/2025 S1	11,554	16,555	91	91	$75	$2,429	$1,246	$3,750
Total	116,065	127,543	-	-	$900	$22,406	$15,860	$39,166

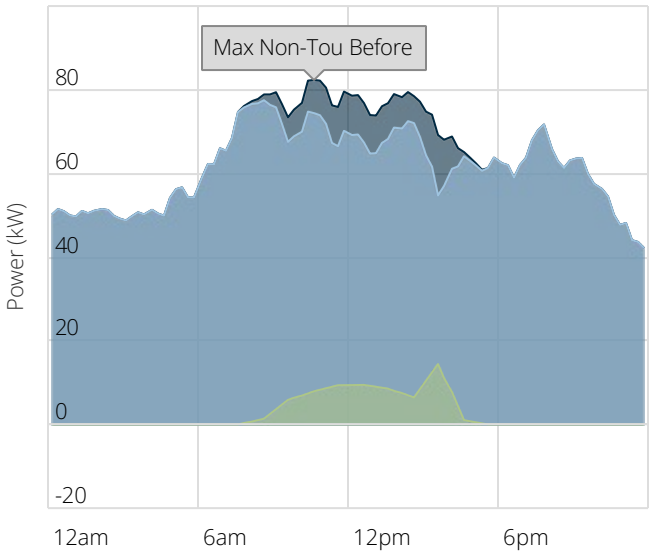
Annual Electricity Savings: $13,103

2.1.7 Demand Profiles

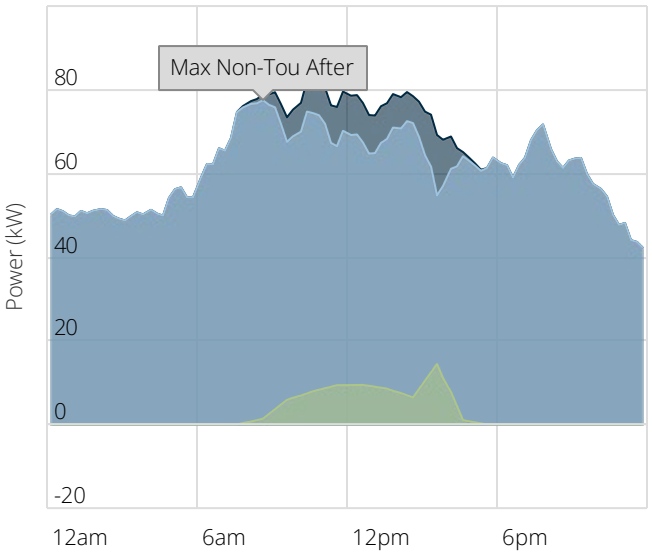
Date Range: 1/14/2025 - 2/14/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 1/22/2025



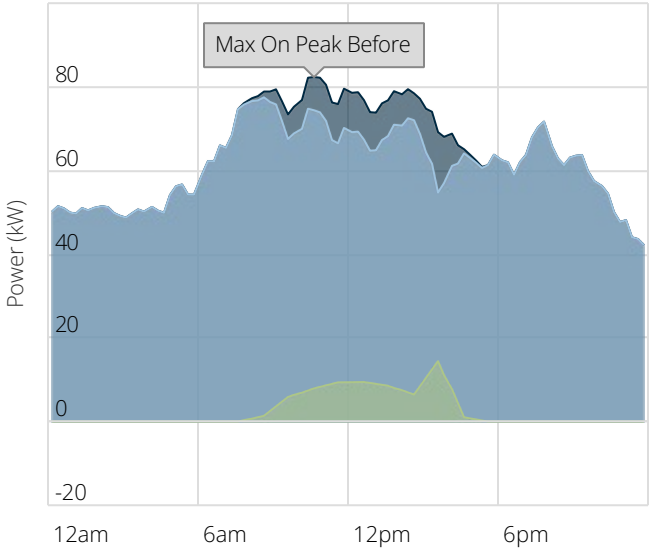
Max Demand After 1/22/2025



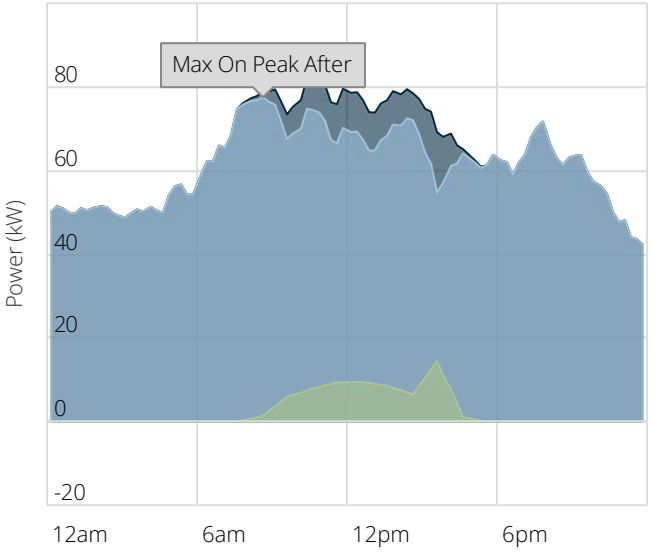
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 1/22/2025



Max On Peak Demand After 1/22/2025



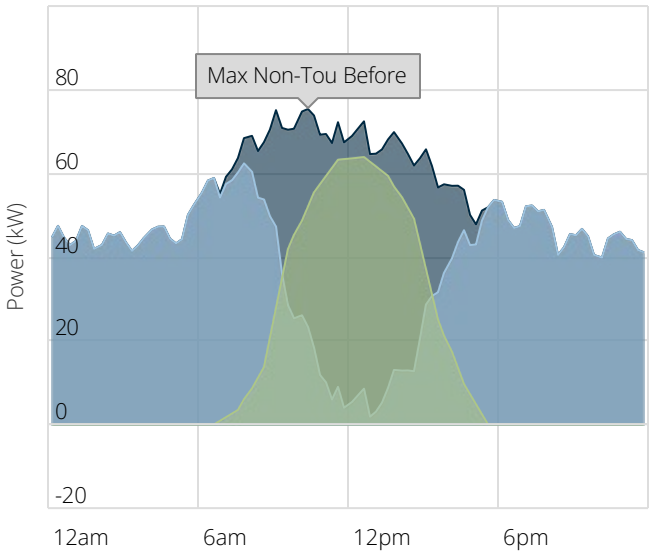
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

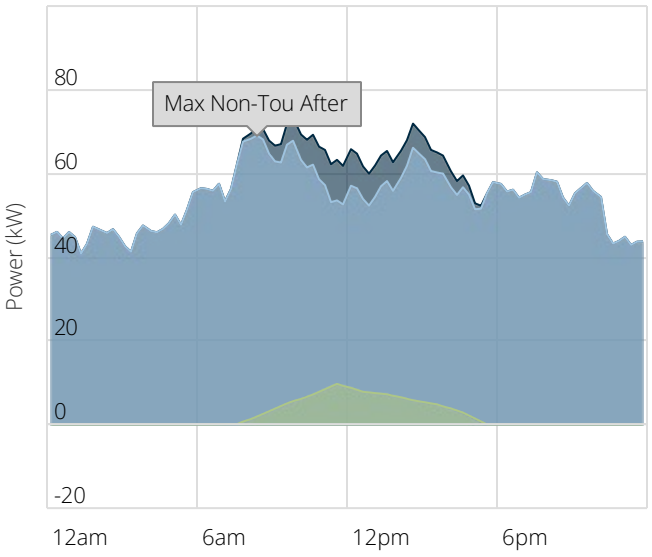
Date Range: 2/14/2025 - 3/14/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 2/17/2025



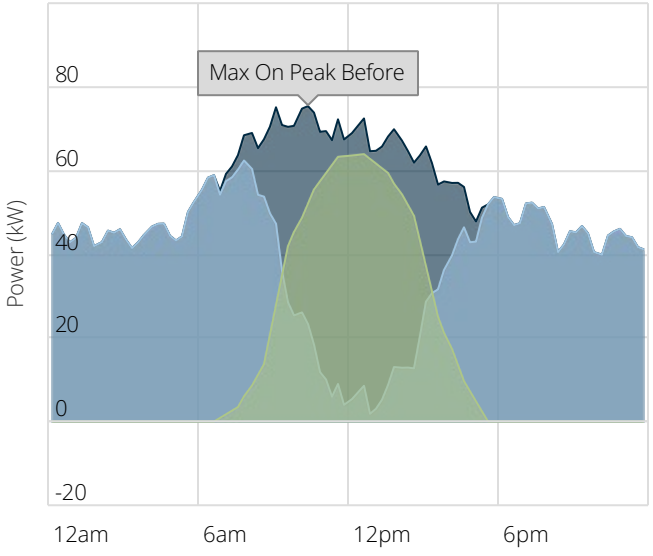
Max Demand After 2/19/2025



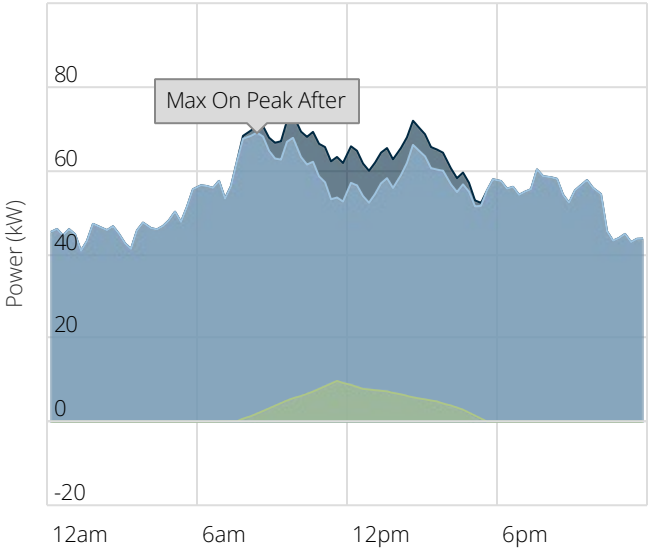
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 2/17/2025



Max On Peak Demand After 2/19/2025



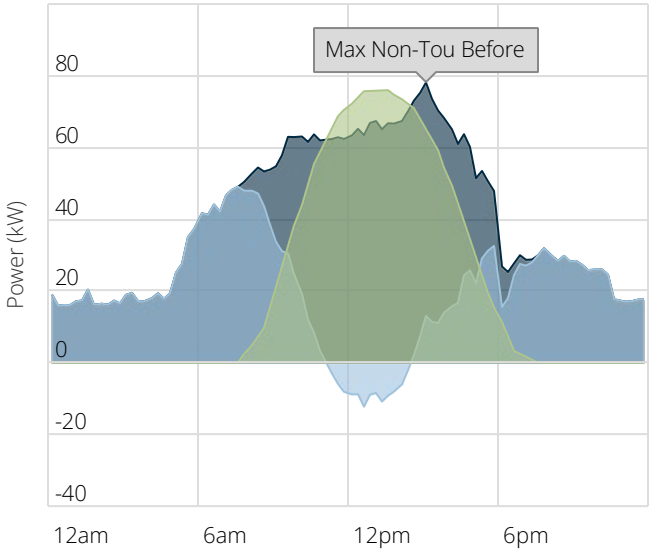
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

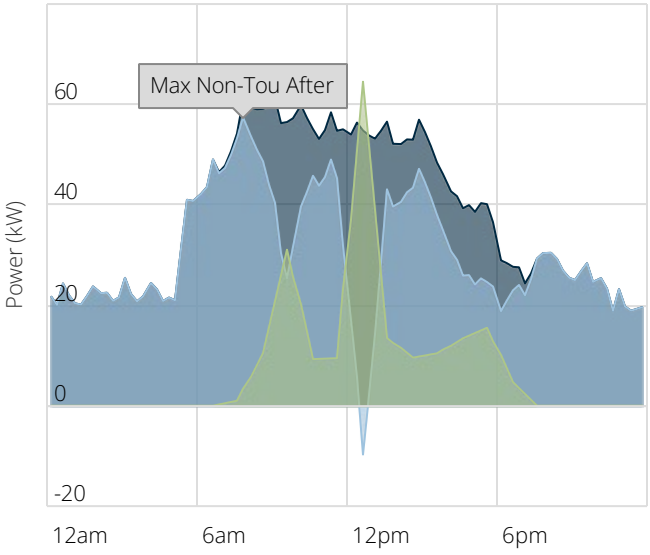
Date Range: 3/14/2025 - 4/14/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 3/14/2025



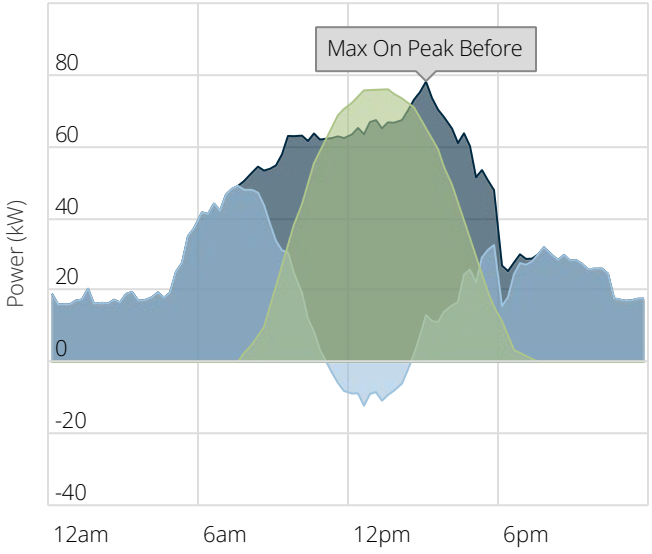
Max Demand After 3/31/2025



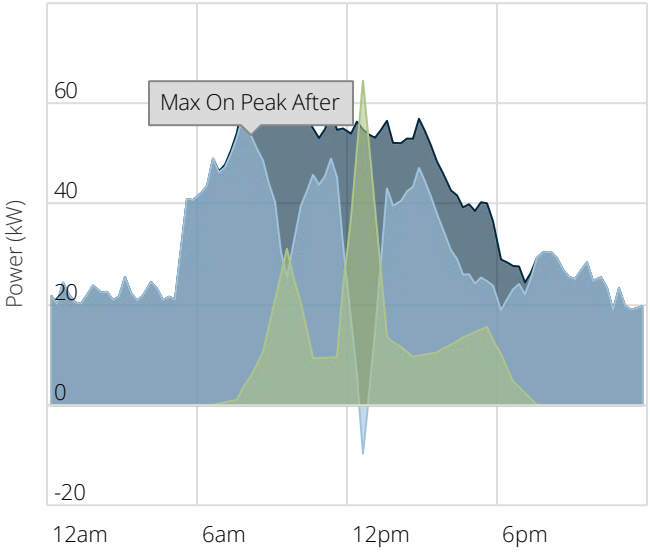
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 3/14/2025



Max On Peak Demand After 3/31/2025



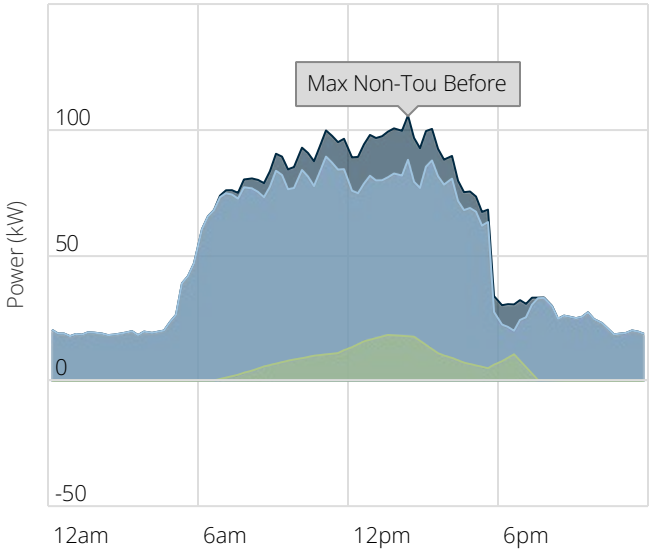
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

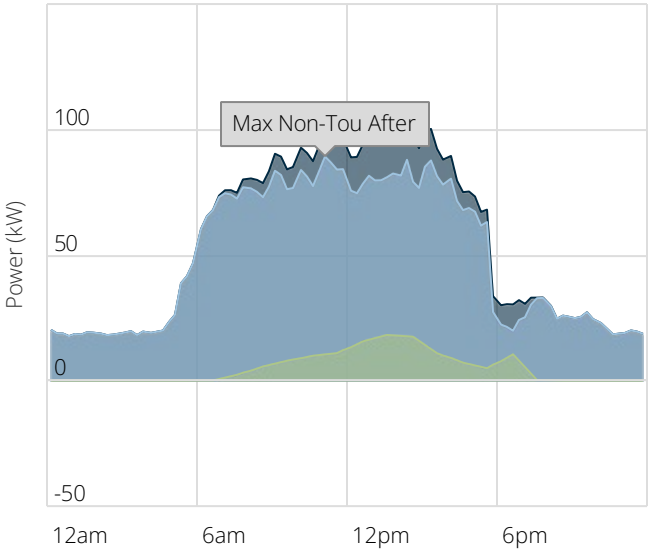
Date Range: 4/14/2025 - 5/14/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 5/13/2025



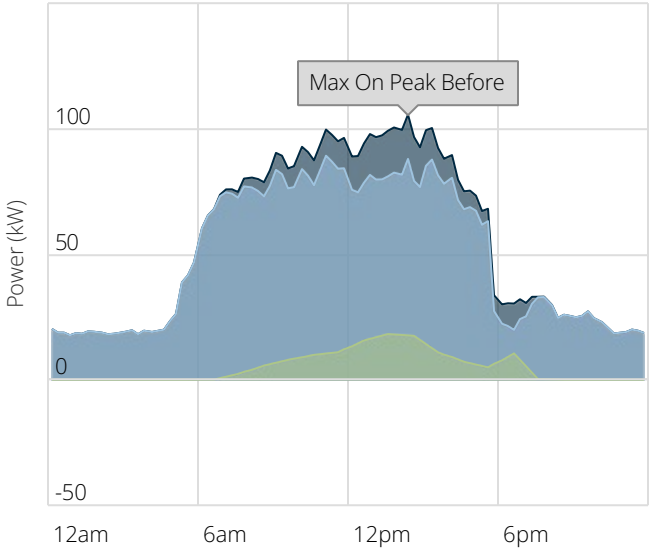
Max Demand After 5/13/2025



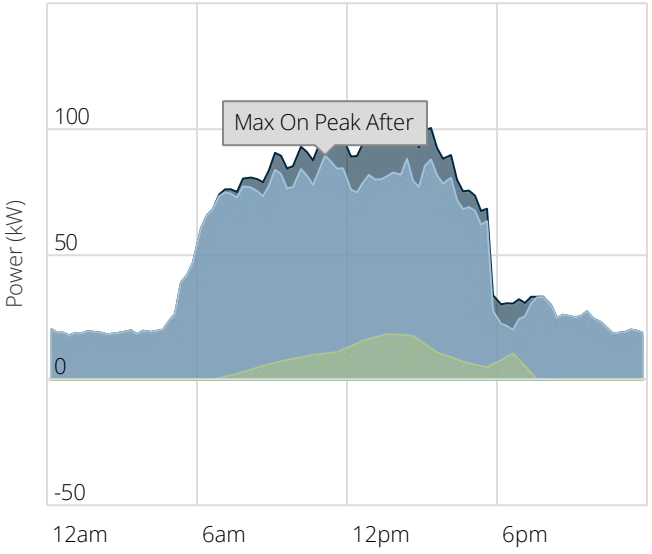
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 5/13/2025



Max On Peak Demand After 5/13/2025



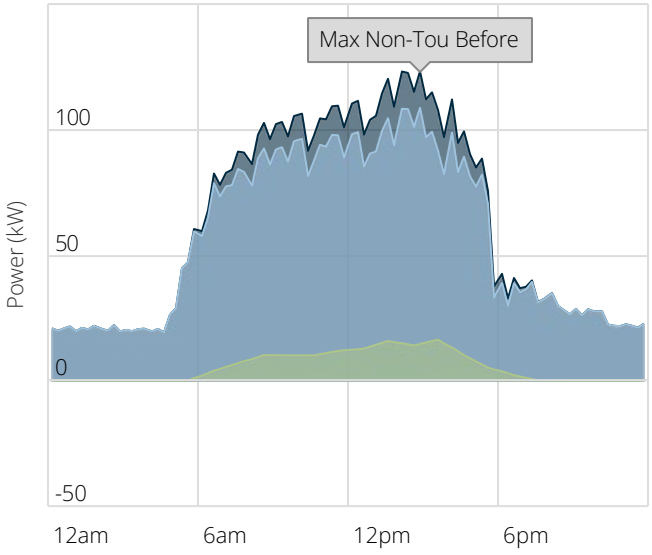
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

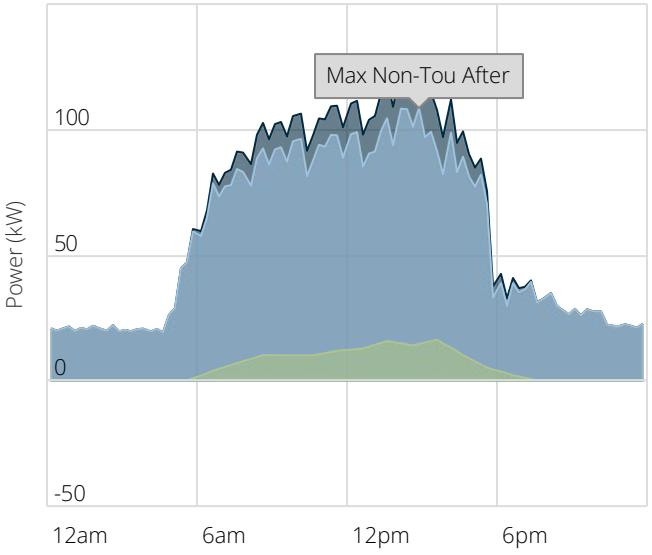
Date Range: 5/14/2025 - 6/14/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 5/15/2025



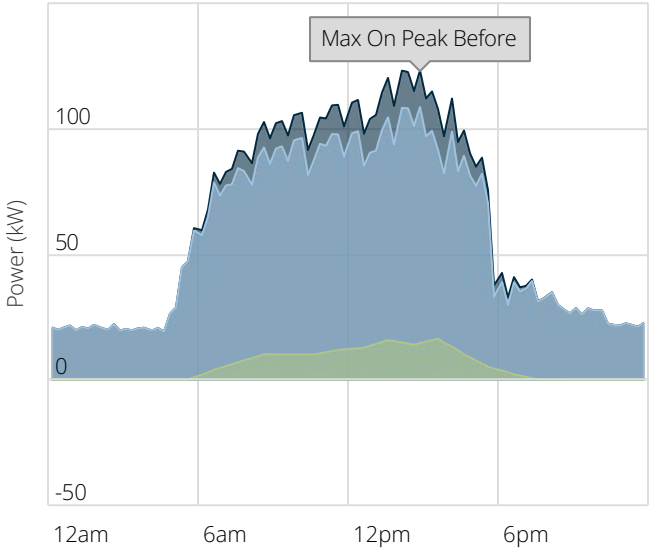
Max Demand After 5/15/2025



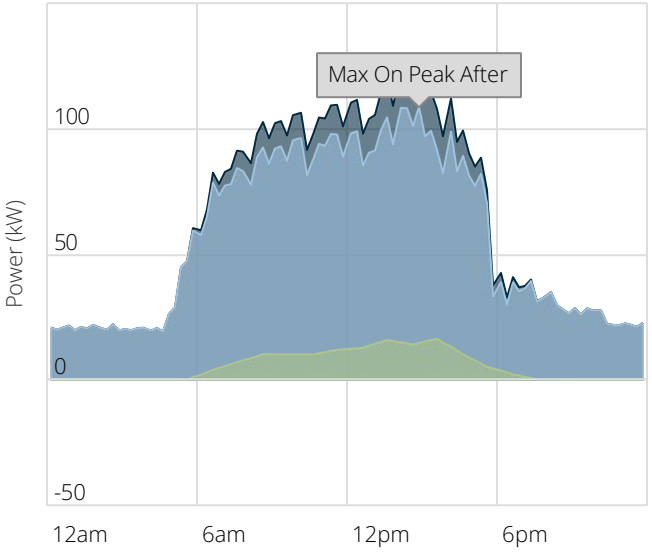
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 5/15/2025



Max On Peak Demand After 5/15/2025



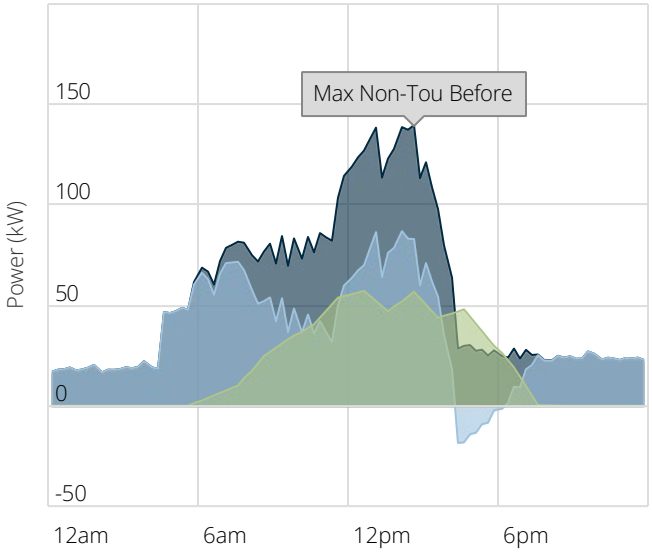
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

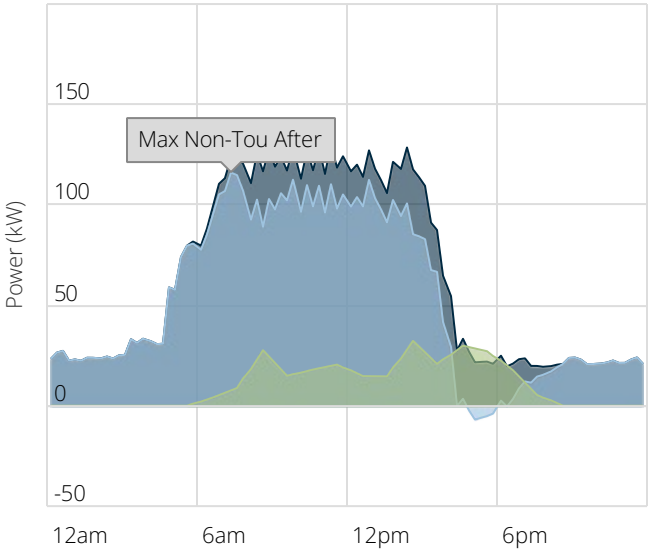
Date Range: 6/14/2025 - 7/14/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 6/25/2025



