

Utility/Municipal

- Location: City of Marathon, Iowa
 - Phase 1 of 3
- System Size: 298.2 kW
- 20.3% Electric offset
- 19.7% Bill offset
- 7.0 Year payback
- 30-yr energy saving = \$1,288,000



Schools/Colleges

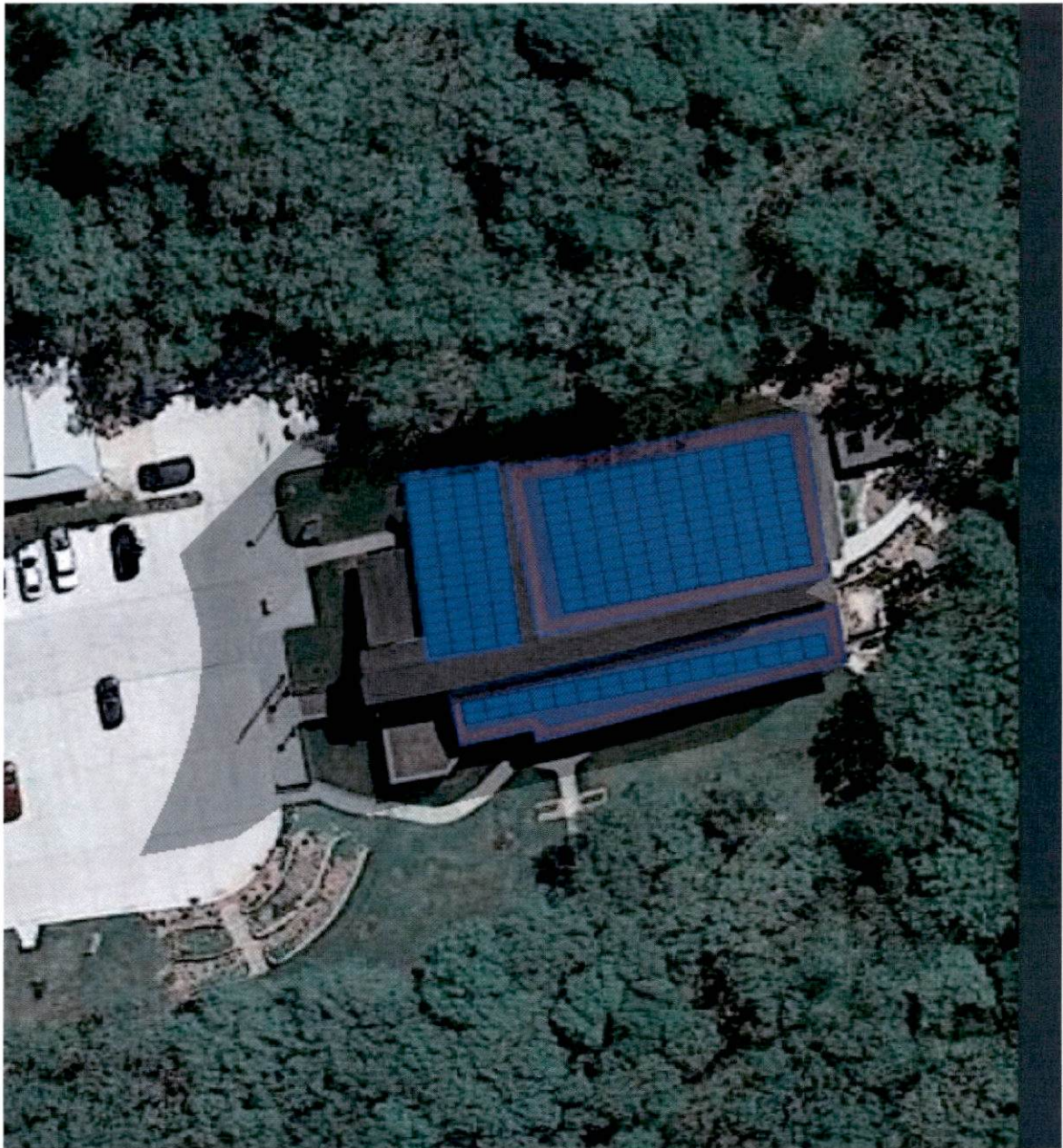
- Location: Albert City, Iowa
- System Size: 222.2 kW
- 100% Electric offset
- 100% Bill offset
- 4.9 Year payback
- 30-yr energy saving = \$2,080,050



Commercial

- Location: Spirit Lake Pizza Ranch
- System Size: 178 kW
- 100% Electric offset
- 100% Bill offset
- 4.2 Year payback
- 25-yr energy saving = \$1,007,90







Prepared For
Woodbury County Conservation
Board
(712) 258-0838
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Trusted Energy™ was founded as a full-service renewable energy company. **Trusted Energy™** provides Engineering, Design, Installation, and Maintenance of renewable energy projects for Farms, Businesses, Homes, and Municipalities.

Trusted Energy™ is dedicated to providing our customers with great service. We continually educate our technicians to ensure that our installations exceed the expectations of our clients. We look forward to helping you with your next renewable energy project.

All Prices quoted are valid for 30 days from the date stated on the quotation.

WCCB Nature Center Roof

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8/11/2021



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1 Project Summary