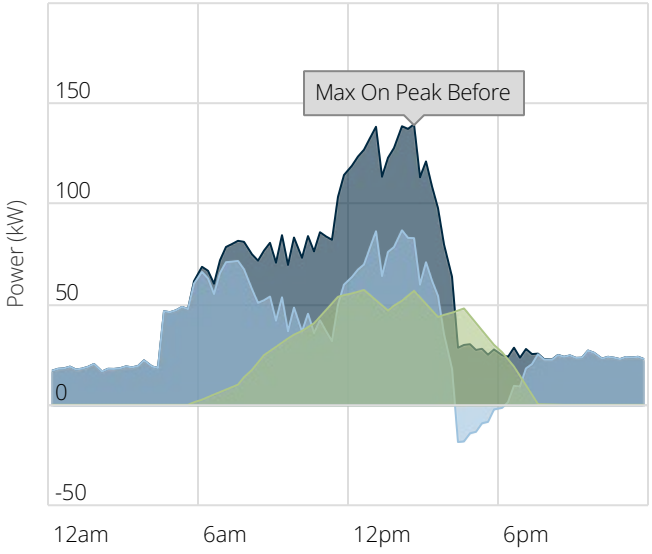
Max Demand After 6/26/2025



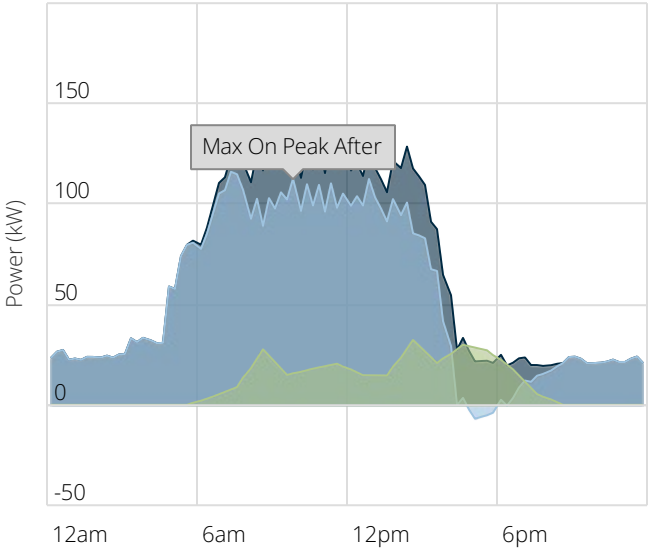
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 6/25/2025



Max On Peak Demand After 6/26/2025



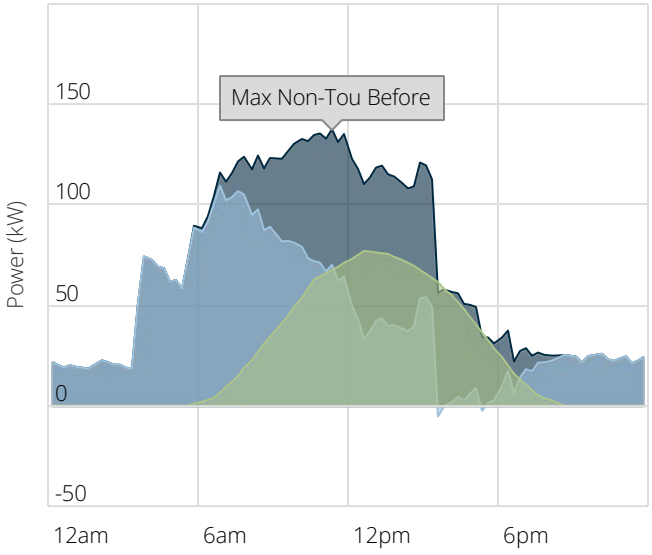
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

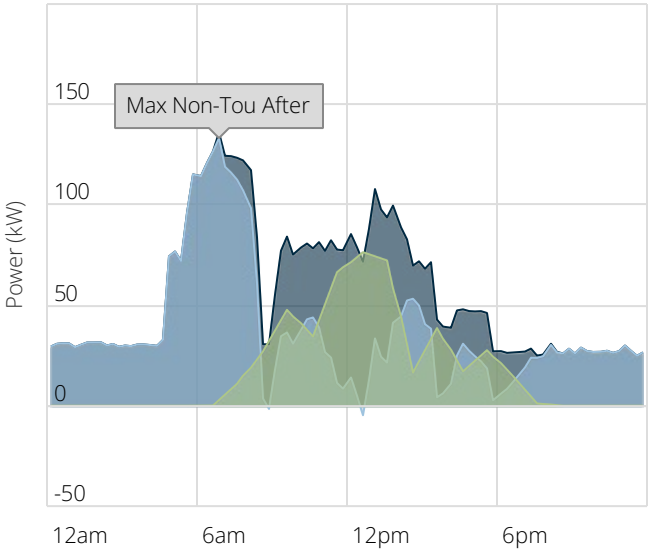
Date Range: 7/14/2024 - 8/14/2024

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 7/15/2024



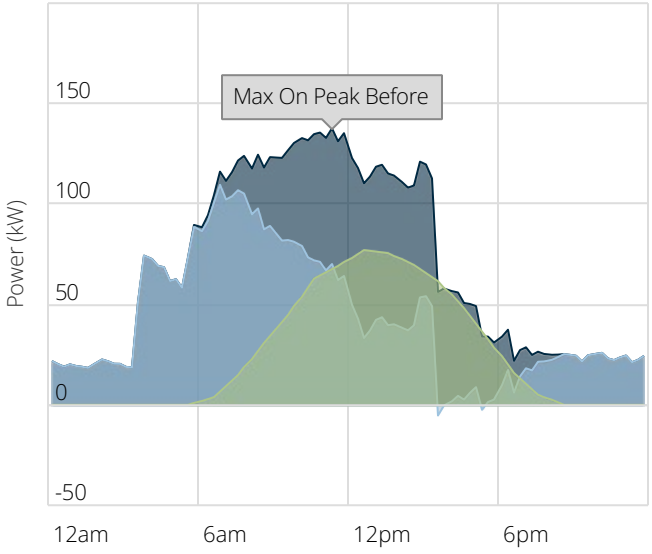
Max Demand After 8/1/2024



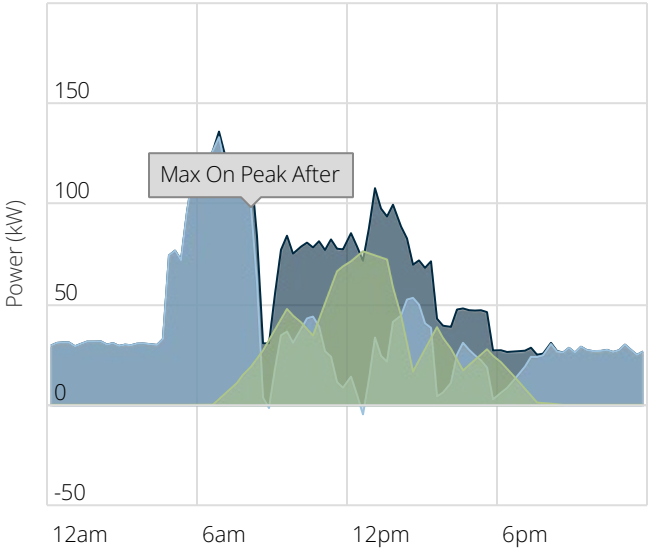
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 7/15/2024



Max On Peak Demand After 8/1/2024



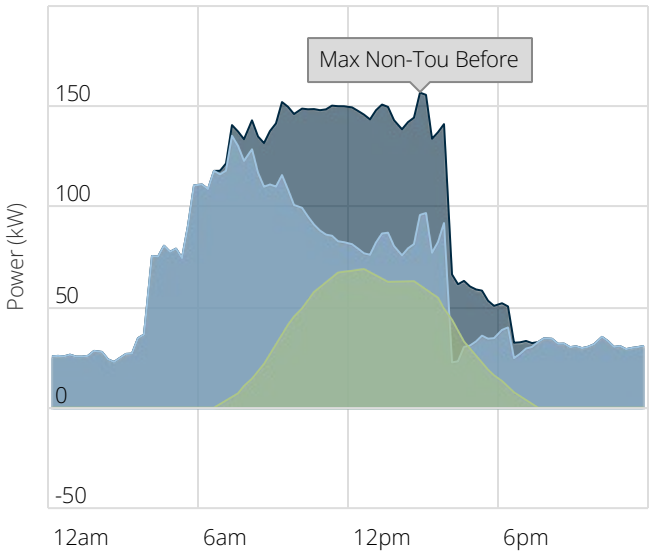
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

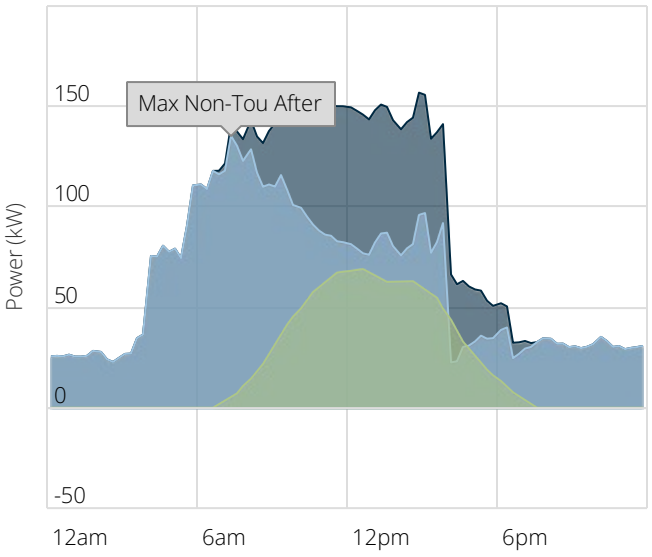
Date Range: 8/14/2024 - 9/14/2024

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 8/27/2024



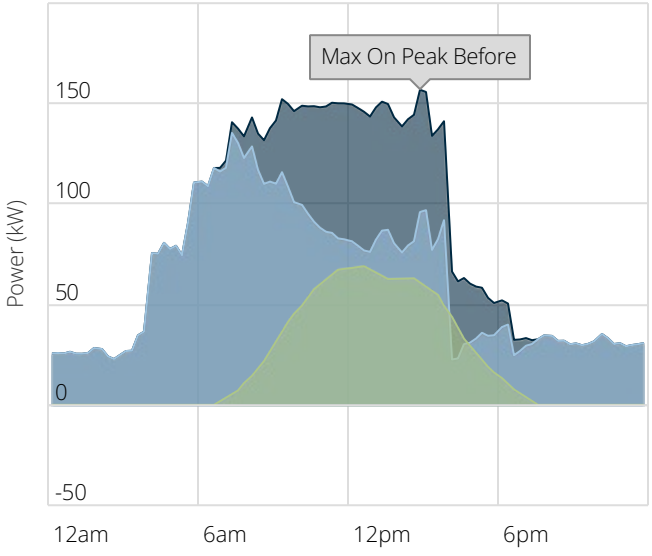
Max Demand After 8/27/2024



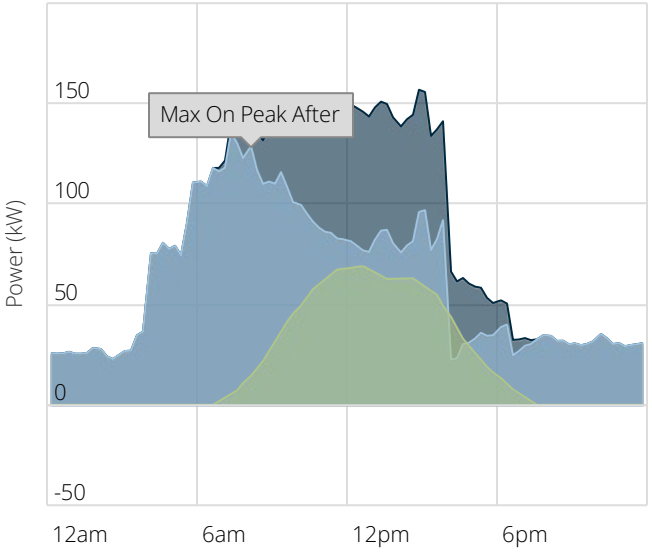
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 8/27/2024



Max On Peak Demand After 8/27/2024



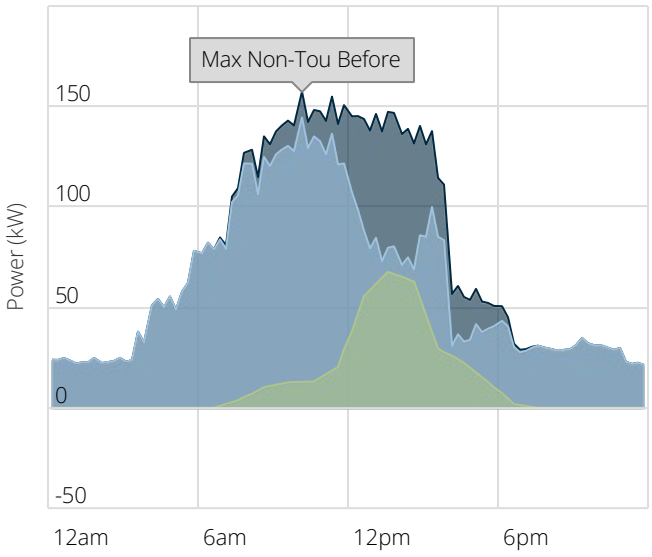
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

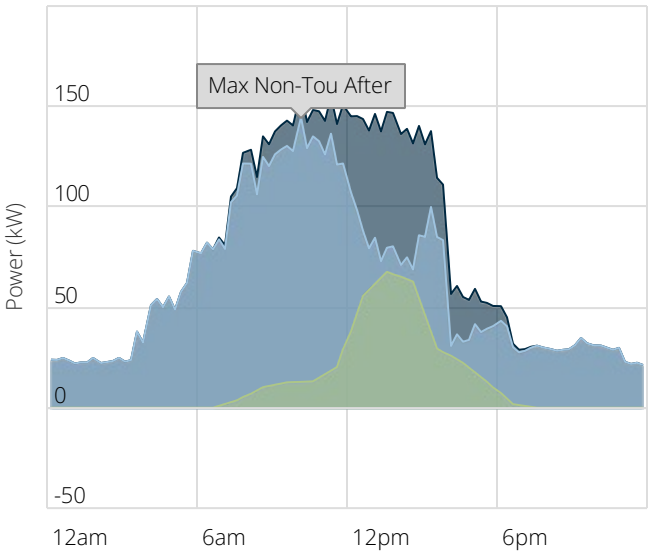
Date Range: 9/14/2024 - 10/14/2024

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 9/16/2024



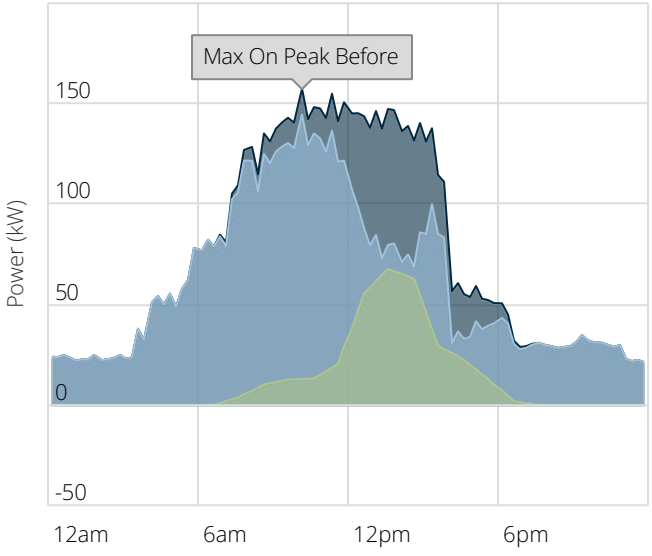
Max Demand After 9/16/2024



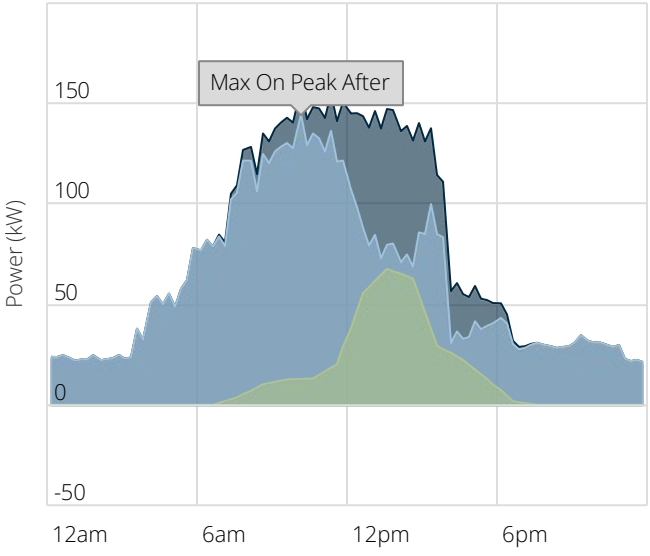
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 9/16/2024



Max On Peak Demand After 9/16/2024



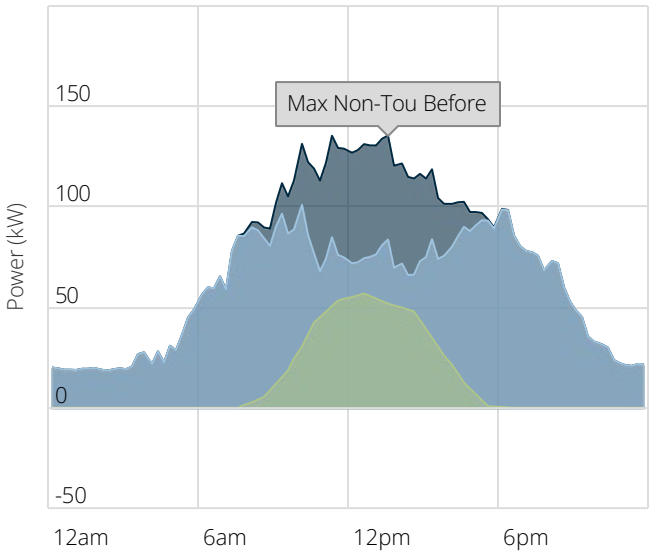
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

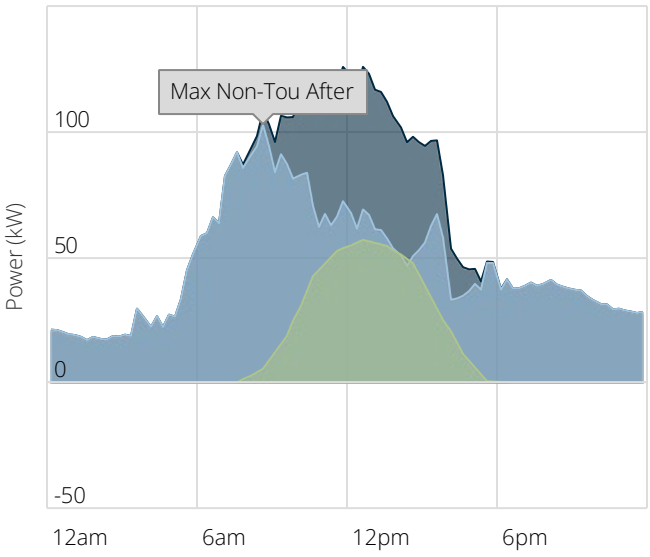
Date Range: 10/14/2024 - 11/14/2024

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 10/29/2024



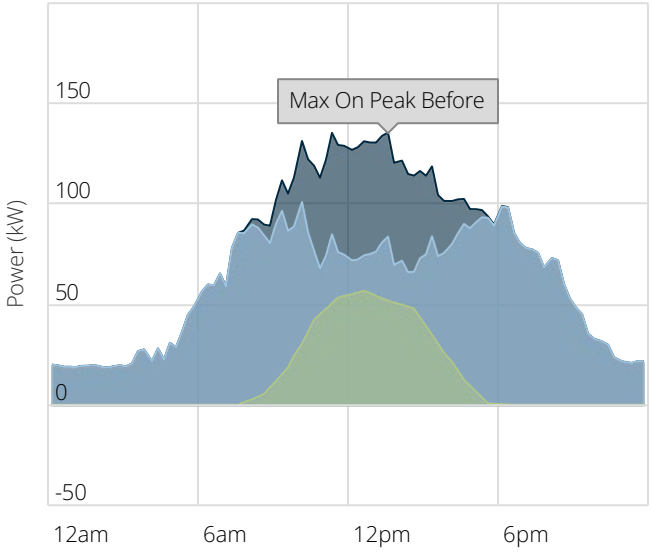
Max Demand After 10/30/2024



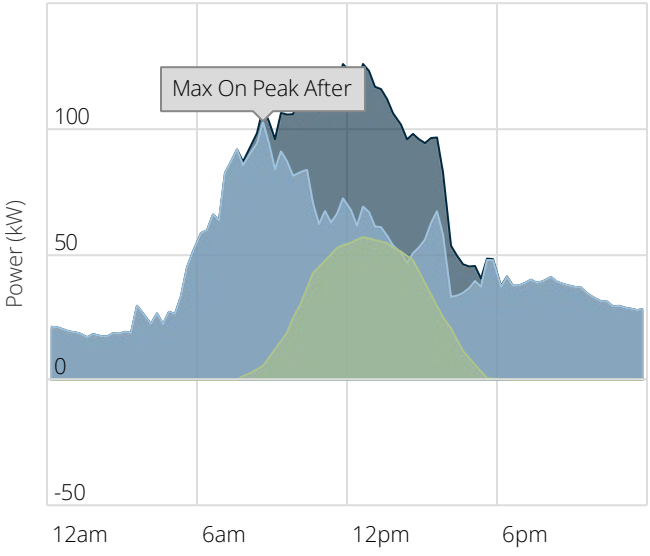
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 10/29/2024



Max On Peak Demand After 10/30/2024



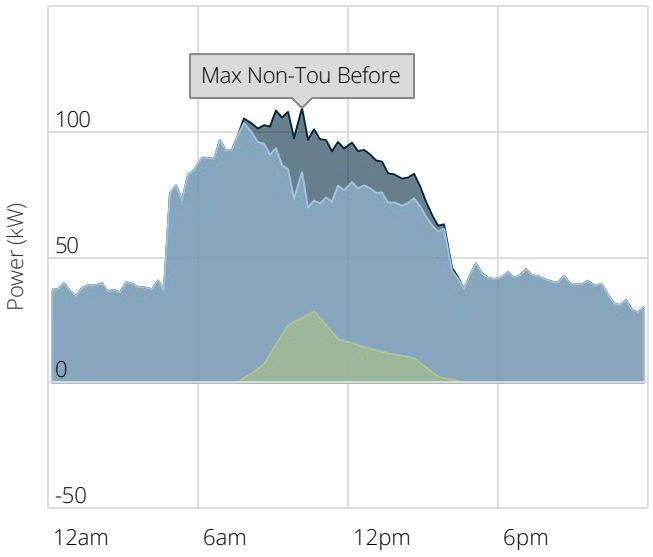
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

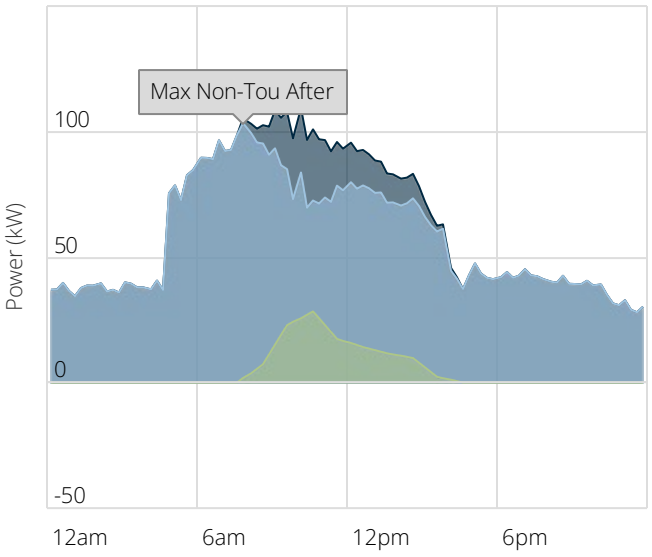
Date Range: 11/14/2024 - 12/14/2024

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 12/5/2024



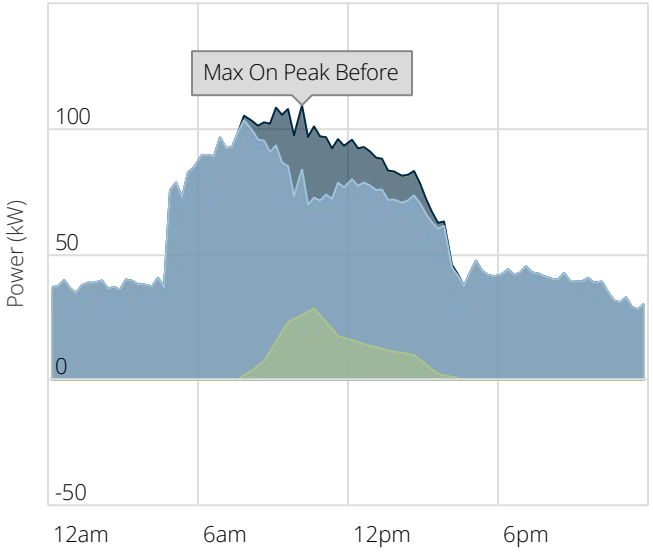
Max Demand After 12/5/2024



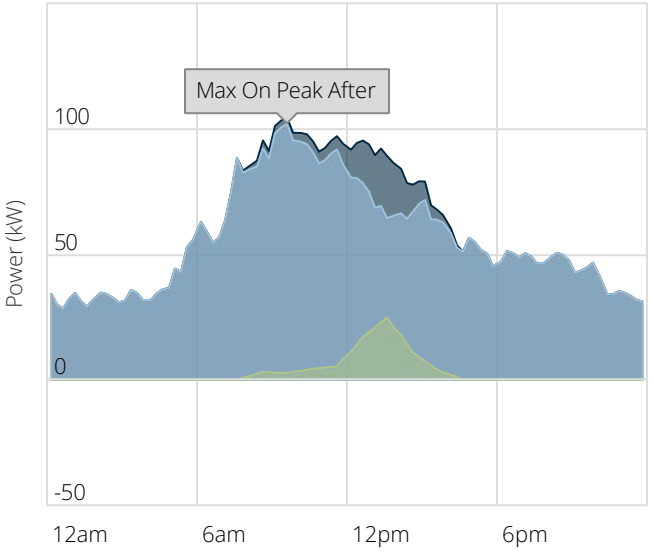
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 12/5/2024



Max On Peak Demand After 12/12/2024



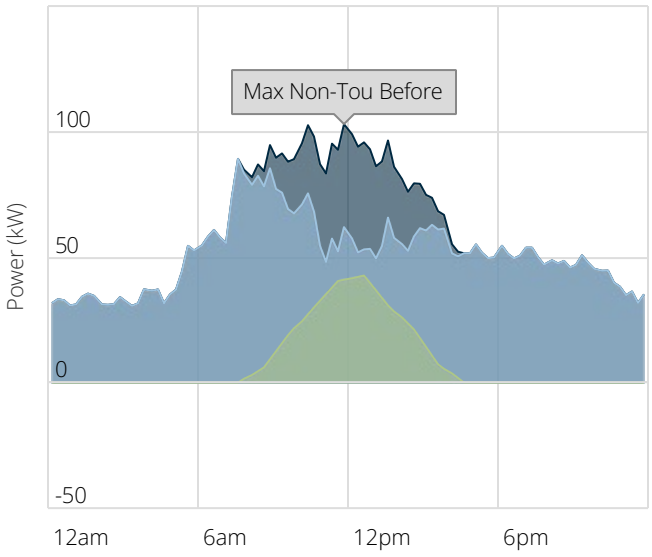
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

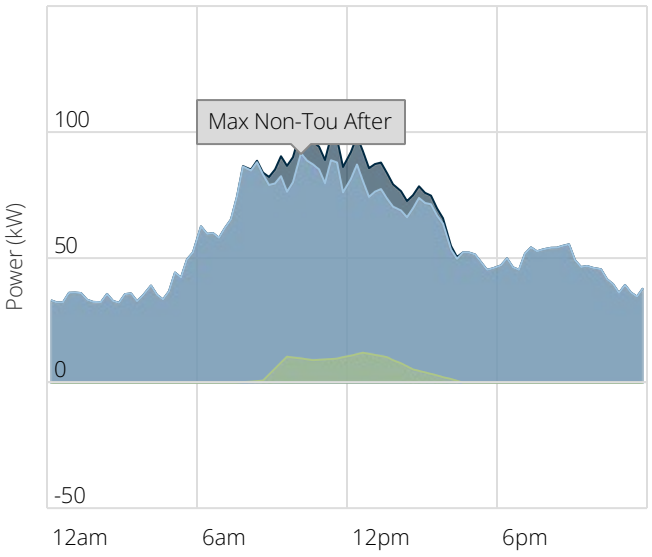
Date Range: 12/14/2024 - 1/14/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 12/19/2024



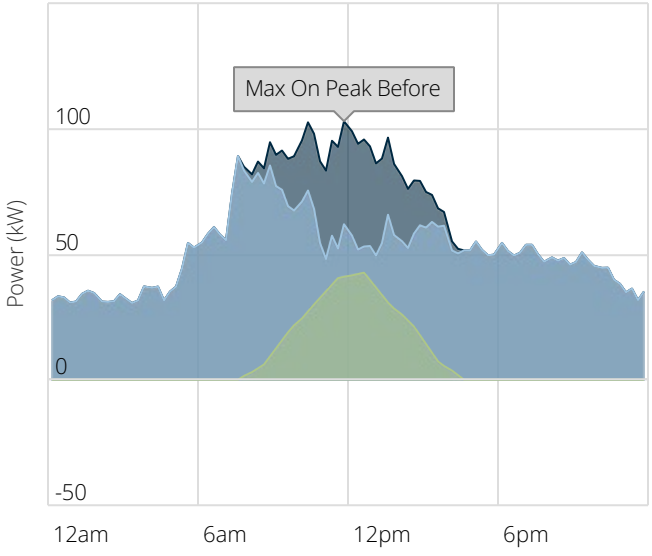
Max Demand After 12/20/2024



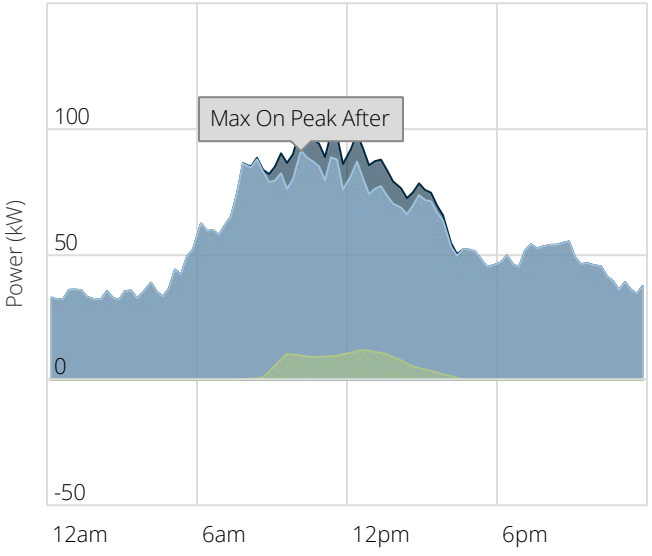
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 12/19/2024



Max On Peak Demand After 12/20/2024



Legend: Demand Before | Solar PV | Energy Storage | Demand After

3.1 PV System

Assumptions and Key Financial Metrics

IRR - Term	11.8%	Net Present Value	$112,129	Payback Period	8.5 Years
ROI	216.1%	PV Degradation Rate	0.40%	Discount Rate	6.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	$212,500	Total Savings over 30 Years	$581,758		

Years	Project Costs	Electric Bill Savings	(FOE) Business Incentive	Direct pay - 30% ITC	Total Cash Flow	Cumulative Cash Flow
Upfront	-$212,500	-	-	-	-$212,500	-$212,500
1	-	$13,103	$5,031	$85,000	$103,134	-$109,366
2	-	$13,442	-	-	$13,442	-$95,925
3	-	$13,789	-	-	$13,789	-$82,135
4	-	$14,146	-	-	$14,146	-$67,989
5	-	$14,511	-	-	$14,511	-$53,478
6	-	$14,886	-	-	$14,886	-$38,593
7	-	$15,270	-	-	$15,270	-$23,323
8	-	$15,663	-	-	$15,663	-$7,659
9	-	$16,067	-	-	$16,067	$8,407
10	-	$16,481	-	-	$16,481	$24,888
11	-	$16,904	-	-	$16,904	$41,792
12	-	$17,339	-	-	$17,339	$59,131
13	-	$17,785	-	-	$17,785	$76,916
14	-	$18,241	-	-	$18,241	$95,157
15	-	$18,709	-	-	$18,709	$113,866
16	-	$19,189	-	-	$19,189	$133,055
17	-	$19,680	-	-	$19,680	$152,735
18	-	$20,184	-	-	$20,184	$172,919
19	-	$20,700	-	-	$20,700	$193,619
20	-	$21,229	-	-	$21,229	$214,849
21	-	$21,772	-	-	$21,772	$236,620
22	-	$22,327	-	-	$22,327	$258,948
23	-	$22,897	-	-	$22,897	$281,844
24	-	$23,480	-	-	$23,480	$305,324
25	-	$24,078	-	-	$24,078	$329,402
26	-	$24,691	-	-	$24,691	$354,093
27	-	$25,318	-	-	$25,318	$379,411
28	-	$25,961	-	-	$25,961	$405,373
29	-	$26,620	-	-	$26,620	$431,993
30	-	$27,295	-	-	$27,295	$459,289
Totals:	-$212,500	$581,758	$5,031	$85,000	$459,289	-

4.1 PV System

Assumptions and Key Financial Metrics

IRR - Term	11.8%	Net Present Value	$112,129	Payback Period	8.5 Years
ROI	216.1%	PV Degradation Rate	0.40%	Discount Rate	6.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	$212,500	Total Savings over 30 Years	$581,758		

Years	Upfront	1	2	3	4	5	6	7	8	9	10	11	12	13
Cash														
Project Costs	-$212,500	-	-	-	-	-	-	-	-	-	-	-	-	-
Electric Bill Savings	-	$13,103	$13,442	$13,789	$14,146	$14,511	$14,886	$15,270	$15,663	$16,067	$16,481	$16,904	$17,339	$17,785
(FOE) Business Incentive	-	$5,031	-	-	-	-	-	-	-	-	-	-	-	-
Direct pay - 30% ITC	-	$85,000	-	-	-	-	-	-	-	-	-	-	-	-
Cash Total	-$212,500	$103,134	$13,442	$13,789	$14,146	$14,511	$14,886	$15,270	$15,663	$16,067	$16,481	$16,904	$17,339	$17,785
Total Cash Flow	-$212,500	$103,134	$13,442	$13,789	$14,146	$14,511	$14,886	$15,270	$15,663	$16,067	$16,481	$16,904	$17,339	$17,785
Cumulative Cash Flow	-$212,500	-$109,366	-$95,925	-$82,135	-$67,989	-$53,478	-$38,593	-$23,323	-$7,659	$8,407	$24,888	$41,792	$59,131	$76,916

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4.1 PV System

Assumptions and Key Financial Metrics

IRR - Term	11.8%	Net Present Value	$112,129	Payback Period	8.5 Years
ROI	216.1%	PV Degradation Rate	0.40%	Discount Rate	6.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	$212,500	Total Savings over 30 Years	$581,758		

Years	14	15	16	17	18	19	20	21	22	23	24	25	26
Cash													
Project Costs	-	-	-	-	-	-	-	-	-	-	-	-	-
Electric Bill Savings	$18,241	$18,709	$19,189	$19,680	$20,184	$20,700	$21,229	$21,772	$22,327	$22,897	$23,480	$24,078	$24,691
(FOE) Business Incentive	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct pay - 30% ITC	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Total	$18,241	$18,709	$19,189	$19,680	$20,184	$20,700	$21,229	$21,772	$22,327	$22,897	$23,480	$24,078	$24,691
Total Cash Flow	$18,241	$18,709	$19,189	$19,680	$20,184	$20,700	$21,229	$21,772	$22,327	$22,897	$23,480	$24,078	$24,691
Cumulative Cash Flow	$95,157	$113,866	$133,055	$152,735	$172,919	$193,619	$214,849	$236,620	$258,948	$281,844	$305,324	$329,402	$354,093

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4.1 PV System

Assumptions and Key Financial Metrics

IRR - Term	11.8%	Net Present Value	$112,129	Payback Period	8.5 Years
ROI	216.1%	PV Degradation Rate	0.40%	Discount Rate	6.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	$212,500	Total Savings over 30 Years	$581,758		

Years	27	28	29	30	Totals
Cash					
Project Costs	-	-	-	-	-$212,500
Electric Bill Savings	$25,318	$25,961	$26,620	$27,295	$581,758
(FOE) Business Incentive	-	-	-	-	$5,031
Direct pay - 30% ITC	-	-	-	-	$85,000
Cash Total	$25,318	$25,961	$26,620	$27,295	$459,289
Total Cash Flow	$25,318	$25,961	$26,620	$27,295	$459,289
Cumulative Cash Flow	$379,411	$405,373	$431,993	$459,289	-

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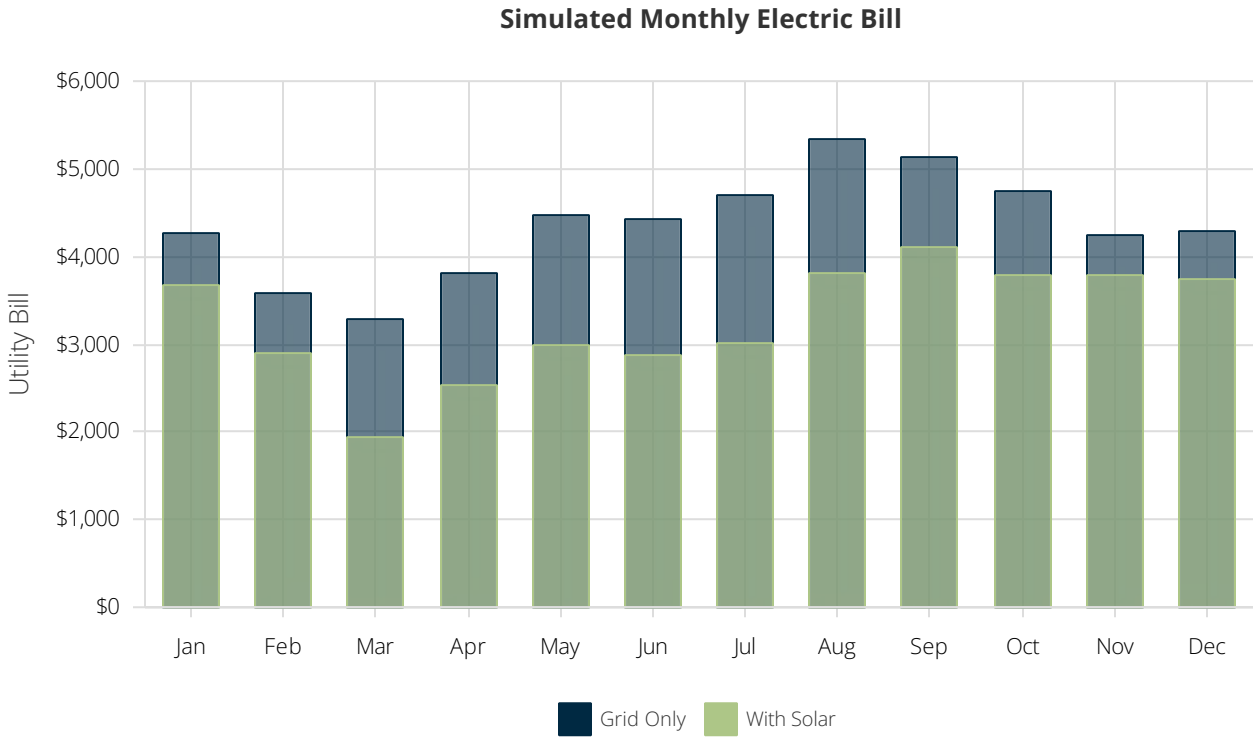
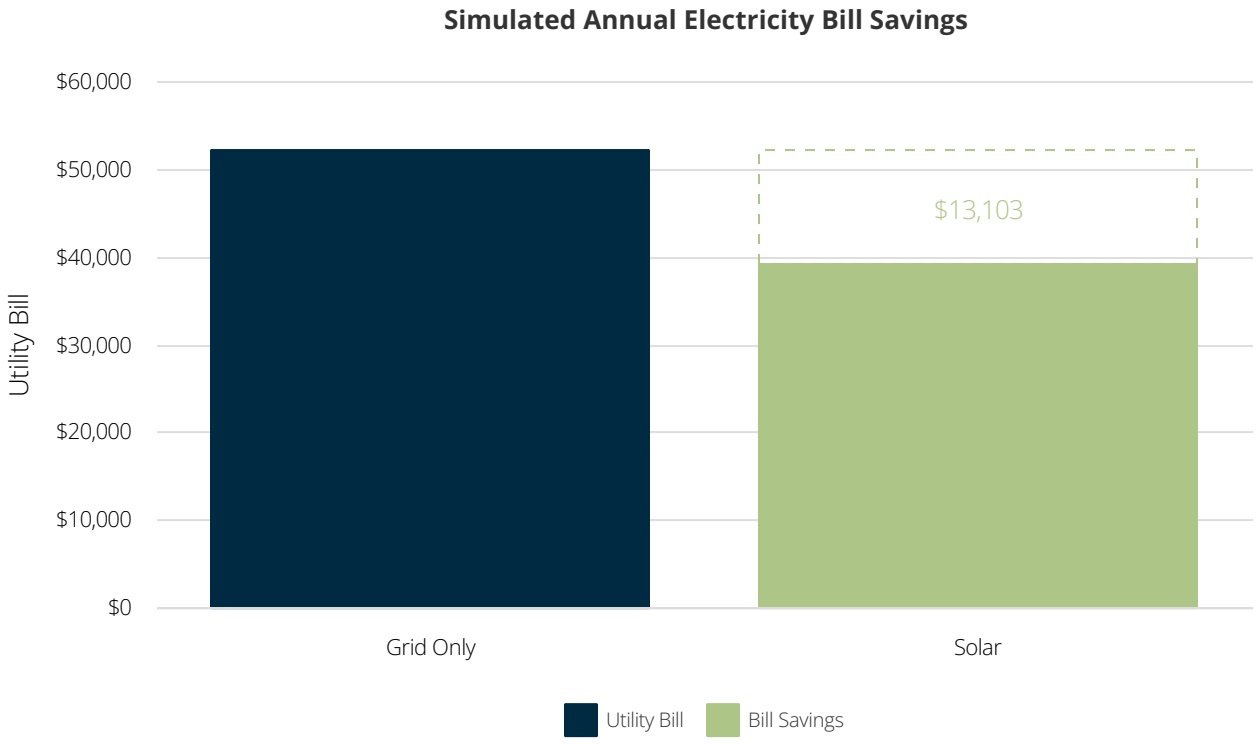
Energy Output and Demand Savings From Solar PV and Energy Storage				
Date Range	ESS Energy Discharge (kWh)	Solar PV Generation (kWh)	ESS Energy as % of PV Energy	Total Demand Savings
1/14/2025 - 2/14/2025	0	5,601	0.00%	$77
2/14/2025 - 3/14/2025	0	6,236	0.00%	$87
3/14/2025 - 4/14/2025	0	13,138	0.00%	$276
4/14/2025 - 5/14/2025	0	12,536	0.00%	$203
5/14/2025 - 6/14/2025	0	15,201	0.00%	$171
6/14/2025 - 7/14/2025	0	15,181	0.00%	$308
7/14/2024 - 8/14/2024	0	14,448	0.00%	$444
8/14/2024 - 9/14/2024	0	13,786	0.00%	$318
9/14/2024 - 10/14/2024	0	9,861	0.00%	$150
10/14/2024 - 11/14/2024	0	6,284	0.00%	$371
11/14/2024 - 12/14/2024	0	4,002	0.00%	$98
12/14/2024 - 1/14/2025	0	4,098	0.00%	$150
Total	0	120,372	0.00%	$2,651




Simulated Annual Electricity Bill Savings
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
Utility Bill
$13,103
Grid Only
Solar
Utility Bill
Bill Savings

100 kW Photovoltaic System Proposal - New Building

Prepared For

New Glarus Elementary School
608-214-5642
thomson@tds.net

Full Spectrum Solar was founded by two Madison area brothers, Burke and Mark O'Neal, in 2002 and has installed over 800 solar pv systems in southern WI. With over 50 years of combined experience, our office staff consists of mechanical engineers, master electricians, and NABCEP certified installers. One of our core values is running a business in an environmentally friendly and sustainable manner which guides all aspects of our business.

Prepared By

8/20/2025

Burke O'Neal
608-284-9495
burke@fullspectrumsolar.com

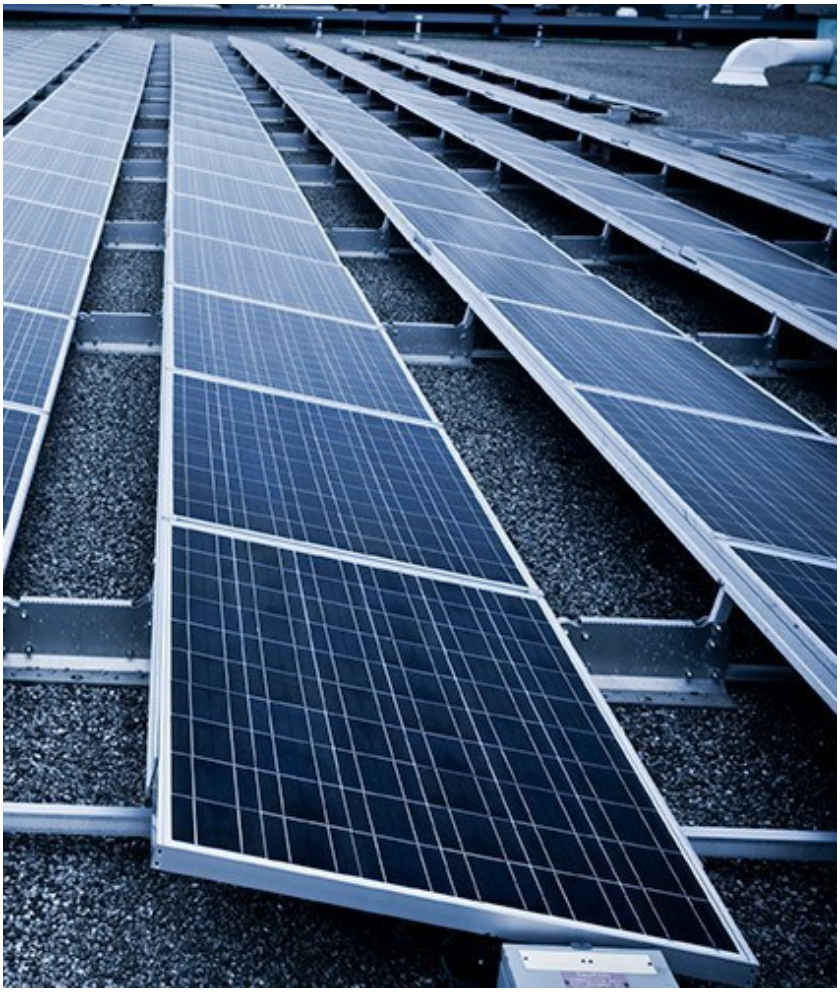
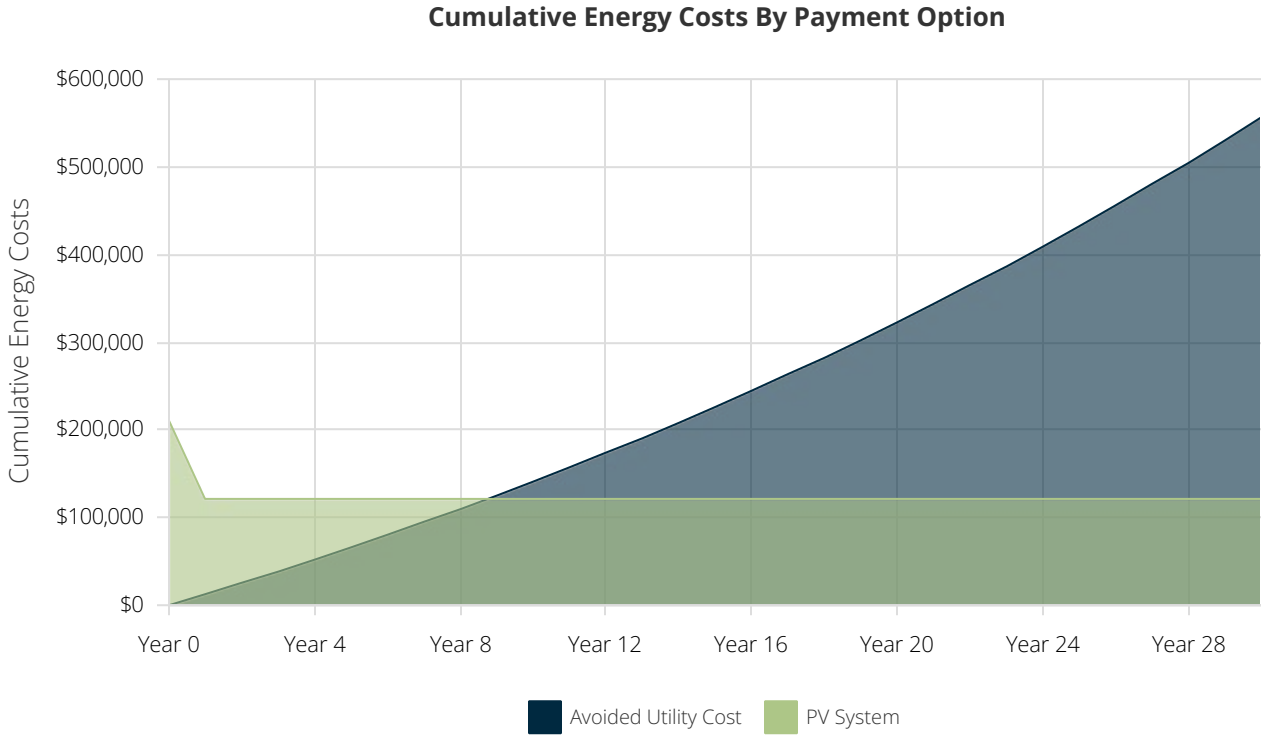


Table of Contents

1 Project Summary

Payment Options	PV System
Contract Amount	$210,500
Price per Watt	$2.09
Total Incentives	$89,231
Net Cost	$121,269
Return on Investment	8.7 Years
Total Electric Bill Savings over 30 Yrs	$556,267
Net Savings over 30 Yrs	$434,998

Combined Solar PV Rating
Power Rating: 100,620 W-DC



2.1.1 PV System Details

General Information
Facility: 430300-01 (extrapolated from Aug forward)
Address: 1420 2nd St New Glarus WI 53574

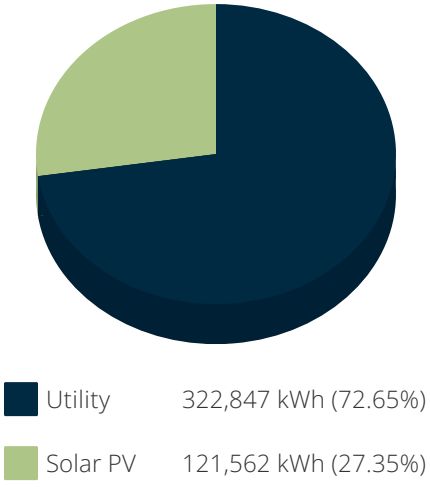
Solar PV Equipment Description
Solar Panels: (234) Silfab SIL-430 QD
Inverters: (4) Fronius Symo 20.0-3-480 (2014)

Solar PV Equipment Typical Lifespan
Solar Panels: Greater than 30 Years
Inverters: 15 Years

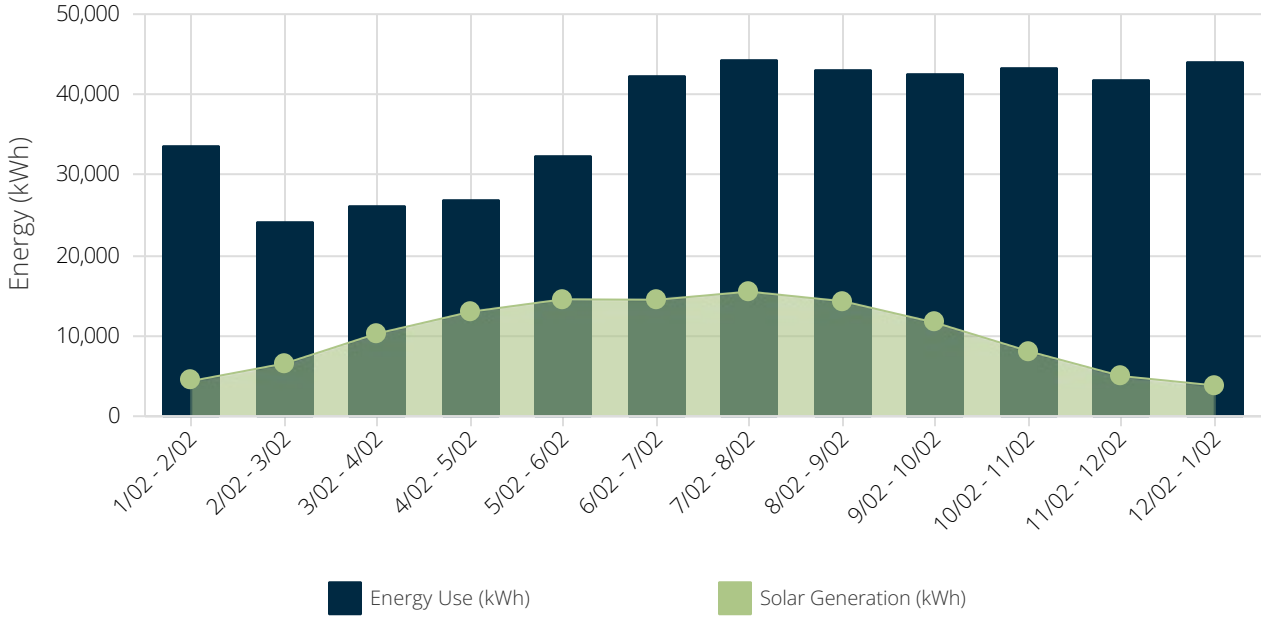
Solar PV System Cost and Incentives	
Solar PV System Cost	$210,500
Direct pay - 30% ITC	-$84,200
(FOE) Business Incentive	-$5,031
Net Solar PV System Cost	**$121,269**

Solar PV System Rating
Power Rating: 100,620 W-DC

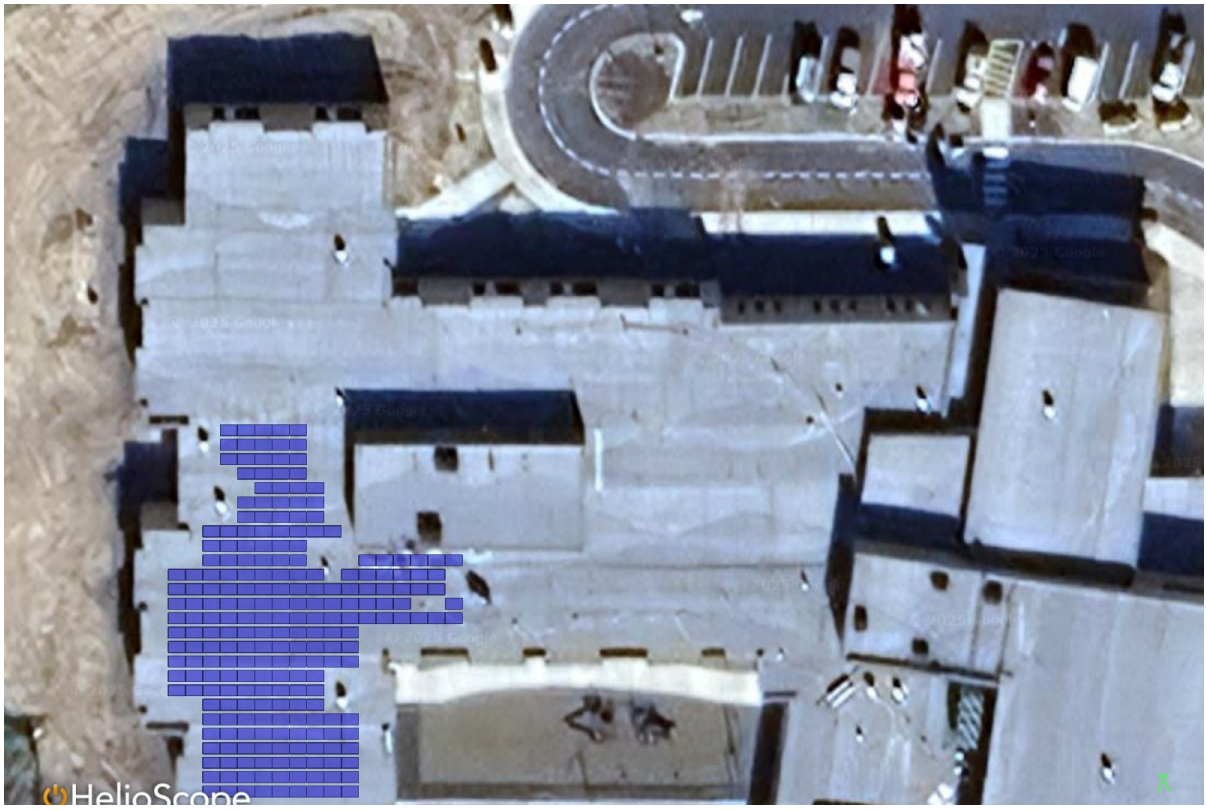
Energy Consumption Mix
Annual Energy Use: 444,409 kWh



Monthly Energy Use vs Solar Generation



2.1.2 PV System Layout



2.1.3 Rebates and Incentives

This section summarizes all incentives available for this project. The actual rebate and incentive amounts for this project are shown in each example.

Focus on Energy 2025 Business/Non-Profit/Municipal PV Incentive

Focus On Energy Business Customer PV Incentive up to 500+ kW (DC) or $25,000 cap for the installation of Solar Electric (PV). $50 per kW with max incentive $25,000. This incentive is available to commercial properties (e.g. any property outside of a 1-3 unit home), and applies also to municipalities, non profits, and/or any entity on a commercial utility rate structure.

Total Incentive Value: $5,031

Direct Pay, Investment Tax Credit (ITC) - 40%

The Inflation Reduction Act (IRA) of 2022 contains a "direct pay" provision that enables certain tax-exempt customers, including state and local government, to receive a direct cash payment in lieu of an investment tax credit (ITC). Entities that qualify for direct pay are eligible to receive a 30% direct payment, assuming they meet the IRA established prevailing wage and apprenticeship requirements in order to qualify for the full 30% “increased rate”, rather than a 6% “base rate”. The IRA states that direct pay is only available for entities, including: an entity exempt from the tax, any State government (or political subdivision thereof), the Tennessee Valley Authority, an Indian tribal government, an Alaska Native Corporation, any corporation operating on a cooperative basis which is engaged in furnishing electric energy to persons in rural areas. These entities may take direct pay for solar and storage in the ITC and PTC as well as the ITC/PTC when tech neutral starts after 2025.

Total Incentive Value: $84,200

2.1.4 Utility Rates

The table below shows the rates associated with your current utility rate schedule (Cp-1). Your estimated electric bills after solar are shown on the following page.

Customer Charges				Energy Charges				Demand Charges			
Season	Charge Type	Rate Type	Cp-1	Season	Charge Type	Rate Type	Cp-1	Season	Charge Type	Rate Type	Cp-1
S1	Flat Rate	per billing period	$75.00	S1	On Peak	Import	$0.1033	S1	Flat Rate	Import	$2.00
S1	Flat Rate: Charges Vary With Units	per billing period	$1.00	S1	Off Peak	Import	$0.0744	S1	On Peak	Import	$10.50

2.1.5 Current Electric Bill

The table below shows your annual electricity costs based on the most current utility rates and your previous 12 months of electrical usage.

Rate Schedule: NGU - Cp-1

Time Periods	Energy Use (kWh)		Max Demand (kW)		Charges			
Bill Ranges & Seasons	On Peak	Off Peak	NC / Max	On Peak	Other	Energy	Demand	Total
1/2/2025 - 2/2/2025 S1	15,075	18,498	91	91	$75	$2,934	$1,270	$4,278
2/2/2025 - 3/2/2025 S1	11,973	12,230	82	82	$75	$2,147	$1,175	$3,397
3/2/2025 - 4/2/2025 S1	12,050	14,127	79	79	$75	$2,296	$1,144	$3,514
4/2/2025 - 5/2/2025 S1	12,616	14,252	75	75	$75	$2,364	$1,102	$3,540
5/2/2025 - 6/2/2025 S1	15,526	16,807	157	157	$75	$2,854	$1,963	$4,892
6/2/2025 - 7/2/2025 S1	21,167	21,047	139	139	$75	$3,752	$1,774	$5,601
7/2/2025 - 8/2/2025 S1	20,566	23,714	106	106	$75	$3,889	$1,427	$5,391
8/2/2025 - 9/2/2025 S1	18,655	24,429	106	106	$75	$3,745	$1,427	$5,247
9/2/2025 - 10/2/2025 S1	19,738	22,781	106	106	$75	$3,734	$1,427	$5,236
10/2/2025 - 11/2/2025 S1	19,332	23,925	106	106	$75	$3,777	$1,427	$5,279
11/2/2025 - 12/2/2025 S1	18,655	23,225	106	106	$75	$3,655	$1,427	$5,157
12/2/2025 - 1/2/2026 S1	20,643	23,378	106	106	$75	$3,872	$1,427	$5,374
Total	205,996	238,413	-	-	$900	$39,017	$16,988	$56,905

2.1.6 New Electric Bill

Rate Schedule: NGU - Cp-1

Time Periods	Energy Use (kWh)		Max Demand (kW)		Charges			
Bill Ranges & Seasons	On Peak	Off Peak	NC / Max	On Peak	Other	Energy	Demand	Total
1/2/2025 - 2/2/2025 S1	12,193	17,005	84	84	$75	$2,529	$1,174	$3,778
2/2/2025 - 3/2/2025 S1	7,355	10,278	72	72	$75	$1,554	$1,048	$2,677
3/2/2025 - 4/2/2025 S1	4,255	11,641	69	69	$75	$1,417	$1,017	$2,508
4/2/2025 - 5/2/2025 S1	3,456	10,417	69	69	$75	$1,285	$1,017	$2,377
5/2/2025 - 6/2/2025 S1	6,540	11,255	146	146	$75	$1,637	$1,825	$3,537
6/2/2025 - 7/2/2025 S1	10,810	16,922	124	124	$75	$2,394	$1,594	$4,063
7/2/2025 - 8/2/2025 S1	9,421	19,364	87	86	$75	$2,442	$1,195	$3,712
8/2/2025 - 9/2/2025 S1	9,296	19,495	89	89	$75	$2,444	$1,227	$3,746
9/2/2025 - 10/2/2025 S1	11,412	19,467	98	98	$75	$2,643	$1,321	$4,039
10/2/2025 - 11/2/2025 S1	13,783	21,406	95	95	$75	$3,025	$1,290	$4,389
11/2/2025 - 12/2/2025 S1	14,828	22,050	99	99	$75	$3,172	$1,332	$4,579
12/2/2025 - 1/2/2026 S1	17,705	22,492	105	105	$75	$3,502	$1,395	$4,972
Total	121,054	201,792	-	-	$900	$28,044	$15,432	$44,376

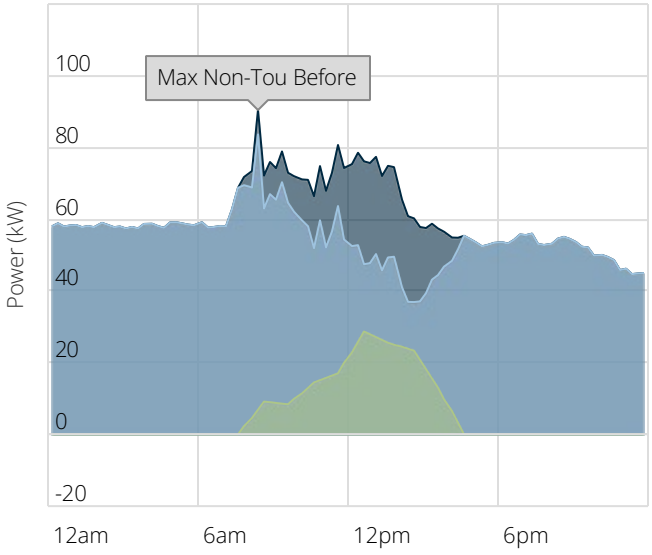
Annual Electricity Savings: $12,529

2.1.7 Demand Profiles

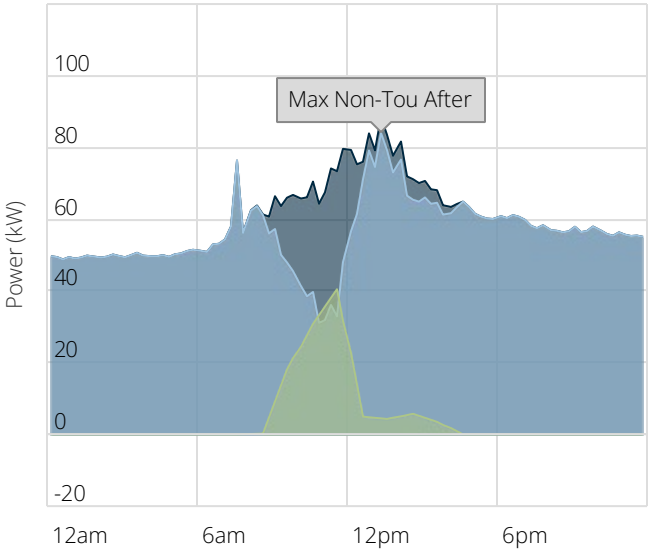
Date Range: 1/2/2025 - 2/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 1/7/2025



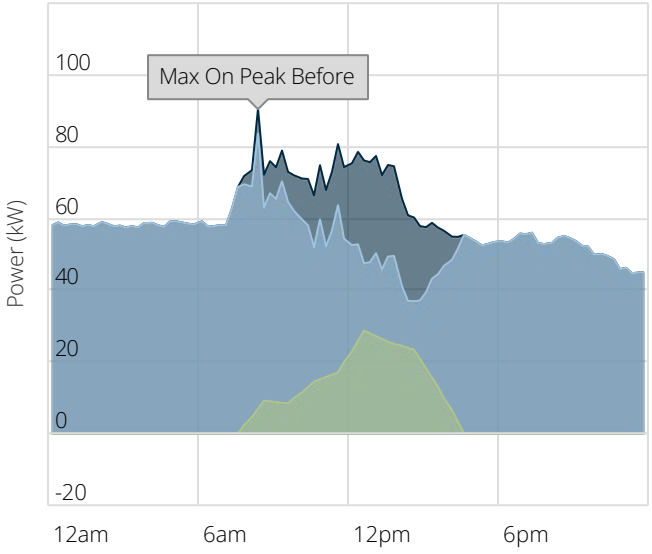
Max Demand After 1/2/2025



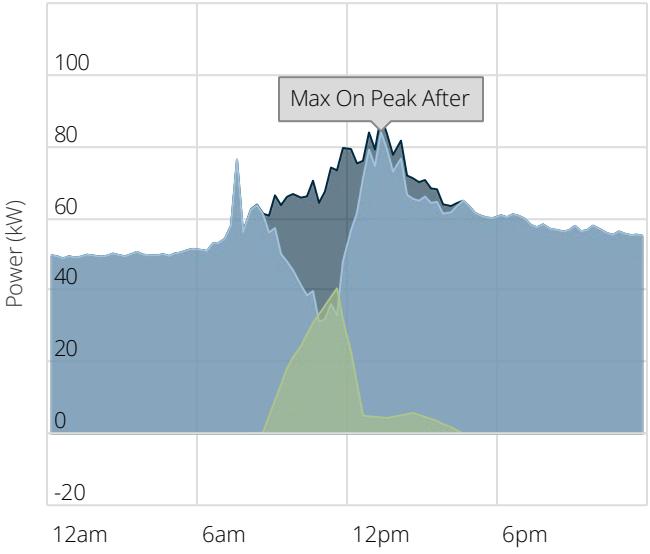
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 1/7/2025



Max On Peak Demand After 1/2/2025



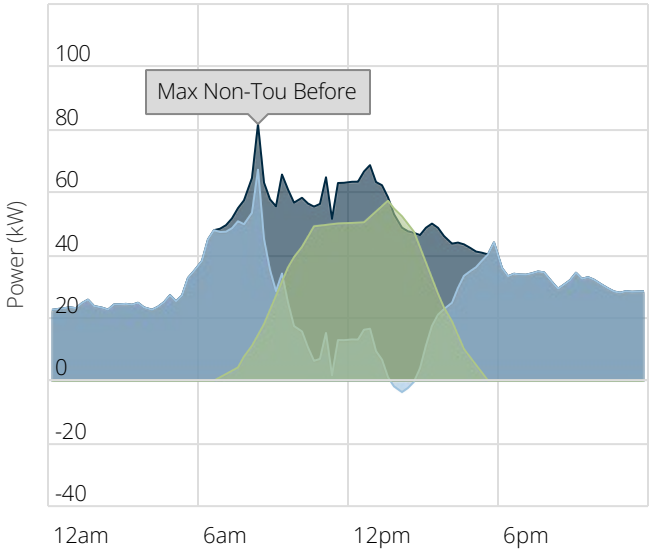
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

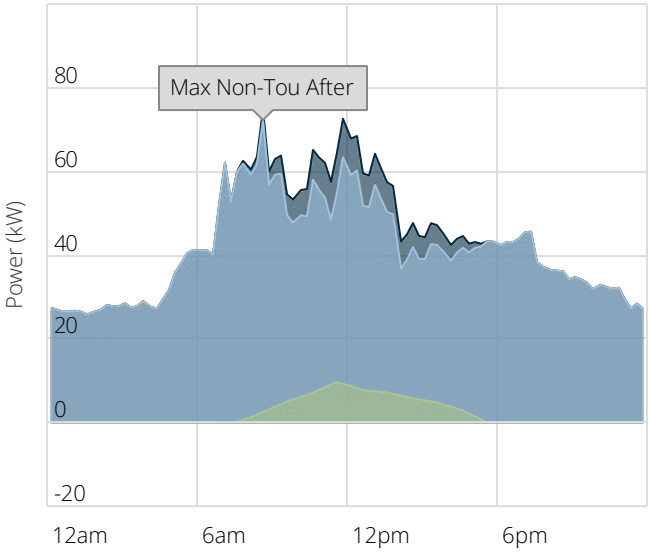
Date Range: 2/2/2025 - 3/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 2/13/2025



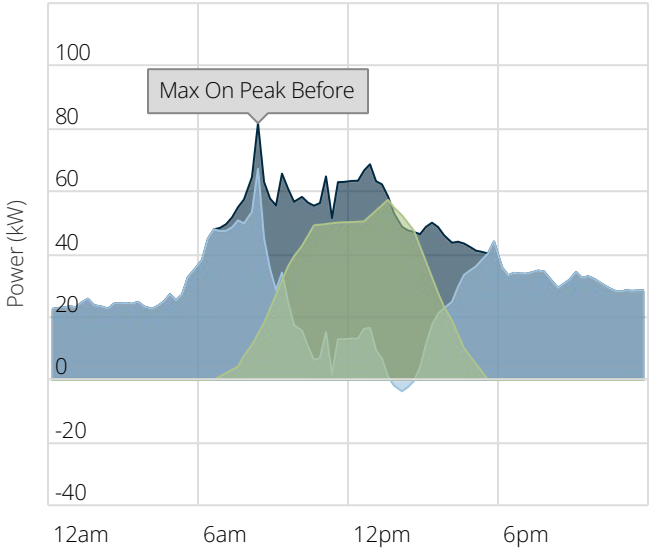
Max Demand After 2/19/2025



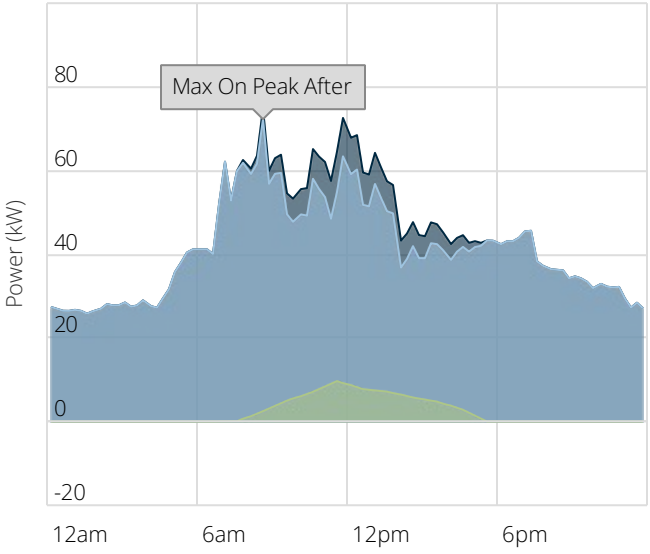
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 2/13/2025



Max On Peak Demand After 2/19/2025



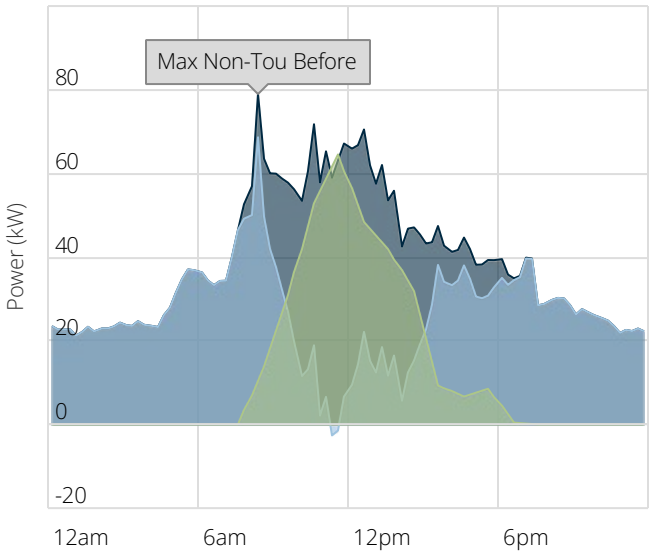
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

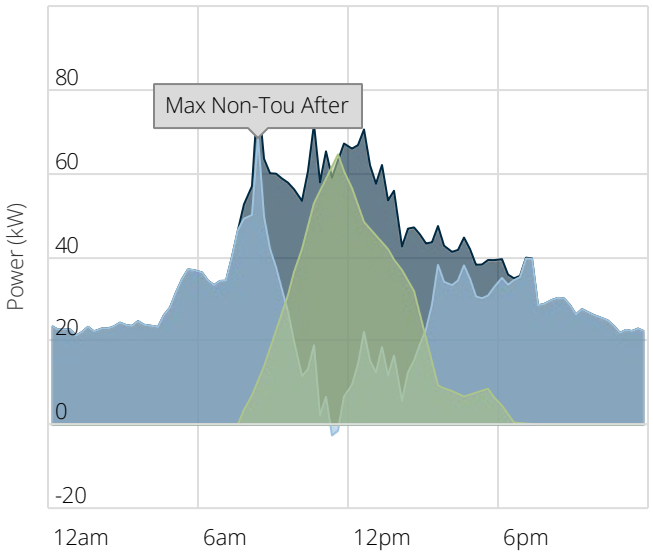
Date Range: 3/2/2025 - 4/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 3/12/2025



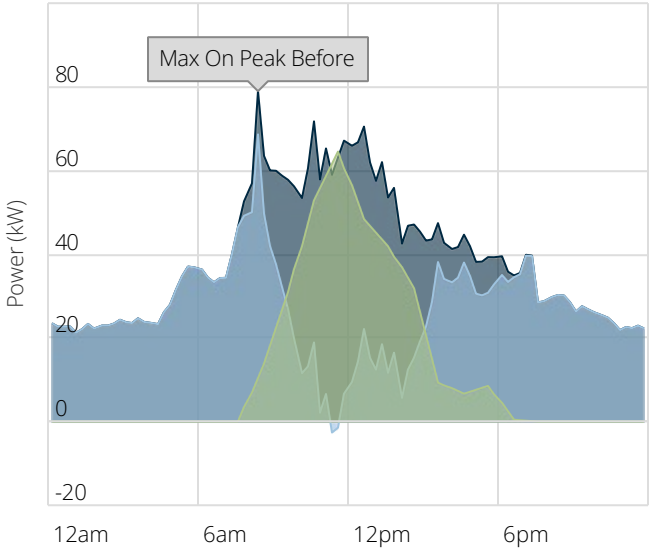
Max Demand After 3/12/2025



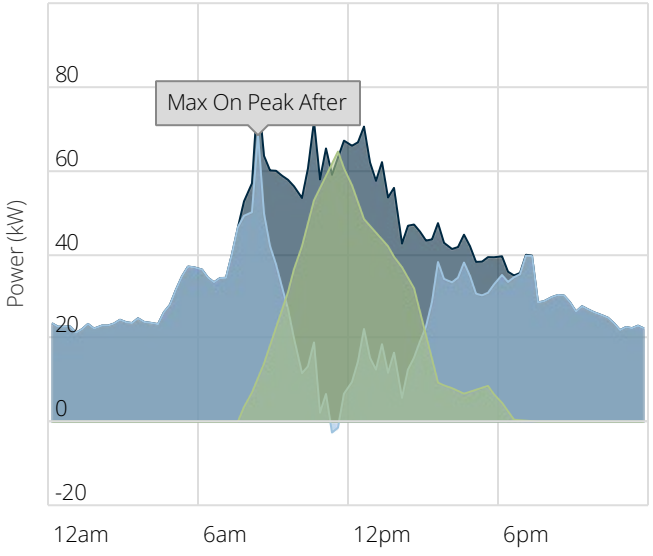
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 3/12/2025



Max On Peak Demand After 3/12/2025



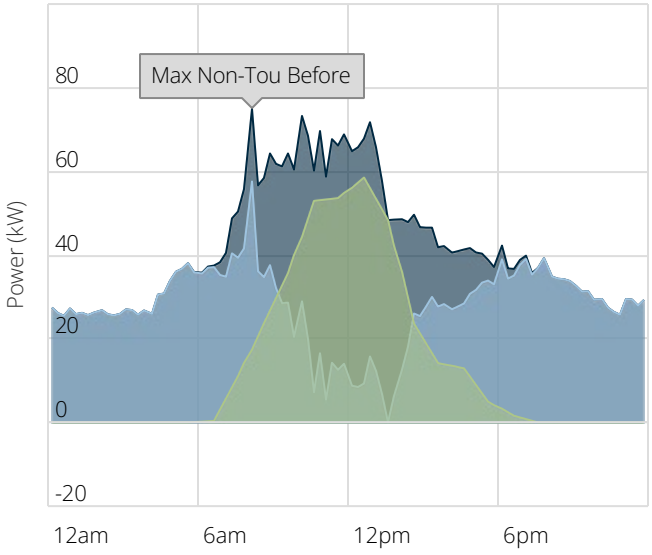
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

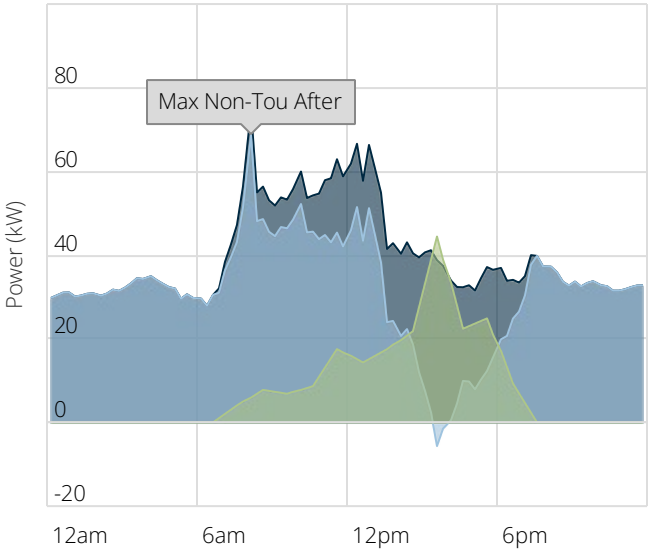
Date Range: 4/2/2025 - 5/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 4/24/2025



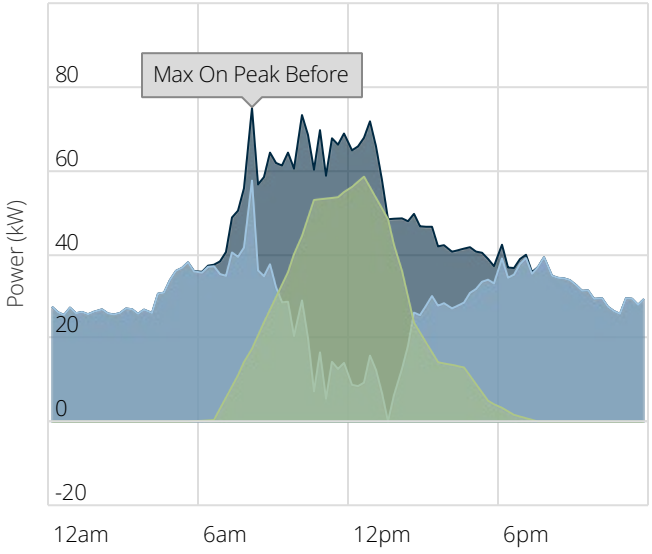
Max Demand After 4/8/2025



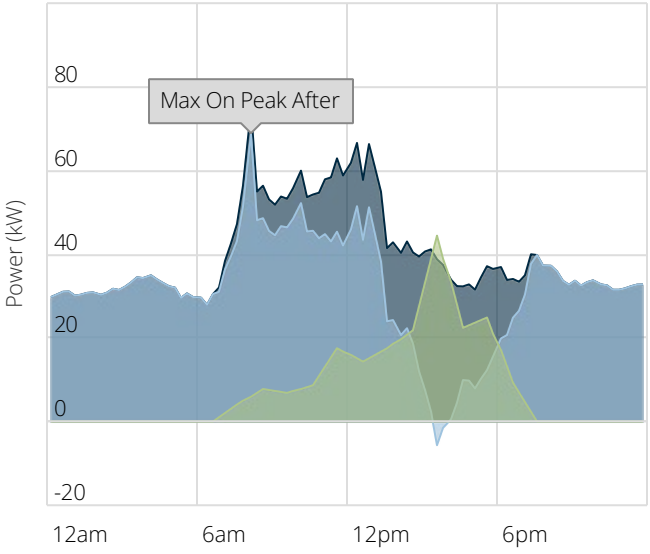
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 4/24/2025



Max On Peak Demand After 4/8/2025



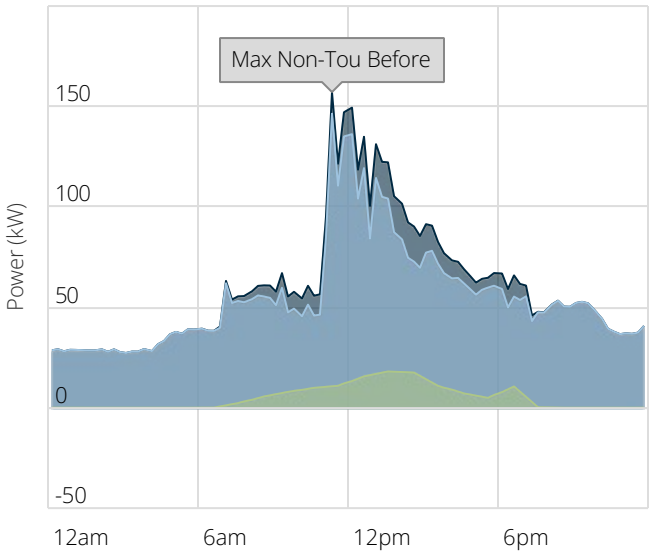
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

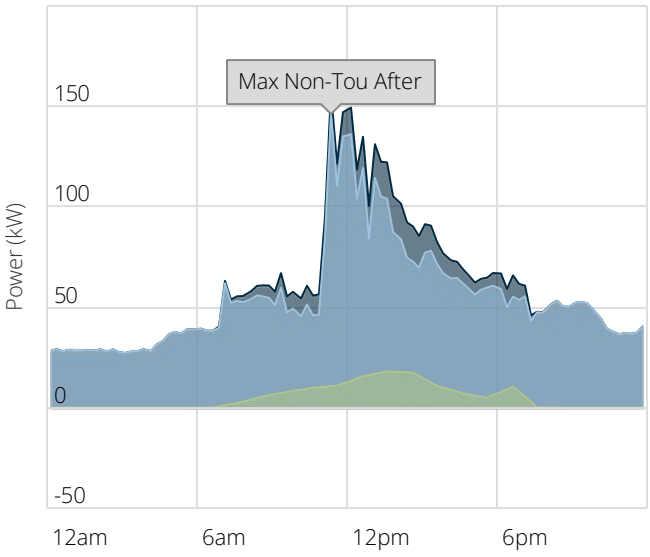
Date Range: 5/2/2025 - 6/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 5/13/2025



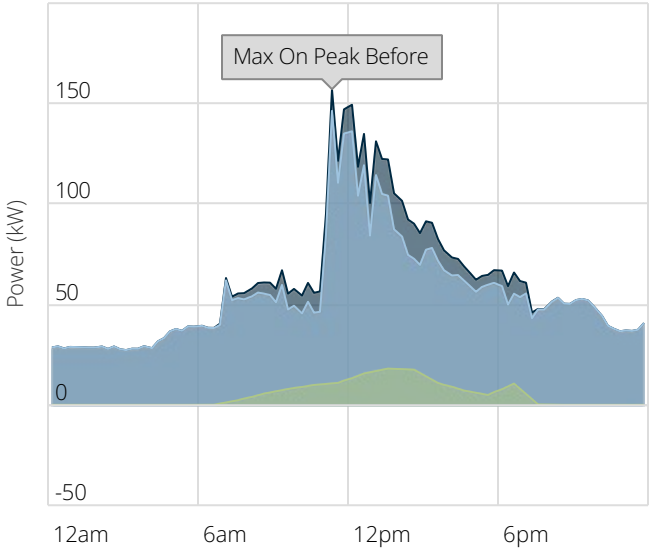
Max Demand After 5/13/2025



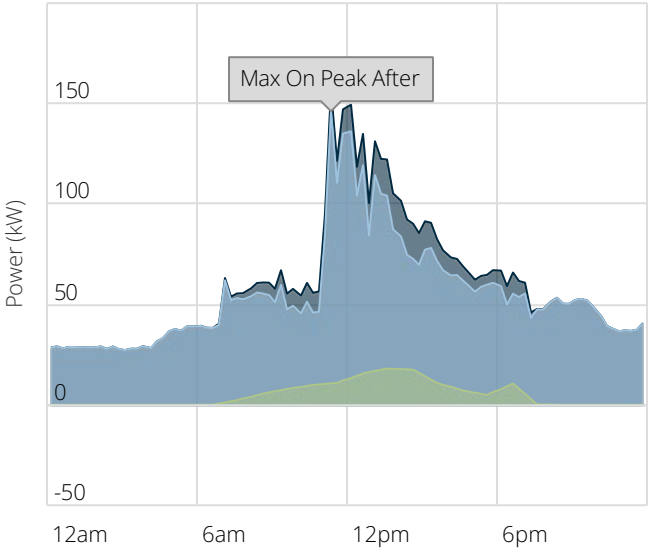
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 5/13/2025



Max On Peak Demand After 5/13/2025



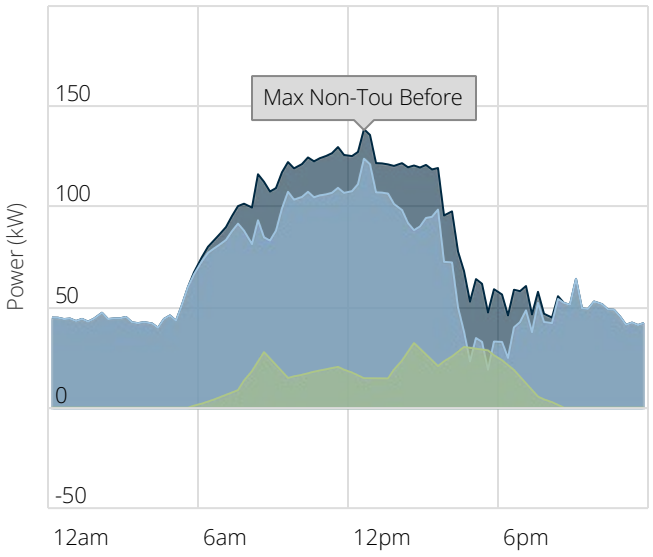
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

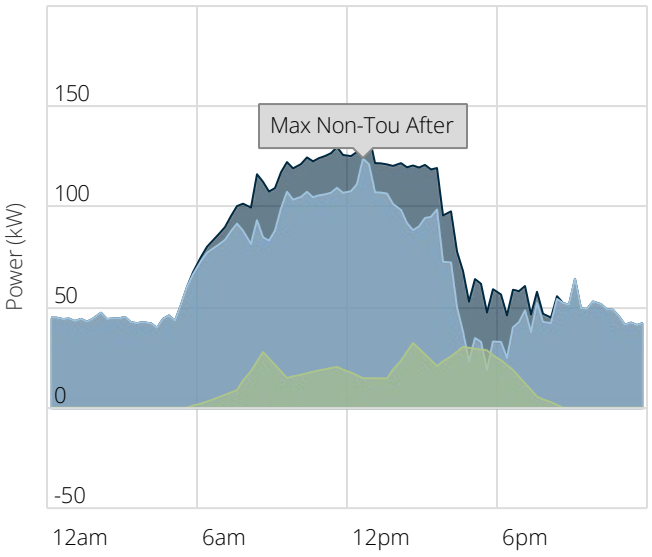
Date Range: 6/2/2025 - 7/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 6/26/2025



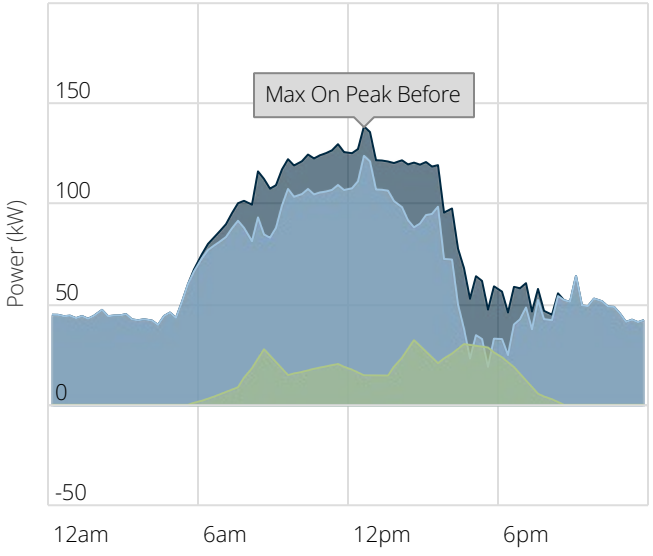
Max Demand After 6/26/2025



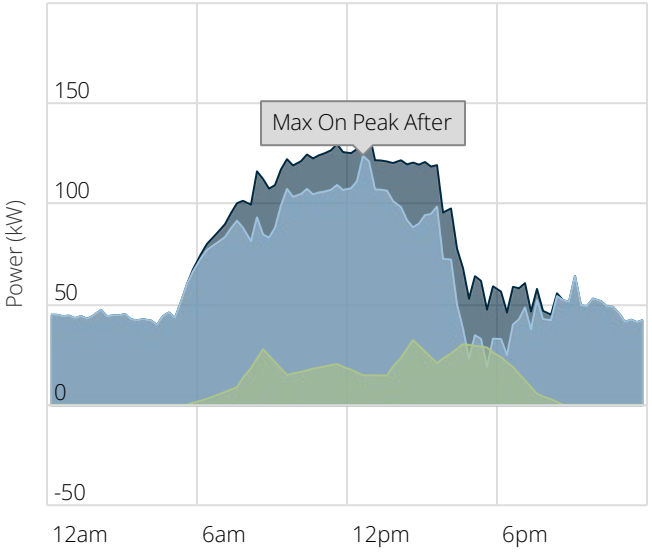
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 6/26/2025



Max On Peak Demand After 6/26/2025



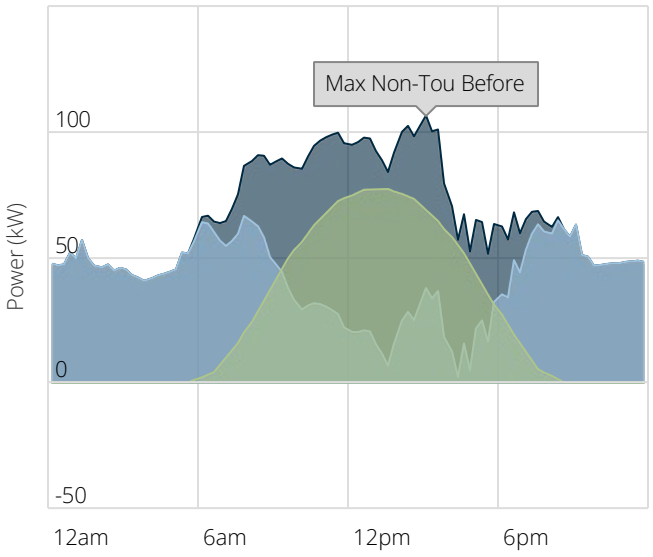
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

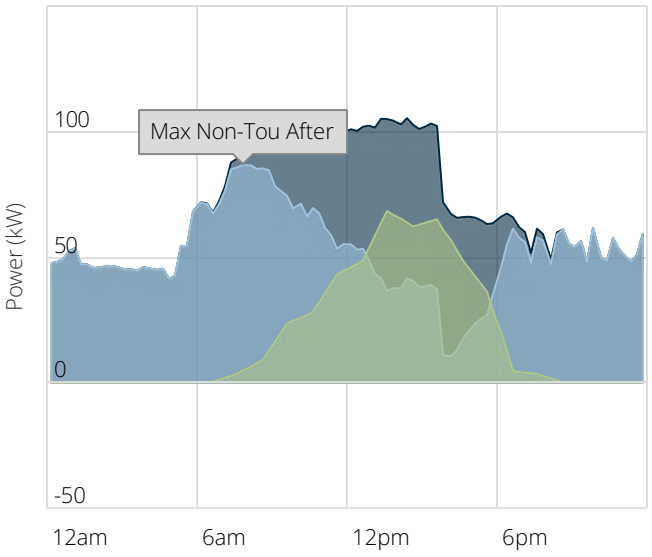
Date Range: 7/2/2025 - 8/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 7/9/2025



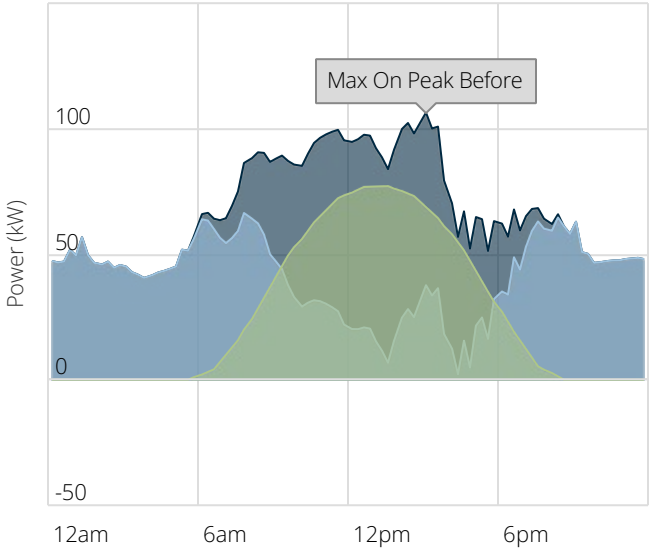
Max Demand After 7/3/2025



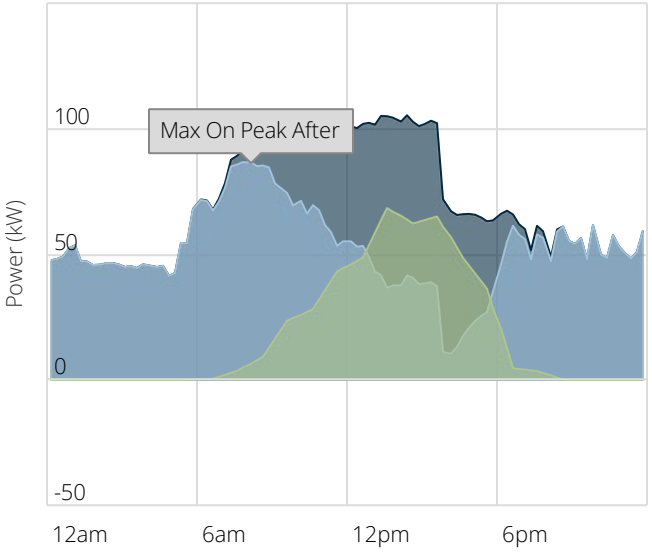
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 7/9/2025



Max On Peak Demand After 7/3/2025



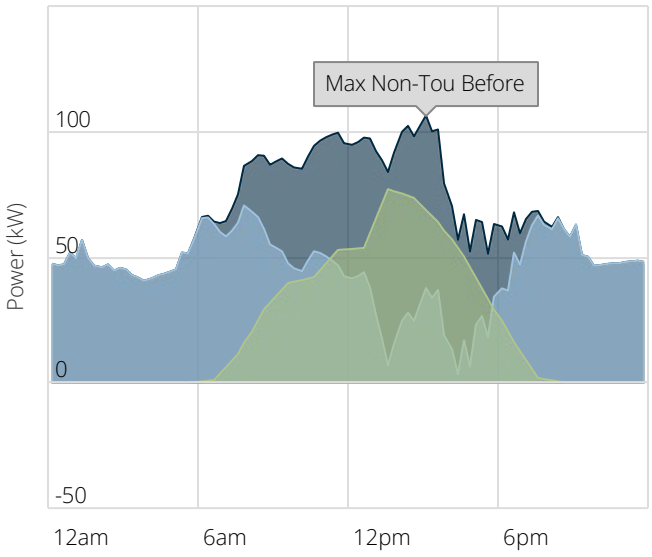
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

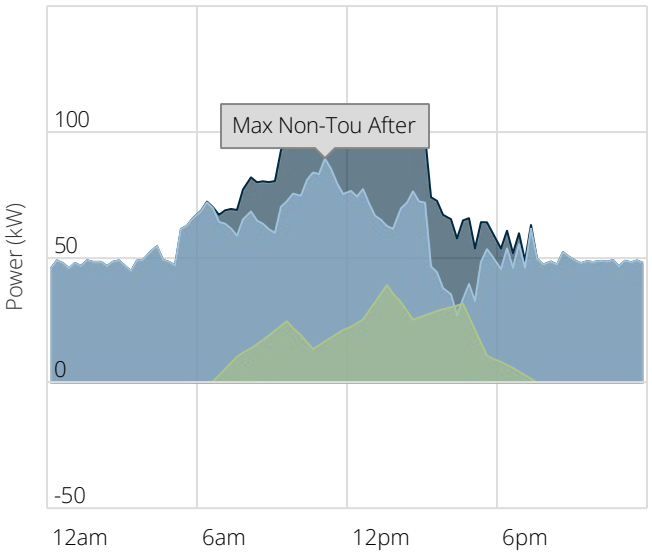
Date Range: 8/2/2025 - 9/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 8/6/2025



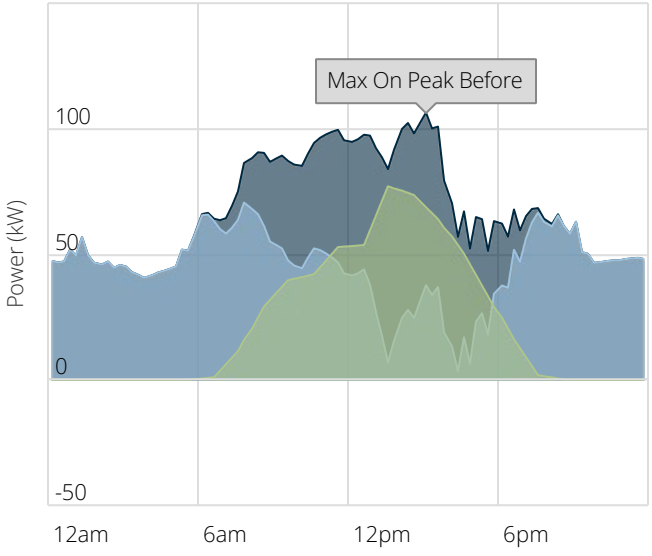
Max Demand After 8/5/2025



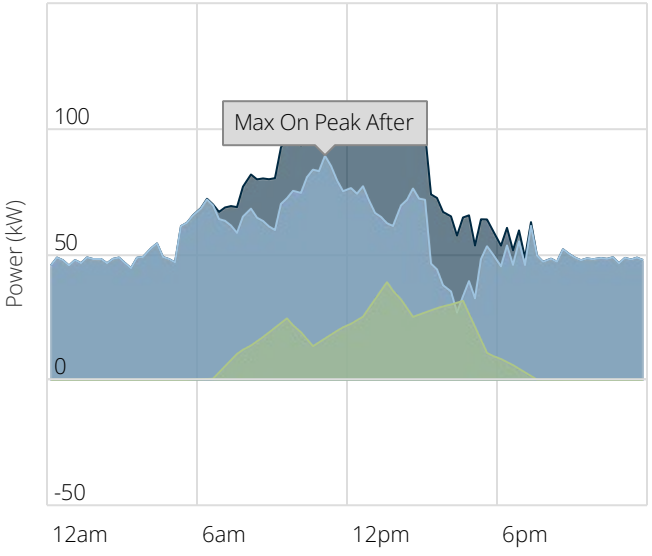
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 8/6/2025



Max On Peak Demand After 8/5/2025



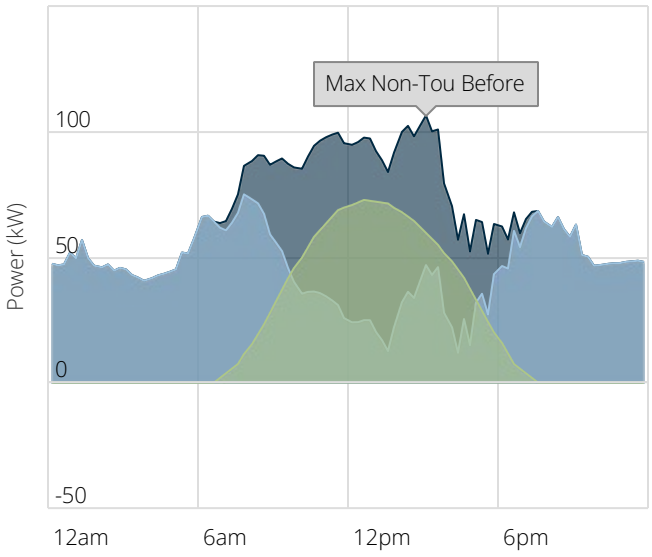
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

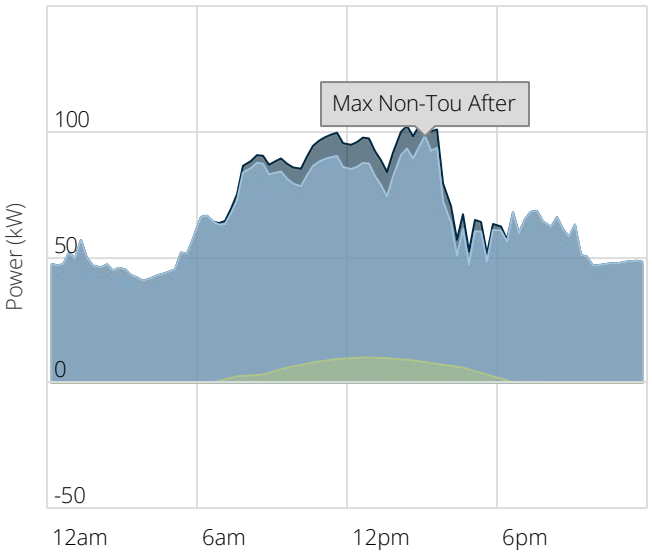
Date Range: 9/2/2025 - 10/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 9/3/2025



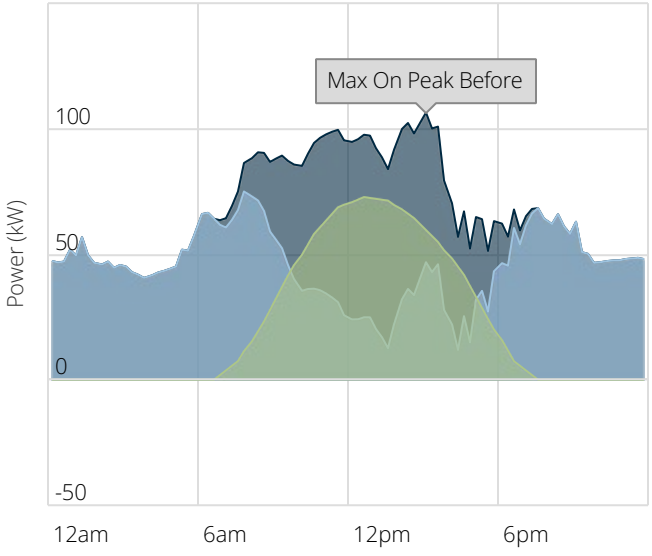
Max Demand After 9/10/2025



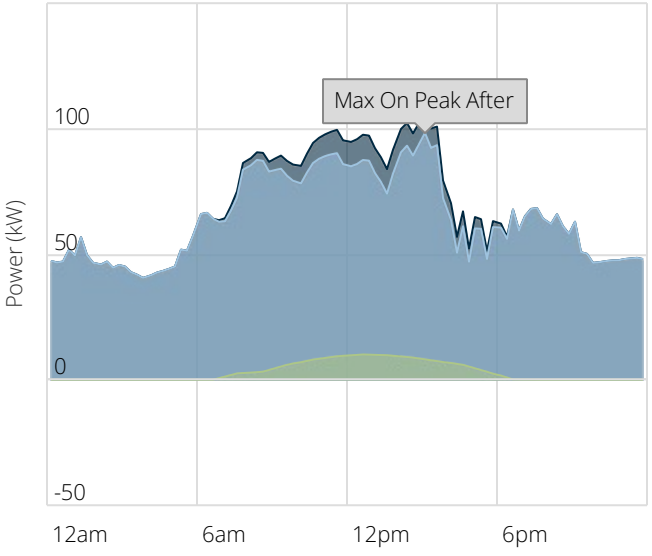
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 9/3/2025



Max On Peak Demand After 9/10/2025



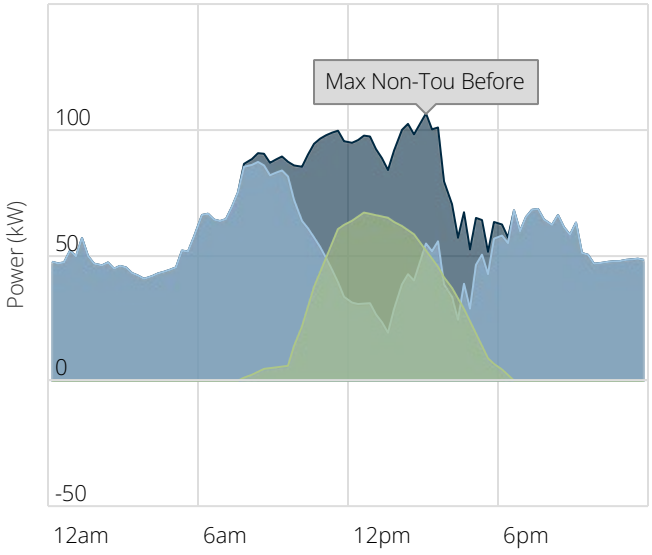
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

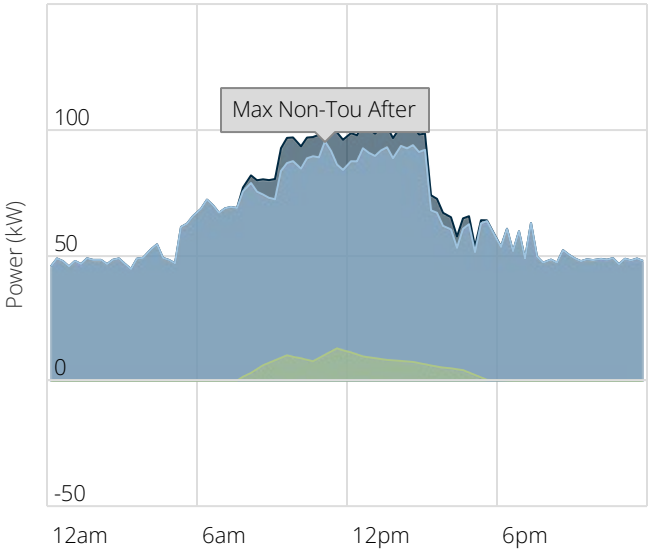
Date Range: 10/2/2025 - 11/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 10/8/2025



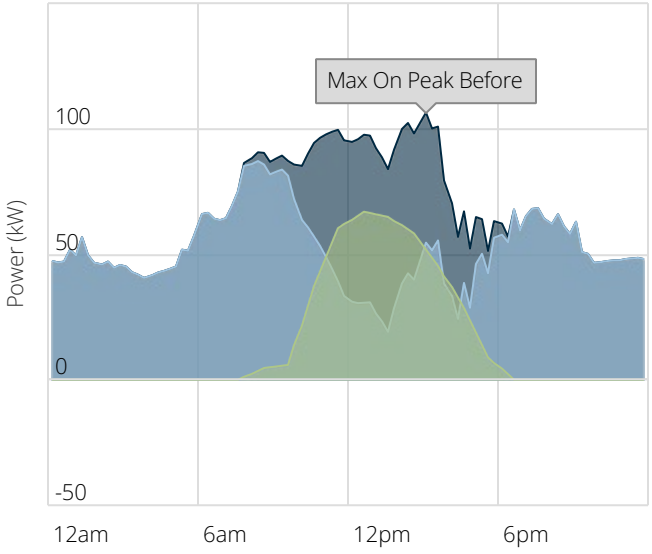
Max Demand After 10/7/2025



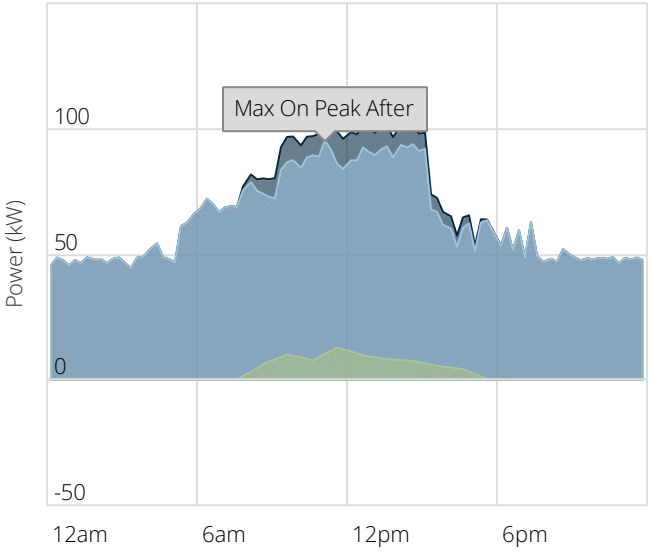
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 10/8/2025



Max On Peak Demand After 10/7/2025



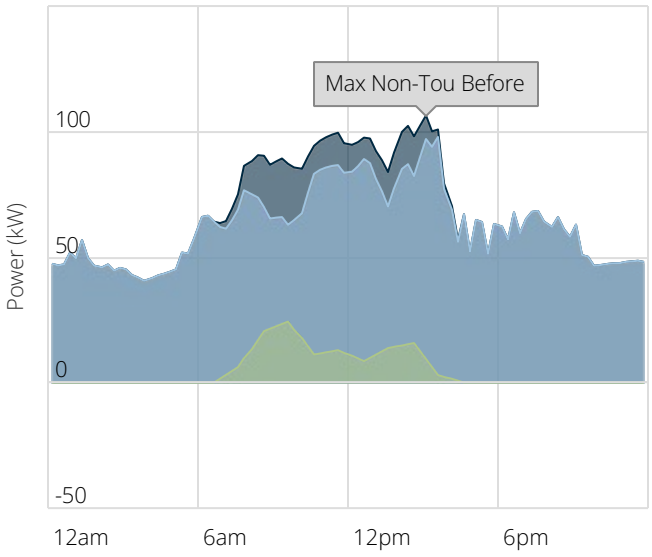
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

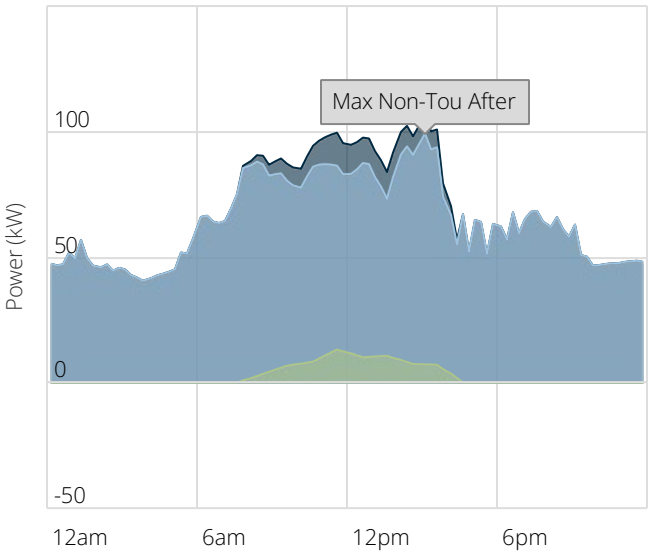
Date Range: 11/2/2025 - 12/2/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 11/5/2025



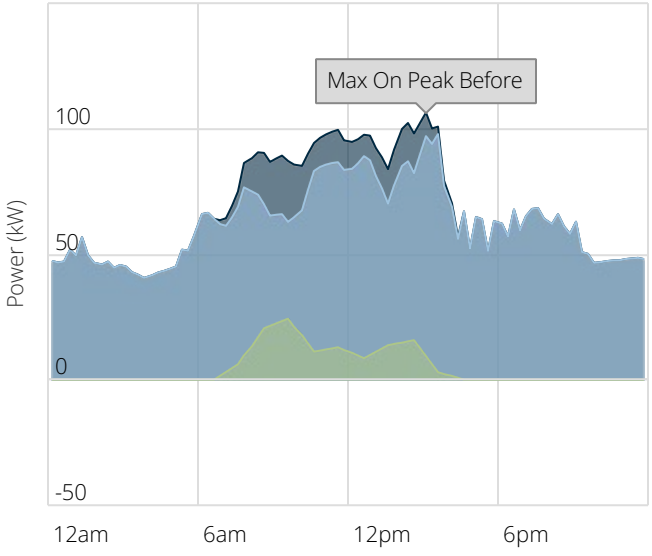
Max Demand After 11/19/2025



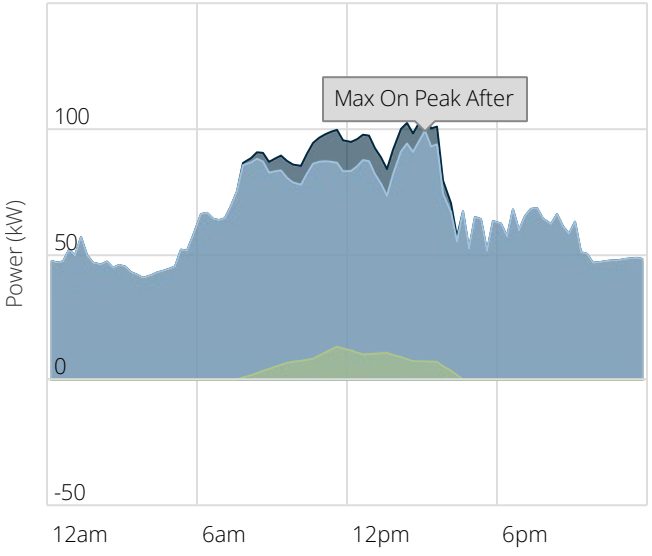
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 11/5/2025



Max On Peak Demand After 11/19/2025



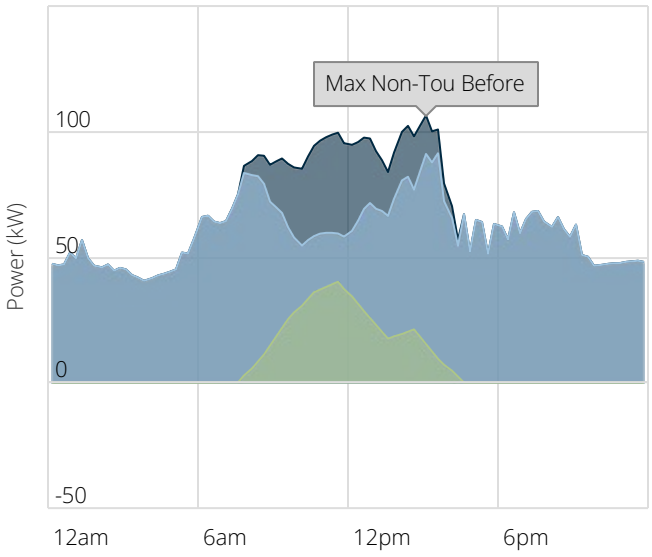
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Demand Profiles

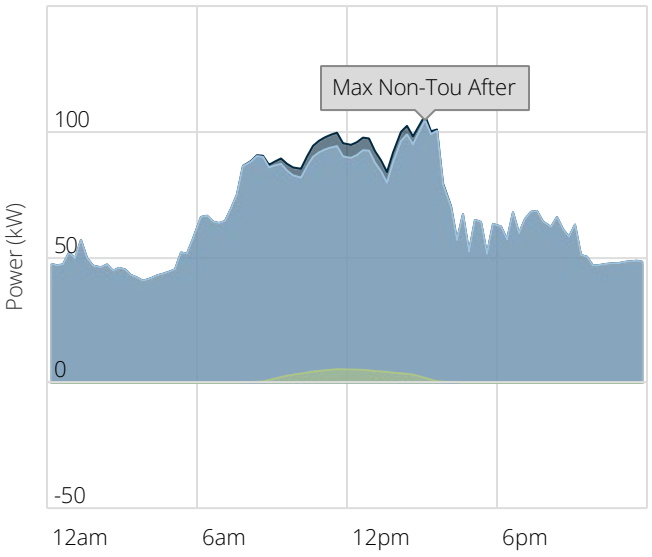
Date Range: 12/2/2025 - 1/2/2026

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.

Max Demand Before 12/3/2025



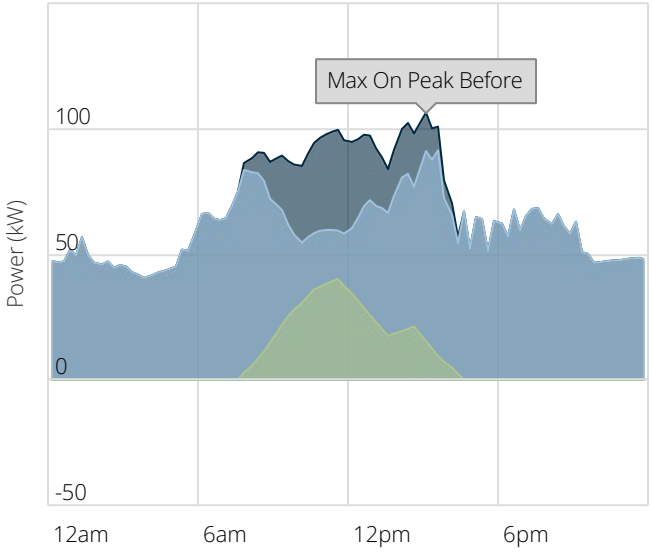
Max Demand After 12/10/2025



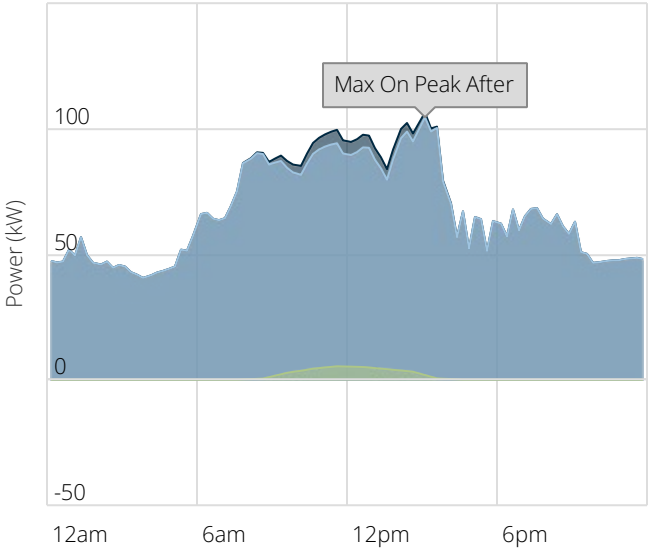
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Max On-Peak Demand: The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Max On Peak Demand Before 12/3/2025



Max On Peak Demand After 12/10/2025



Legend: Demand Before | Solar PV | Energy Storage | Demand After

3.1 PV System

Assumptions and Key Financial Metrics

IRR - Term	11.4%	Net Present Value	$102,872	Payback Period	8.7 Years
ROI	206.7%	PV Degradation Rate	0.40%	Discount Rate	6.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	$210,500	Total Savings over 30 Years	$556,267		

Years	Project Costs	Electric Bill Savings	(FOE) Business Incentive	Direct pay - 30% ITC	Total Cash Flow	Cumulative Cash Flow
Upfront	-$210,500	-	-	-	-$210,500	-$210,500
1	-	$12,529	$5,031	$84,200	$101,760	-$108,740
2	-	$12,853	-	-	$12,853	-$95,888
3	-	$13,185	-	-	$13,185	-$82,703
4	-	$13,526	-	-	$13,526	-$69,177
5	-	$13,875	-	-	$13,875	-$55,301
6	-	$14,234	-	-	$14,234	-$41,068
7	-	$14,601	-	-	$14,601	-$26,467
8	-	$14,977	-	-	$14,977	-$11,490
9	-	$15,363	-	-	$15,363	$3,873
10	-	$15,758	-	-	$15,758	$19,631
11	-	$16,164	-	-	$16,164	$35,795
12	-	$16,579	-	-	$16,579	$52,375
13	-	$17,005	-	-	$17,005	$69,380
14	-	$17,442	-	-	$17,442	$86,822
15	-	$17,889	-	-	$17,889	$104,711
16	-	$18,348	-	-	$18,348	$123,059
17	-	$18,818	-	-	$18,818	$141,877
18	-	$19,300	-	-	$19,300	$161,176
19	-	$19,793	-	-	$19,793	$180,970
20	-	$20,299	-	-	$20,299	$201,269
21	-	$20,818	-	-	$20,818	$222,087
22	-	$21,349	-	-	$21,349	$243,436
23	-	$21,893	-	-	$21,893	$265,329
24	-	$22,451	-	-	$22,451	$287,780
25	-	$23,023	-	-	$23,023	$310,803
26	-	$23,609	-	-	$23,609	$334,412
27	-	$24,209	-	-	$24,209	$358,621
28	-	$24,824	-	-	$24,824	$383,445
29	-	$25,454	-	-	$25,454	$408,899
30	-	$26,099	-	-	$26,099	$434,998
Totals:	-$210,500	$556,267	$5,031	$84,200	$434,998	-

4.1 PV System

Assumptions and Key Financial Metrics

IRR - Term	11.4%	Net Present Value	$102,872	Payback Period	8.7 Years
ROI	206.7%	PV Degradation Rate	0.40%	Discount Rate	6.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	$210,500	Total Savings over 30 Years	$556,267		

Years	Upfront	1	2	3	4	5	6	7	8	9	10	11	12	13
Cash														
Project Costs	-$210,500	-	-	-	-	-	-	-	-	-	-	-	-	-
Electric Bill Savings	-	$12,529	$12,853	$13,185	$13,526	$13,875	$14,234	$14,601	$14,977	$15,363	$15,758	$16,164	$16,579	$17,005
(FOE) Business Incentive	-	$5,031	-	-	-	-	-	-	-	-	-	-	-	-
Direct pay - 30% ITC	-	$84,200	-	-	-	-	-	-	-	-	-	-	-	-
Cash Total	-$210,500	$101,760	$12,853	$13,185	$13,526	$13,875	$14,234	$14,601	$14,977	$15,363	$15,758	$16,164	$16,579	$17,005
Total Cash Flow	-$210,500	$101,760	$12,853	$13,185	$13,526	$13,875	$14,234	$14,601	$14,977	$15,363	$15,758	$16,164	$16,579	$17,005
Cumulative Cash Flow	-$210,500	-$108,740	-$95,888	-$82,703	-$69,177	-$55,301	-$41,068	-$26,467	-$11,490	$3,873	$19,631	$35,795	$52,375	$69,380

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4.1 PV System

Assumptions and Key Financial Metrics

IRR - Term	11.4%	Net Present Value	$102,872	Payback Period	8.7 Years
ROI	206.7%	PV Degradation Rate	0.40%	Discount Rate	6.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	$210,500	Total Savings over 30 Years	$556,267		

Years	14	15	16	17	18	19	20	21	22	23	24	25	26
Cash													
Project Costs	-	-	-	-	-	-	-	-	-	-	-	-	-
Electric Bill Savings	$17,442	$17,889	$18,348	$18,818	$19,300	$19,793	$20,299	$20,818	$21,349	$21,893	$22,451	$23,023	$23,609
(FOE) Business Incentive	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct pay - 30% ITC	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash Total	$17,442	$17,889	$18,348	$18,818	$19,300	$19,793	$20,299	$20,818	$21,349	$21,893	$22,451	$23,023	$23,609
Total Cash Flow	$17,442	$17,889	$18,348	$18,818	$19,300	$19,793	$20,299	$20,818	$21,349	$21,893	$22,451	$23,023	$23,609
Cumulative Cash Flow	$86,822	$104,711	$123,059	$141,877	$161,176	$180,970	$201,269	$222,087	$243,436	$265,329	$287,780	$310,803	$334,412

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4.1 PV System

Assumptions and Key Financial Metrics

IRR - Term	11.4%	Net Present Value	$102,872	Payback Period	8.7 Years
ROI	206.7%	PV Degradation Rate	0.40%	Discount Rate	6.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	$210,500	Total Savings over 30 Years	$556,267		

Years	27	28	29	30	Totals
Cash					
Project Costs	-	-	-	-	-$210,500
Electric Bill Savings	$24,209	$24,824	$25,454	$26,099	$556,267
(FOE) Business Incentive	-	-	-	-	$5,031
Direct pay - 30% ITC	-	-	-	-	$84,200
Cash Total	$24,209	$24,824	$25,454	$26,099	$434,998
Total Cash Flow	$24,209	$24,824	$25,454	$26,099	$434,998
Cumulative Cash Flow	$358,621	$383,445	$408,899	$434,998	-

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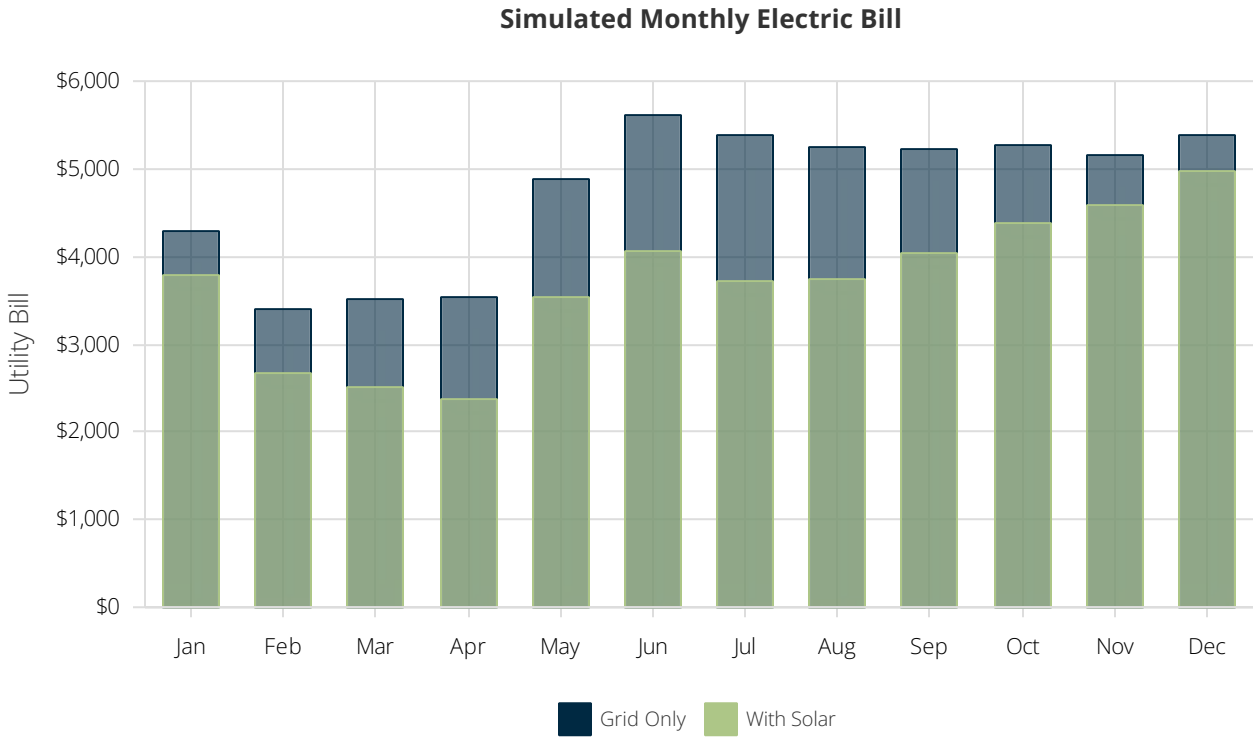
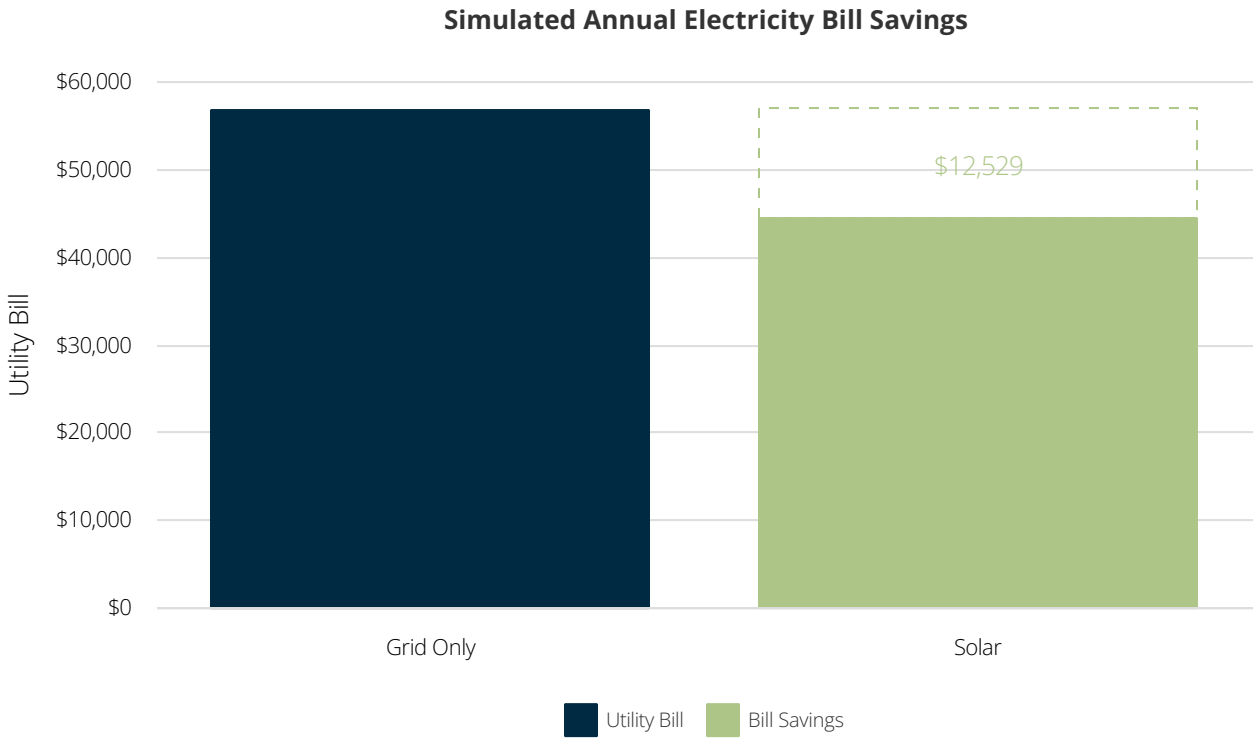
Energy Output and Demand Savings From Solar PV and Energy Storage				
Date Range	ESS Energy Discharge (kWh)	Solar PV Generation (kWh)	ESS Energy as % of PV Energy	Total Demand Savings
1/2/2025 - 2/2/2025	0	4,375	0.00%	$96
2/2/2025 - 3/2/2025	0	6,570	0.00%	$127
3/2/2025 - 4/2/2025	0	10,280	0.00%	$127
4/2/2025 - 5/2/2025	0	12,995	0.00%	$85
5/2/2025 - 6/2/2025	0	14,539	0.00%	$138
6/2/2025 - 7/2/2025	0	14,481	0.00%	$180
7/2/2025 - 8/2/2025	0	15,495	0.00%	$232
8/2/2025 - 9/2/2025	0	14,293	0.00%	$201
9/2/2025 - 10/2/2025	0	11,640	0.00%	$106
10/2/2025 - 11/2/2025	0	8,068	0.00%	$138
11/2/2025 - 12/2/2025	0	5,002	0.00%	$96
12/2/2025 - 1/2/2026	0	3,824	0.00%	$33
Total	0	121,562	0.00%	$1,556




Simulated Annual Electricity Bill Savings
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
Utility Bill
$12,529
Grid Only
Solar
Utility Bill
Bill Savings

New Glarus School District – Elementary School Rough Order of Magnitude Budgeting

Date: February 2, 2025
Client: New Glarus School District

The following preliminary budget numbers were put together without core cuts or analysis or thermal scans and are intended to provide a rough order of magnitude for costs of a new EPDM or metal standing seam roof assembly.

The roofs have been identified based on natural occurring sections based on elevations, walls and perimeter edges. The building is split up into 6 sections. Depending on how many sections are done at once there would be economies of scale in pricing. Final pricing would be achieved from Apex designing a system specification and competitively bidding out labor and materials with qualified contractors and suppliers. Roof section 02 is currently deemed low slope only (EPDM) without a metal option.

Roof Section	FAEPDM Budget	Standing Seam Budget
01	$150,000	$290,000
02	$85,000	$85,000
03	$85,000	$165,000
04	$215,000	$405,000
05	$325,000	$620,000
06	$110,000	$205,000
Total	$970,000	$1,770,000

The project could be split up over 3-5 years to spread costs out if desired for funding purposes.

Regards,

Jordan Tuminaro
Apex Building Consultants
608-239-2382

New Glarus School District – Elementary School Rough Order of Magnitude Budgeting

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06	$110,000	$205,000
Total	$970,000	$1,770,000

The project could be split up over 3-5 years to spread costs out if desired for funding purposes.

Regards,

Jordan Tuminaro
Apex Building Consultants
608-239-2382

Roof Thermal Scan Inspection Report

Client:	New Glarus School District
Location:	Elementary School
Date:	June, 2025
Consultant:	Jordan Tuminaro Apex Building Consultants

June, 2025

Attention: Larry McGowan

Please find attached the thermal inspection report for the Elementary School building at New Glarus School District. This report is based on thermal scan performed in June of 2025. The report identifies areas of suspected moisture within the roof assembly.

Should you require any additional information, please feel free to call me at any time.

Sincerely,

Jordan Tuminaro
President
Apex Building Consultants
608-239-2382
jt@apexbuildingconsultants.com

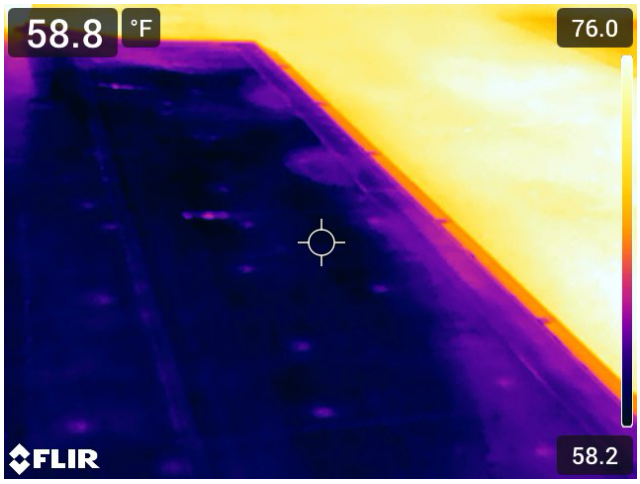
Pre Inspection Notes

The roofs on the older section of the Elementary School are comprised of fully adhered EPDM single ply assemblies and standing seam metal assemblies. The fully adhered EPDM areas were installed in 2000 according to District staff. Core cuts were taken and reveal that the roofs have either steel decks and 2 layers of 2" polyisocyanurate insulation or wood decks with limited insulation. The roofs all have great slope which has helped the roofs longevity as water does not pool on the membrane. There have been some areas which have leaked and been patched as evidenced by repair material being installed.

Insulation Analysis

The R-Value of the roof assemblies with 4 inches of iso is approximately 24. The roofs that have wood decks have R-Values between 1.5 and 9. Additional insulation can be added to the existing (if dry) during future roof replacements to bring the R-Value up to code or recommended levels.

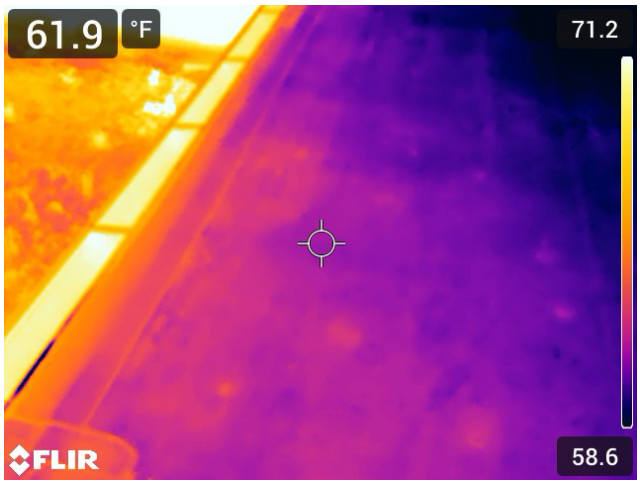
Photo Confirmation



Thermal scan performed on all areas of EPDM roofing at the Elementary. Areas of where wet roofing is will show up as holding heat compared to areas that are dry.

The scan showed areas at perimeter edges that may contain wet.

There are also a few areas in the field of the roof that show potential wet. These areas were all marked with orange spray paint.



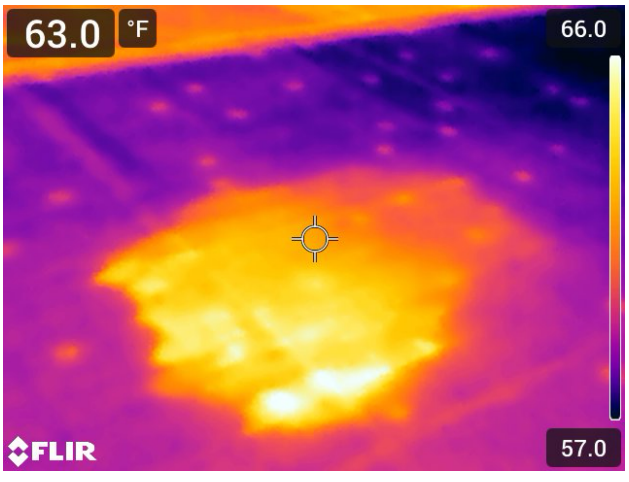


Photo Confirmation

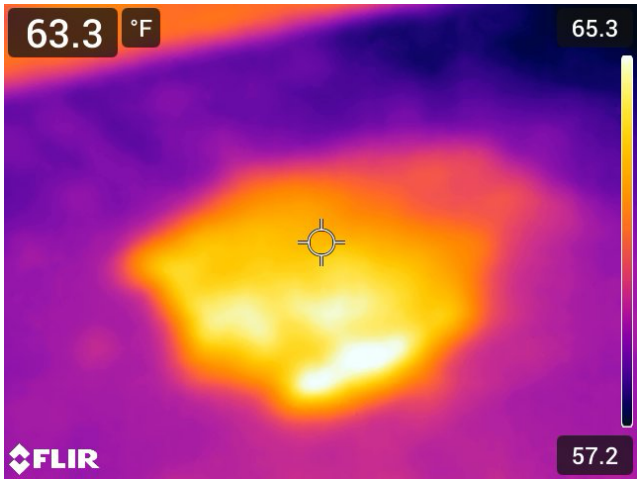
	The roofs have tremendous slope throughout, and this assists the roof in not aging. Water doesn't sit or pool on the membrane preventing accelerated aging.
	Overall, the roofs show limited hot spots. Except for a few isolated spots, the insulation appears to be dry.
	Low edges may have some wet while the field of the roof looks good with the exception of some isolated spots where leaks may have been present.

Photo Confirmation

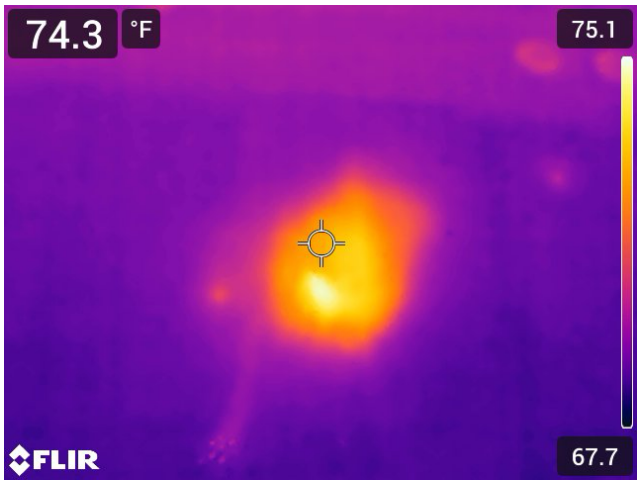
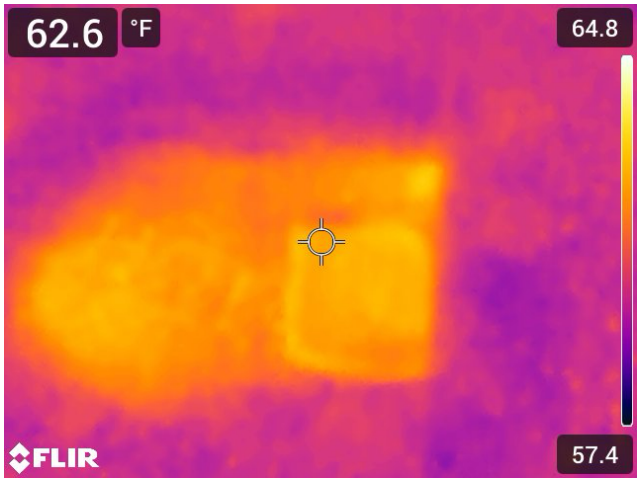
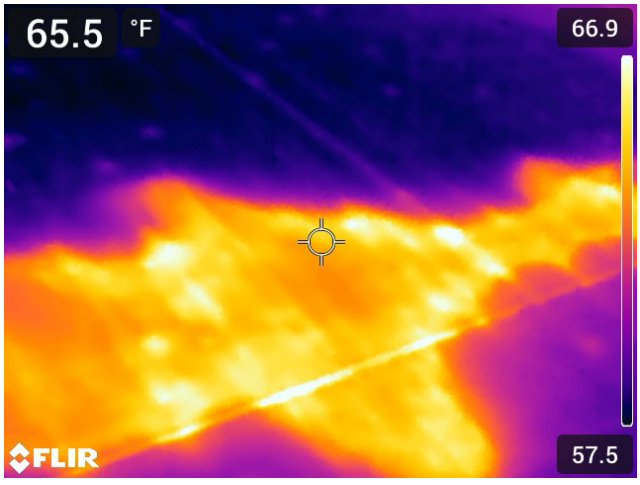
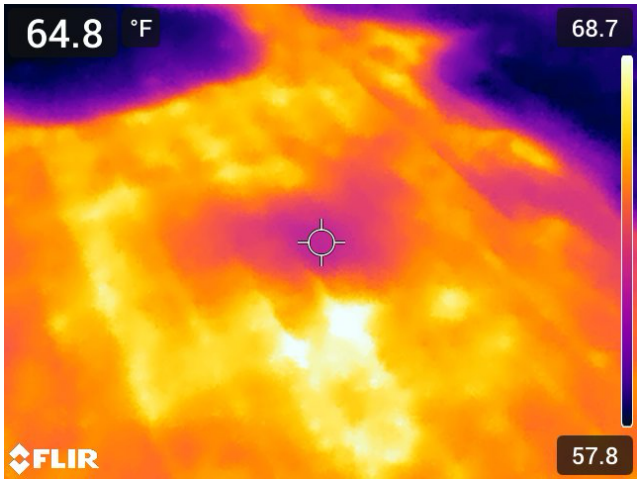
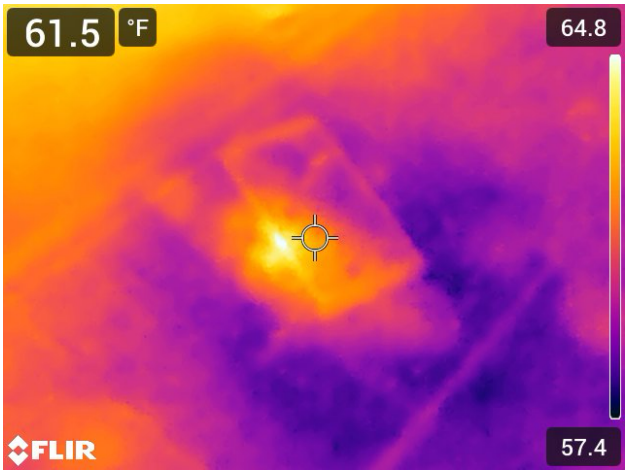
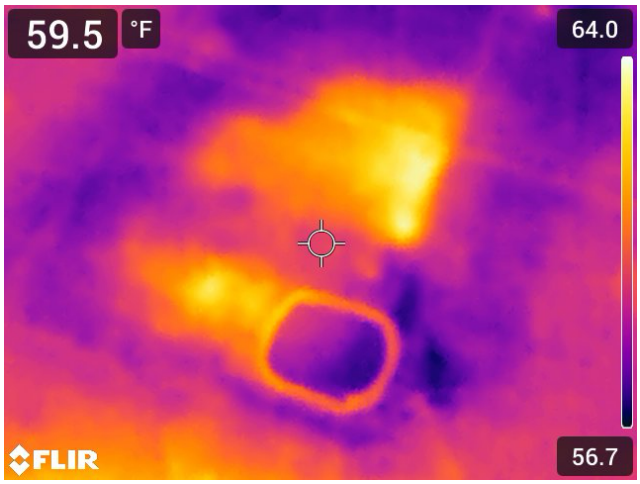
	Small area where a leak was likely present.
	Additional area that was marked as having wet in a small spot. There was a patch on this area indicating a previous cut or puncture in the membrane.
	Substantial area where moisture appears to be present in the field. This area was marked with orange paint.

Photo Confirmation







Additional areas where leaks were likely present as there are hot spots in the field.

Roof System Analysis

The amount of wet identified by the scan is minimal and could be addressed with spot replacement in any roof replacements. This would allow the existing insulation to remain, reducing tear off costs and saving on insulation costs. The existing insulation could be supplemented with new insulation on top to increase the R-Value of the system.

This would provide substantial savings of up to $3 per sq. ft. in any future project.

The areas with potential wet insulation were all marked on the roof with spray paint. Most of the areas corresponded with areas where repairs had been made in the past, indicating areas where the membrane was damaged in some way, allowing water into the assembly.

APEX
BUILDING CONSULTANTS

Roof Inspection Report

Client:	New Glarus School District
Location:	Elementary School
Date:	January, 2025
Consultant:	Jordan Tuminaro Apex Building Consultants

January, 2025

Attention: Larry McGowan

Please find attached the inspection report for the Elementary School building at New Glarus School District. This report is based on visual inspections performed in January of 2025. The report catalogs the observed conditions and identifies short-term needs for maintenance and repair along with future roof replacement considerations.

Continued inspections will be needed to monitor conditions as the roof continues to age.

Should you require any additional information, please feel free to call me at any time.

Sincerely,

Jordan Tuminaro
President
Apex Building Consultants
608-239-2382
jt@apexbuildingconsultants.com

Pre Inspection Notes

The roofs on the older section of the Elementary School are comprised of fully adhered EPDM single ply assemblies and standing seam metal assemblies. The fully adhered EPDM areas were installed in 2000 according to District staff. Core cuts were not taken at this time but can be when deemed appropriate to fully determine the make-up of the insulation and the roof assembly. Staff believes that the roofs contain 4 inches of insulation. The roofs all have great slope which has helped the roofs longevity as water does not pool on the membrane.

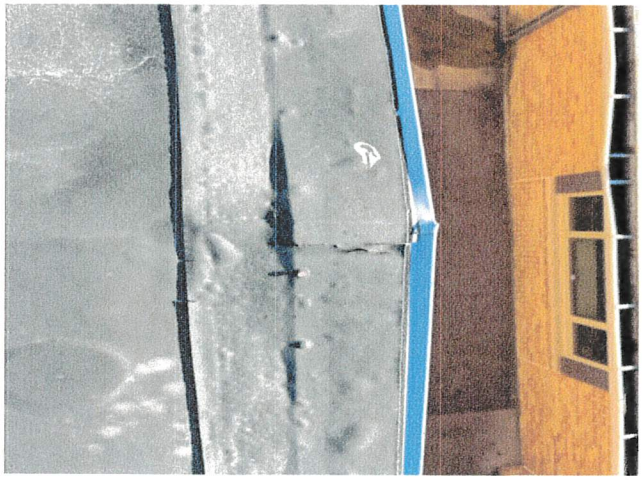
Insulation Analysis

The R-Value of the roof assembly is believed to currently be between 15 and 20. Core cuts will be able to accurately identify the type and depth of insulation to pinpoint exact R-Value. It is believed that the current assembly is less than current Wisconsin Code for the region. Additional insulation can be added to the existing (if dry) during future roof replacements to bring the R-Value up to code or recommended levels.

Photo Confirmation

Perimeter flashing where the membrane is starting to delaminate at the edge and the fasteners for the metal edge are backing out through the membrane.

Flashing membrane splitting and where nails have backed out and punctured. These areas have been in the process of being repaired by internal staff.



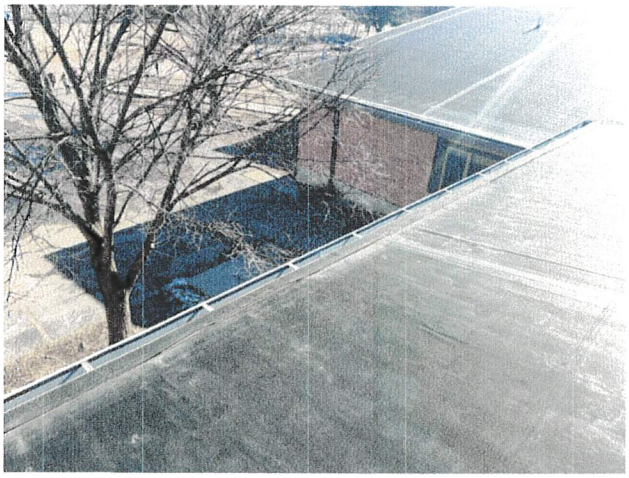
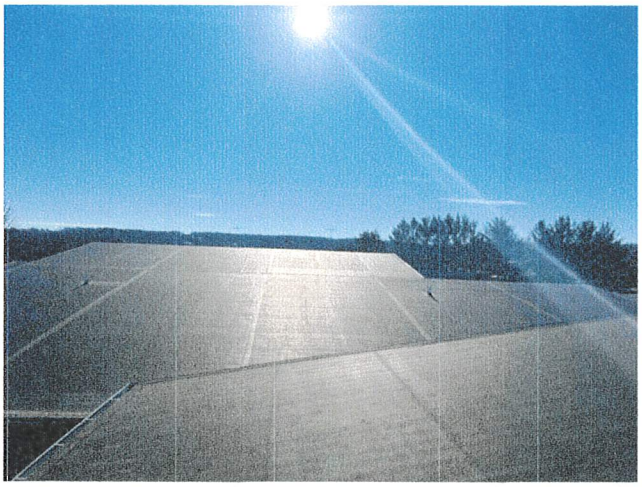
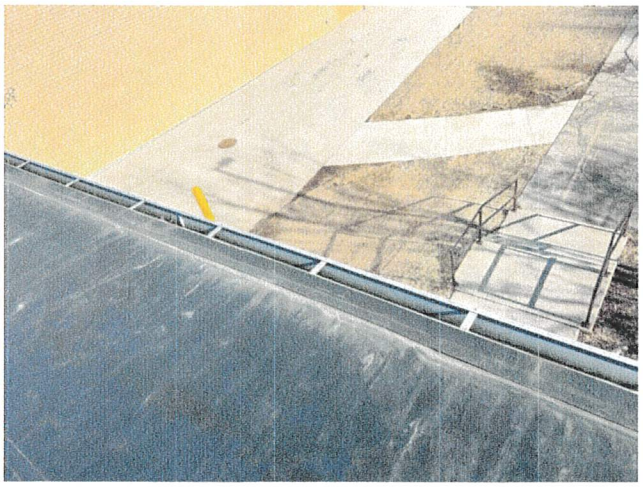


Photo Confirmation

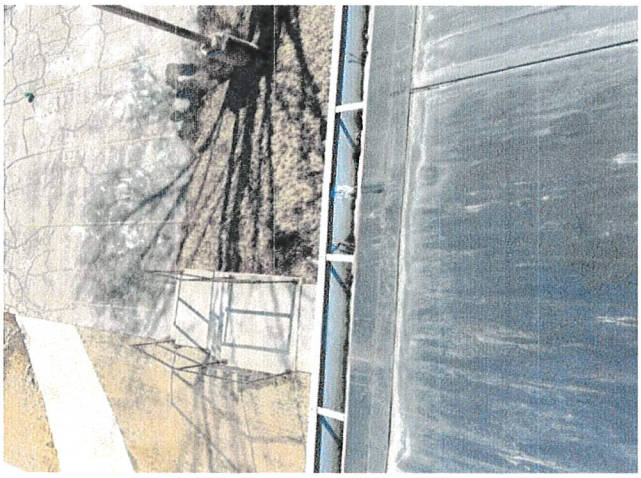


The roofs have tremendous slope throughout, and this assists the roof in not aging. Water doesn't sit or pool on the membrane preventing accelerated aging.



Gutter edges have been damaged over the years and would need to be replaced in conjunction with any roof replacements.

Flashing membrane at the perimeter edge is the main area where roof deterioration and aging are seen.



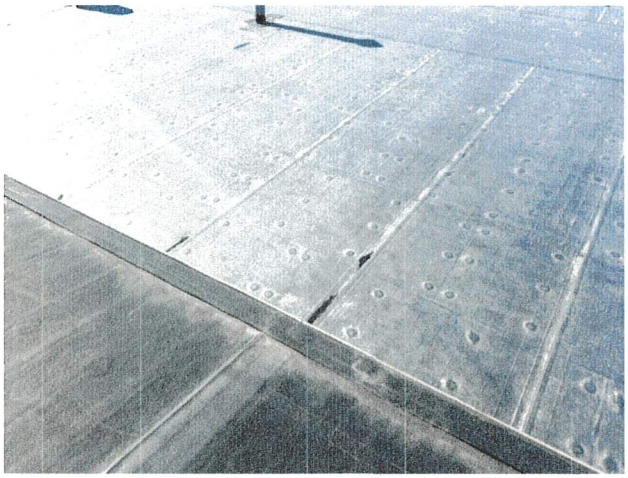
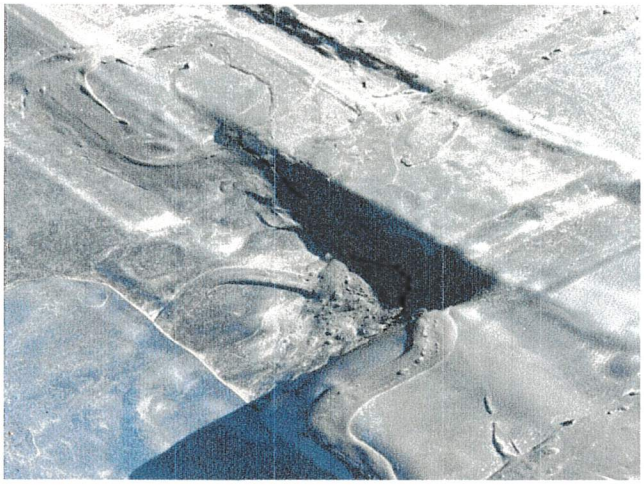
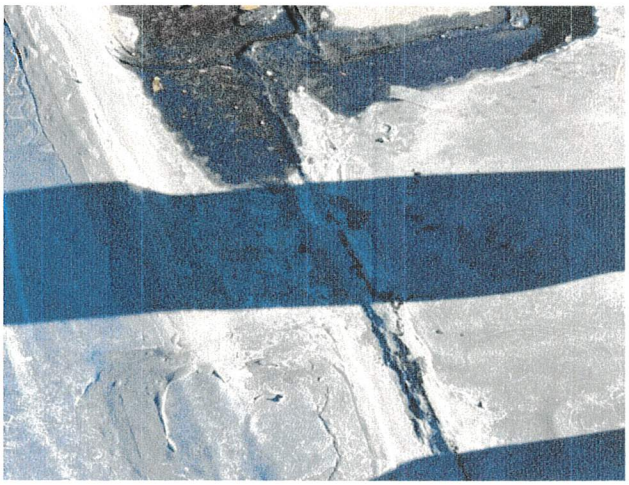


Photo Confirmation

Curling of the flashing membrane at the perimeter. These areas are the main areas of wear and tear on the roof assembly. The field membrane is not showing any signs of punctures or tears. Maintenance has done a great job of making repairs to flashing areas such as the one at left to address deterioration and aging.

Pictures below show membrane at the transition between two roofs where lap sealant is deteriorating at the seam. Bottom right shows curling of the membrane.





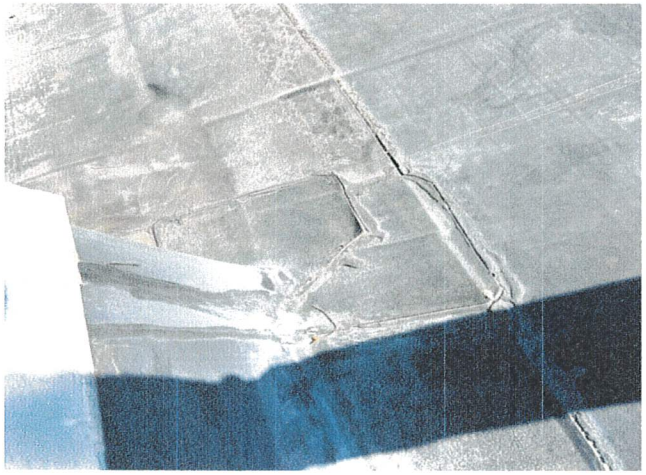
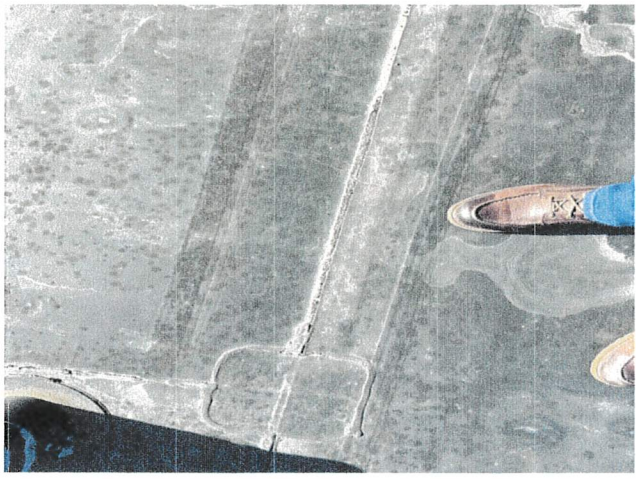
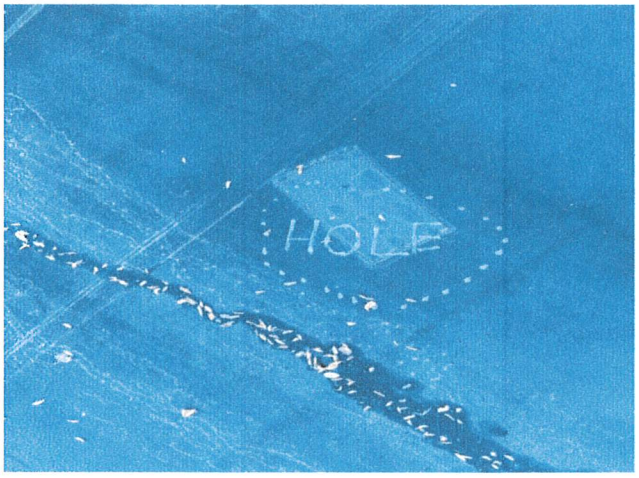


Photo Confirmation



Lap sealant at field seam is showing signs of deterioration.



Area identified as having a void in the insulation.

Photo Confirmation

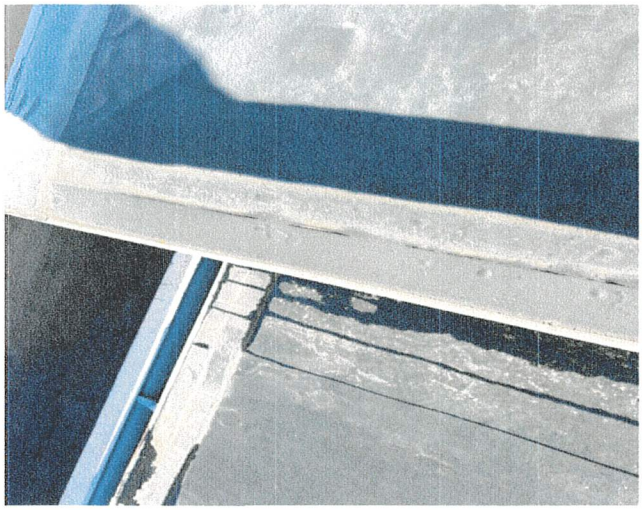
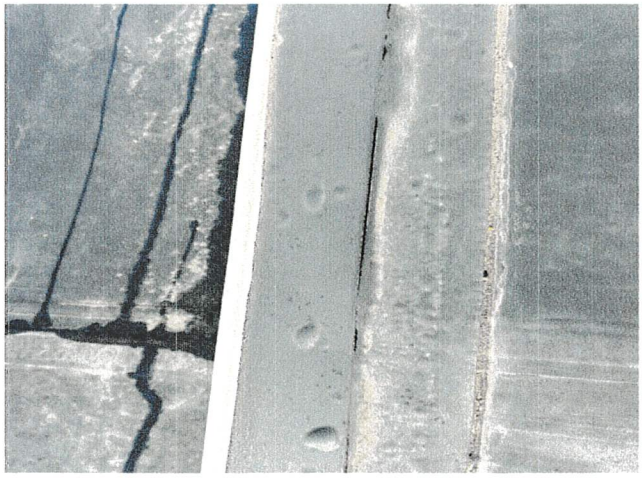
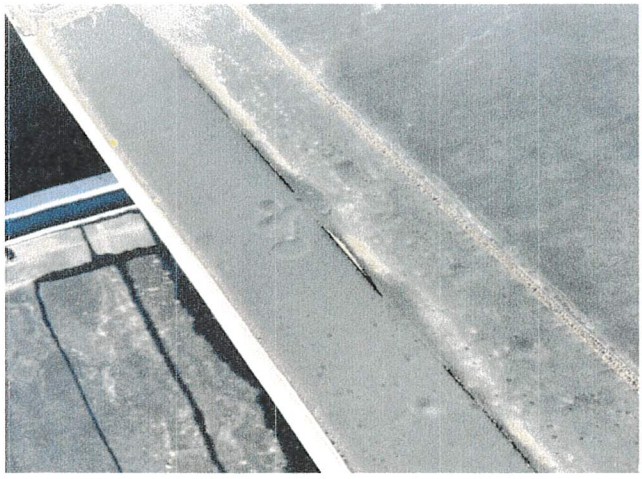
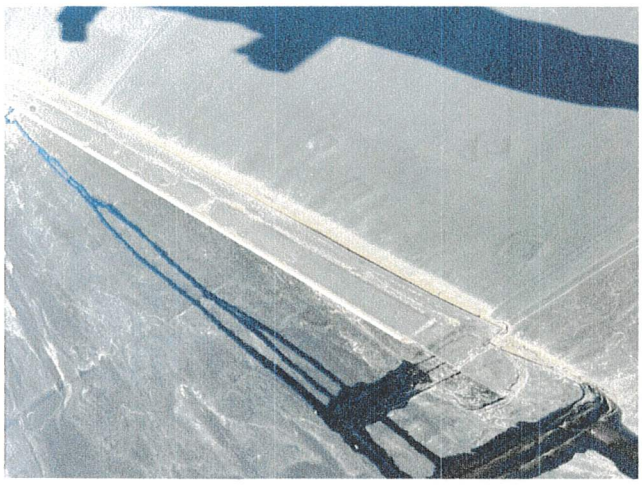
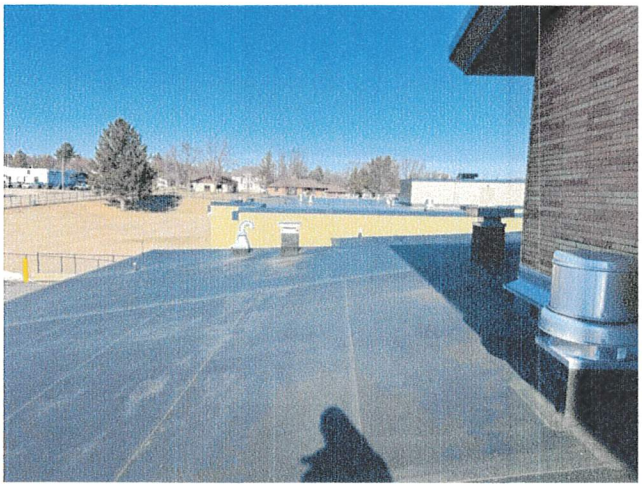
	Perimeter flashing that is split open.
	Perimeter flashing with split in the membrane. Bottom right picture shows curling and delamination at the edge of the flashing.
	

Photo Confirmation





The picture at right shows some areas that appear to have been patches that may have held heat tape at one time.

Pictures above show general roof overviews of the areas at the elementary.

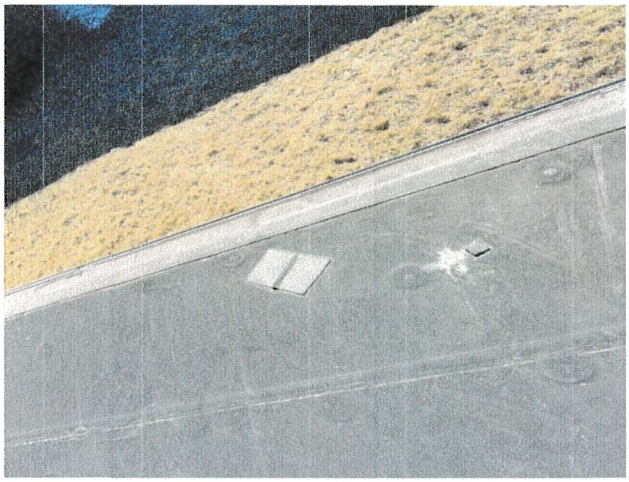
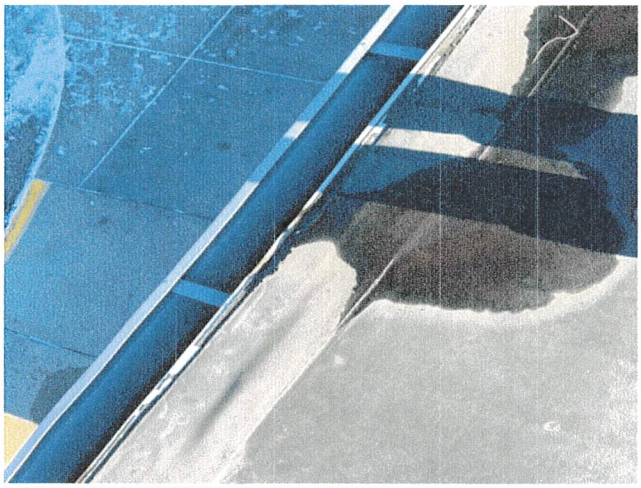
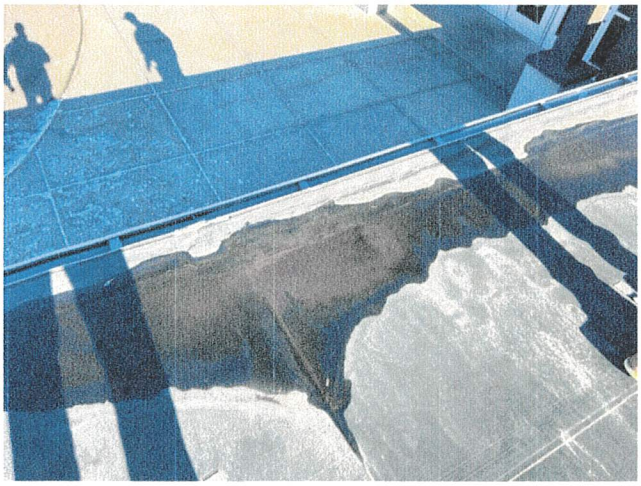


Photo Confirmation





Slight ponding of water at low gutter edge.

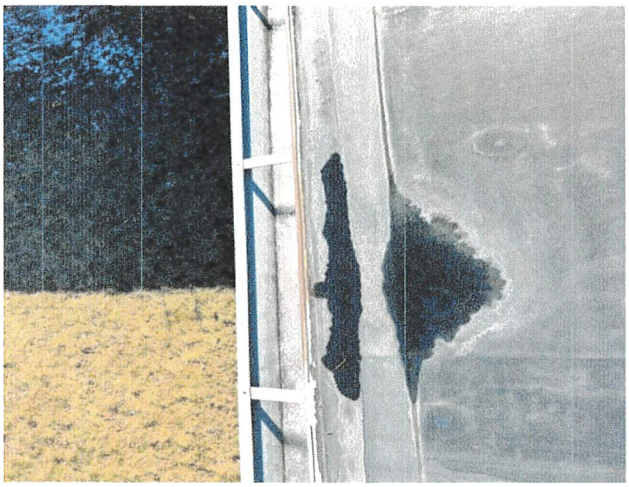
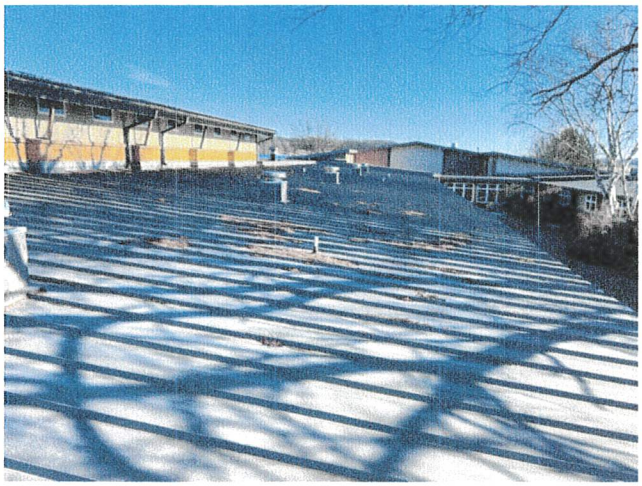


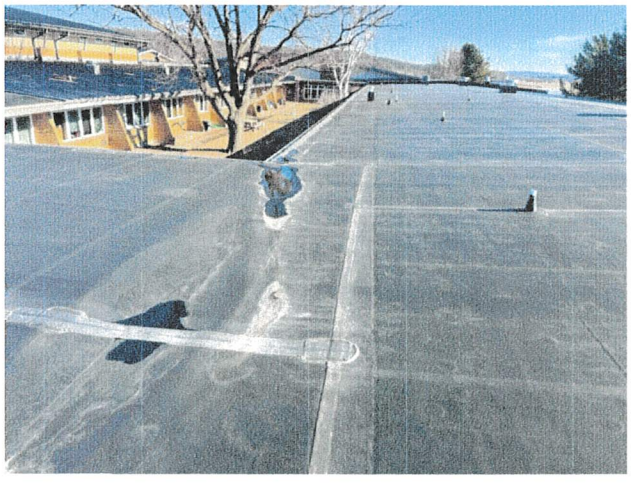
Photo Confirmation



Section of the elementary that utilizes standing seam metal roof assembly.

Transition between metal roof assembly and single ply assembly.

Pictures below show small areas of ponding water in the field of the roof.



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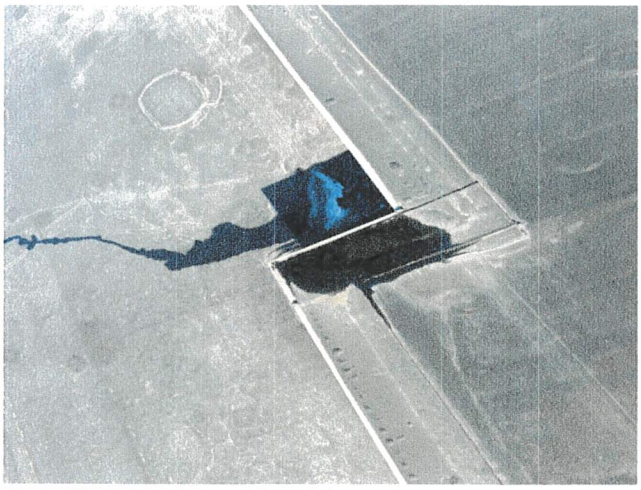
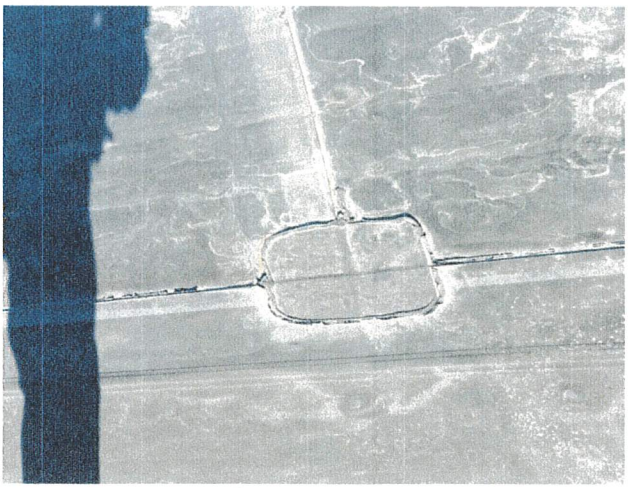
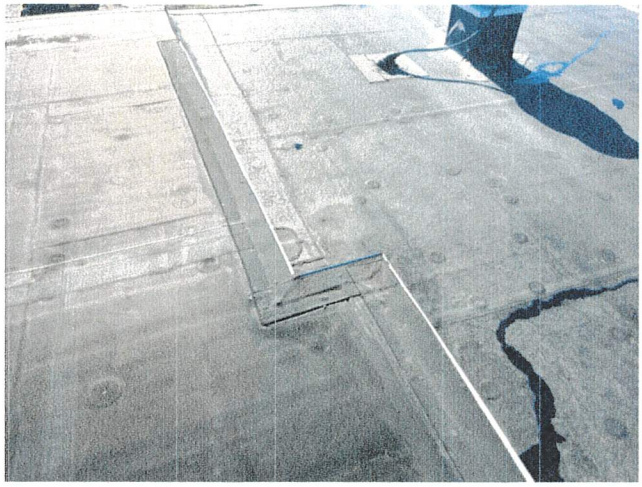


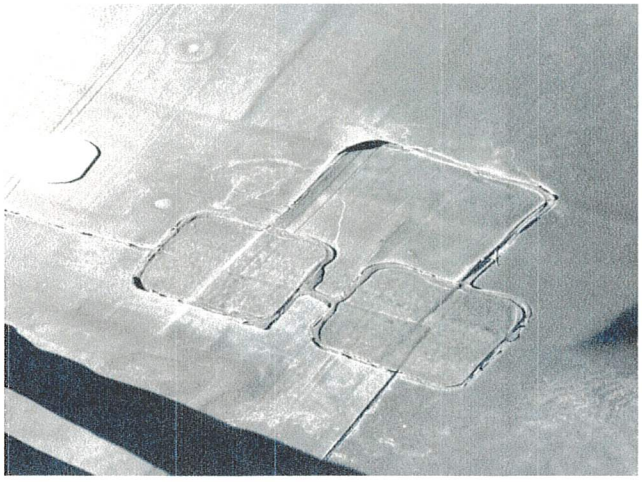


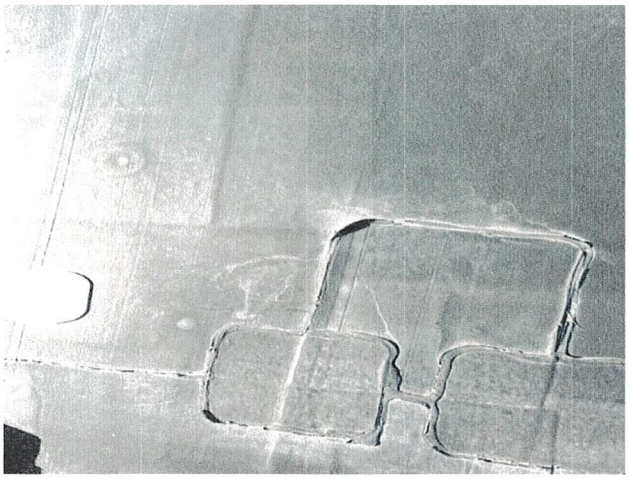


Area where repairs to flashing have been made by staff.

Metal edge telegraphing through the flashing membrane at the corner transition. Eventually this will cause the membrane to split open as it has in other spots.

Photo Confirmation





T patches at field seams where curling and delamination is occurring.

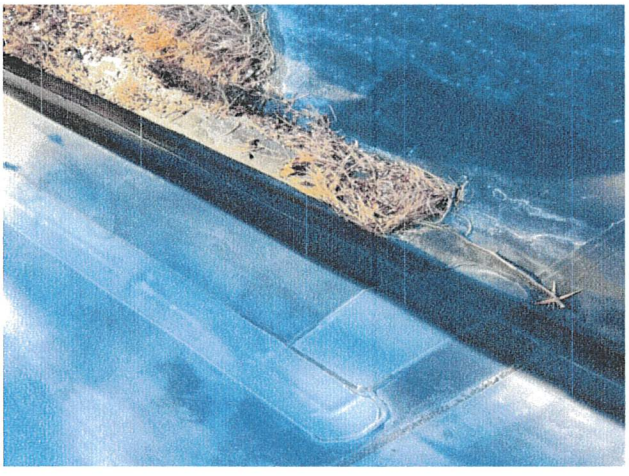


Photo Confirmation

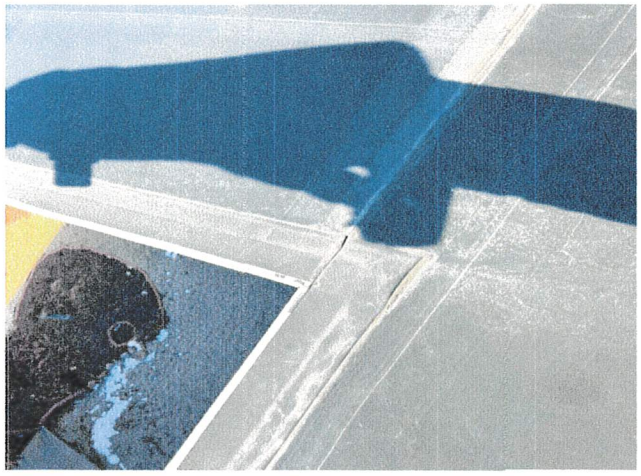
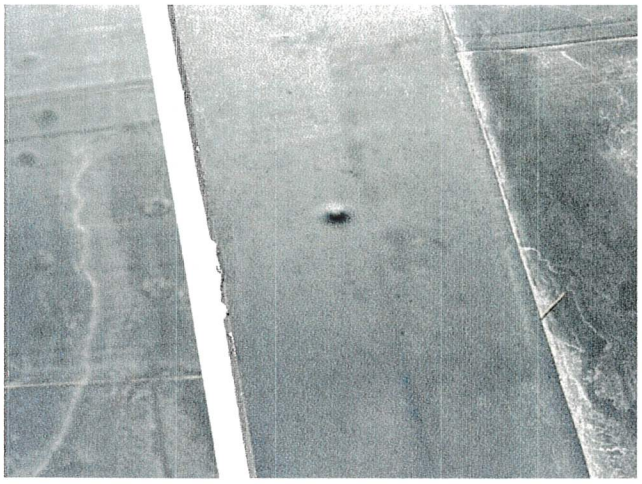
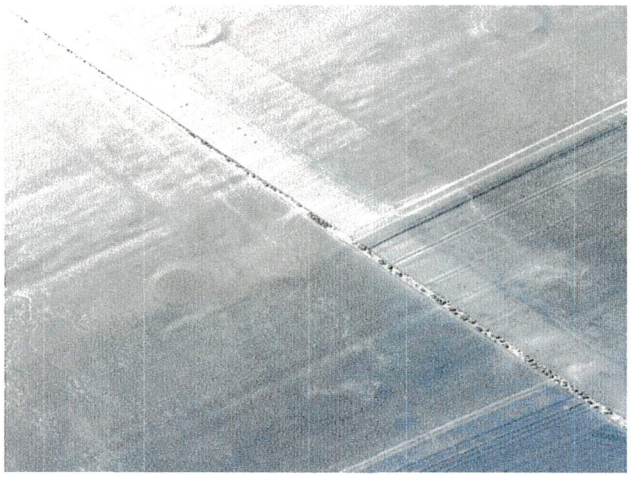
	Slight tenting at the perimeter transition wall.
	Curling of the flashing at the corner transition.
	

Photo Confirmation



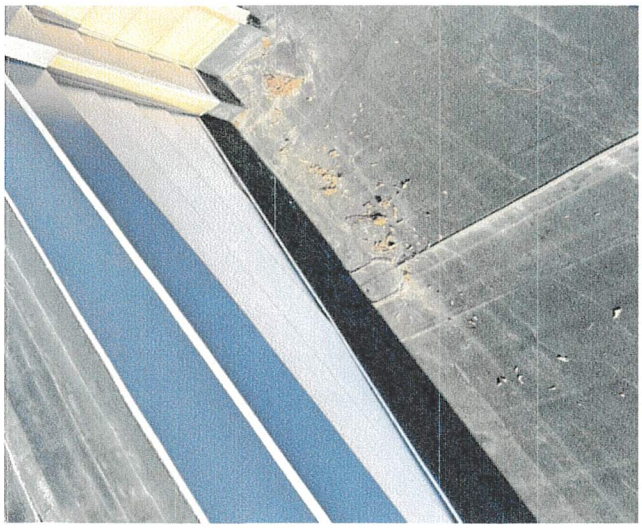


Lap sealant deterioration at the field seam.

Slight ponding at the low gutter edge in the picture at bottom left.

Gutter damage is evident in the bottom right picture.

Photo Confirmation



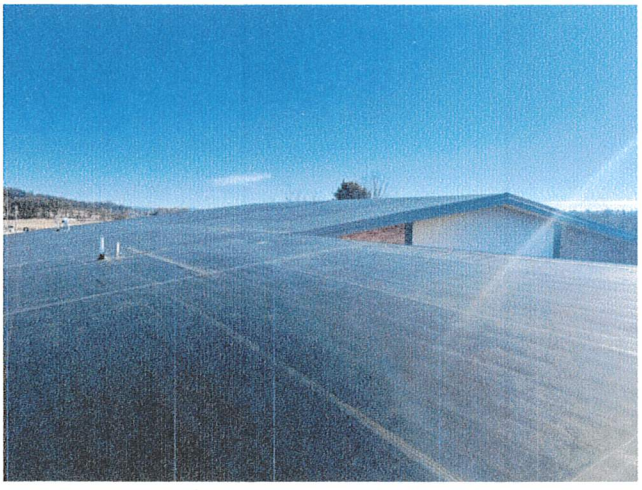
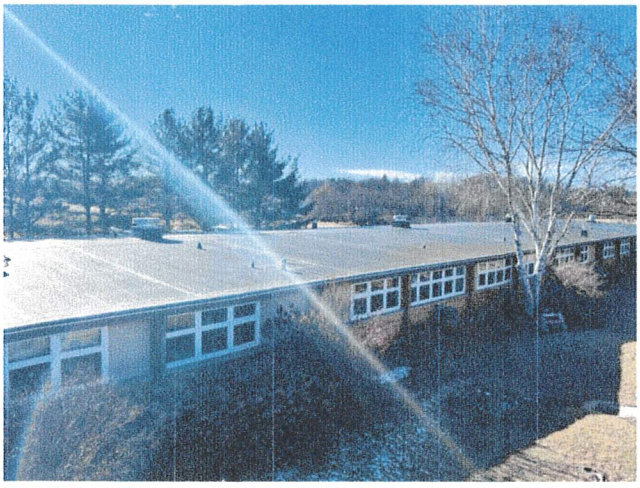


Photo Confirmation



Overview of the elementary roof sections.

Roof System Analysis

Core Samples: Core samples have yet to be taken on the roof assemblies. Once cores are taken the exact composition and insulating value of the roof can be determined.

Field Membrane Condition: The field membrane on the single ply EPDM assemblies is good considering the age of the membrane. There are some areas where lap sealant at the seams is showing deterioration and a few areas where delamination is beginning but overall the roof doesn't show any splits, punctures, tears or openings. Maintenance has done a great job of identifying areas that need repairs or maintenance, and this has extended the life of the roof.

Flashing Membrane Condition: The flashing membrane shows limited signs of tenting and pulling throughout the various roof sections. There have been punctures at corner flashings, but these have been patched by maintenance. The flashing at the perimeter edge on some sections is deteriorated and there are areas where fasteners/nails are backing out through the membrane. These areas are in the process of being reflashed by maintenance staff.

Energy Efficiency: The EPDM roof is lower than the current code R-Value. Current R value is approximately 15-20. The roofs should be taken to an R-value of 30. If the roofs are replaced prior to widespread leaks and damage, the existing insulation should be able to be re-used and added to, which can save as much as $2-$3 a square foot in costs.

The roofs have great slope overall which has led to solid drainage and limited areas of ponding water. This in turn has kept the roofs performing past the traditional, expected industry life. The main areas of damage are at the flashing seams at the perimeter edges including gutter edges. These areas have flashing membrane that has deteriorated and split, nails that have backed out and punctured the membrane from below, and edges that have curled. The field of the roof doesn't show much damage in the form of splits, tears or punctures. There are some areas at field seams where lap sealant has deteriorated and where insulation has shifted or buckled leaving small voids in the substrate. The roofs have limited penetrations which has also helped performance.

Recommendations

EPDM roofs generally have a 10, 15 or 20-year warranty and have an expected industry life average of 20 years. Typically, issues begin to show up with more frequency in the 15-year age range as the roofs begin to show wear and tear from age and dimensional shortening. The dimensional shortening (shrinking) that occurs as the roof ages, generally shows at the perimeter and penetration flashing where the membrane tents or balloons. As the roof continues to dimensionally shorten (shrink) it will eventually split, tear or open. As the roof only contains one ply of waterproofing this will then become an immediate source of water infiltration into the roof assembly and eventually the interior of the building. Water within the roof assembly will deteriorate the insulation and other components and can also contribute to indoor air quality issues with mold growth.

At 25 years of age now is the time to discuss and plan a course of action for addressing these roof assemblies. Experience has shown that this type of roof assembly begins to show increased decline when it reaches this age. Similar roof assemblies on buildings in the area commonly reach a point of needing to be replaced at the twenty-year mark. The roofs all have great slope which moves water effectively off the roof. The lack of water sitting on the roof helps the roof from having accelerated deterioration. The slope coupled with diligent maintenance and repairs from the maintenance staff have led to the roof's longevity. Currently these factors have helped to prevent areas where the membrane is completely open. The condition of the roofs will allow the District to have options in planning for replacement.

There are three different options available to addressing the roofs on a building of this size at this age:

1. Make large-scale repairs, when needed, aimed at addressing the perimeter flashing assemblies in an attempt to squeeze additional life out of the existing roof. (This has been and is currently being done by maintenance staff).
2. Begin a yearly roof replacement program aimed at spreading the costs of replacement over several years. This would be coordinated to address the worst areas first, cutting down on repair and maintenance costs. The goal would be to re-use existing insulation and replace all roofs prior to large scale failure.
3. Replace the roofs in one large capital project.

Each option has its pros and cons and fits differently with the district's resources and goals. The correct option will be the one that best marries the districts resources, goals, expectations and desired outcome. Each option is discussed further below:

Option 1

Making large-scale repairs, specifically to the perimeter and penetration flashings could allow the roof to function longer than if nothing were done as it corrects the areas where deficiencies show up first. There are however unknowns in this option. There is generally no guarantee or knowledge as to how long these repairs will last and the bulk of the roof will still be the original age and keep aging. The key in this option is performing the repairs correctly and seaming the old membrane with the new membrane. Note** This process has been performed by internal staff over the last few years and is why the roofs have exceeded industry standards for life.

Option 2

Replacing the existing roofs in sections over several years allows the costs to be spread out over those years reducing a large, all at once capital outlay. Spreading the work out over several years also allows the worst sections to be addressed first and has the potential to reduce yearly maintenance and repair costs. Existing insulation that is viable is also more likely to be incorporated with the new roof assembly as widespread failure is reduced. This can contribute to savings of as much as $2 to $3 a foot. The key in this option is timing, as you want to have all roofs replaced prior to large scale failure.

Option 3

Replacing the roofs in one large capital project allows for maximization of the existing roof assembly. Performing this option requires the capital to be available all at once and requires that year to year funds be available for maintenance and repairs that will be needed prior to replacement. The downside to all at once option is that the roofs are now all again the same vintage and can be expected to all need repairs/restoration/replacement at the same time in the future. It is also possible that the existing insulation may become wet and not viable for re-use in a new roof assembly depending on when the replacement takes place.

Once it is determined what plan of action best suits the District's needs, then discussions and analysis can begin based on the chosen option. In options 2 and 3 discussion and analysis can begin on the appropriate roof options available for replacement. Roof options can be compared based on performance, initial cost, maintenance cost, life-cycle cost and sustainability. With the slope and the success of the existing fully adhered EPDM roof assembly this would be a natural choice for a replacement assembly. The other option to consider would be a standing seam metal roof assembly like the one that is on the internal section of the building.

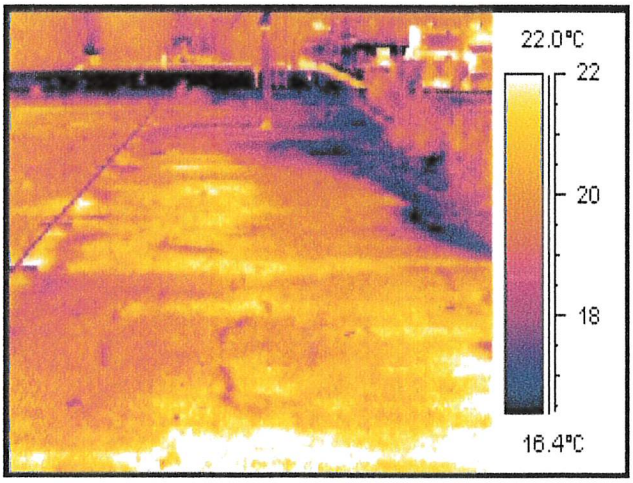
Date: February 4, 2025
Client: New Glarus School District
Area: Elementary School

Subject: Thermal Roof Scan and Core Cuts

There are many times when thermal scans can assist in identifying the condition of your roofs and aid in determining what actions may be possible. The thermal scan will show where leaks and wet insulation are present by identifying areas of moisture within the roof assembly. By determining whether there is wet insulation or not the appropriate plans can be made for the future.

The Thermal Scan is a diagnostic tool and acts very much like an X-ray to determine the condition of the roof and insulation that are not visible to the naked eye.

Utilizing the most up to date equipment and performing the scan at the optimal time will ensure the most accurate readings. The use of a thermal scan assists in setting priorities. Funds are spent on correction of wet insulation thereby correcting leaks and minimizing long-term costs. Wet insulation has the potential to deteriorate the roof deck and lead to more issues like mold and structural damage to other building components. The Thermal Scan will allow for a non-invasive analysis of whether this wet is contained only in limited sections or whether wet is found throughout the building in multiple areas. Another important question the scan will answer is whether existing insulation could be re-used in future replacement projects with the potential for savings of as much as $2 to $3 per sq. ft.



The following is included as part of the Infra Red Scan Service that would be provided:

1. A complete scan of the designated area or roof areas with any problem areas marked.
2. A drawing of the roof with all sections of wet insulation marked.
3. Thermograms and photos of all problem areas.
4. Recommendations for any required work to bring the roofs up to a watertight condition immediately and recommendations for the future as related to restoration and/or replacement.

Once the scan is completed you will have the scientific information you require to make proper maintenance decisions regarding your roofing systems. This information will then allow for the accurate budgeting of the necessary remedies to address these needs. The cost for the Infrared Thermal Scan is determined based on the amount of square feet to be scanned as well as the access to the areas.

The cost to perform the scan and develop the analysis report for the Elementary is $2,100.

Potential Savings based on $2 to $3 square foot savings for scanned area would be between $128,498 and $192,747. Even if one tenth of the roofs were verified through scan to be dry that would still provide savings well above the cost of the scan.

The roofs also need to have core cuts performed to determine the full composition of the roof assembly including deck type, insulation type and thickness, current R-value, number of roof systems, and attachment. Without this information it is impossible to properly discuss viable options and design a replacement system for bid specifications.

The cost to perform the cores and analysis for the Elementary is $1,200

Total Cost of Thermal Scan and Core Cuts and Analysis = $3,300

Regards,

Jordan Tuminaro, President
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608-239-2382

VIII. **Adjourn**

PURSUANT TO APPLICABLE LAW, NOTICE IS HEREBY GIVEN THAT A QUORUM OR A MAJORITY OF THE NEW GLARUS SCHOOL DISTRICT BOARD MEMBERS MAY ATTEND THIS MEETING. INFORMATION PRESENTED AT THIS MEETING MAY HELP FORM THE RATIONALE BEHIND FUTURE ACTIONS THAT MAY BE TAKEN BY THE NEW GLARUS SCHOOL DISTRICT BOARD.

UPON REQUEST TO THE DISTRICT OFFICE, SUBMITTED TWENTY-FOUR (24) HOURS IN ADVANCE, THE DISTRICT SHALL MAKE REASONABLE ACCOMMODATIONS INCLUDING THE PROVISION OF INFORMATIONAL MATERIAL IN AN ALTERNATIVE FORMAT FOR A DISABLED PERSON TO BE ABLE TO ATTEND THIS MEETING.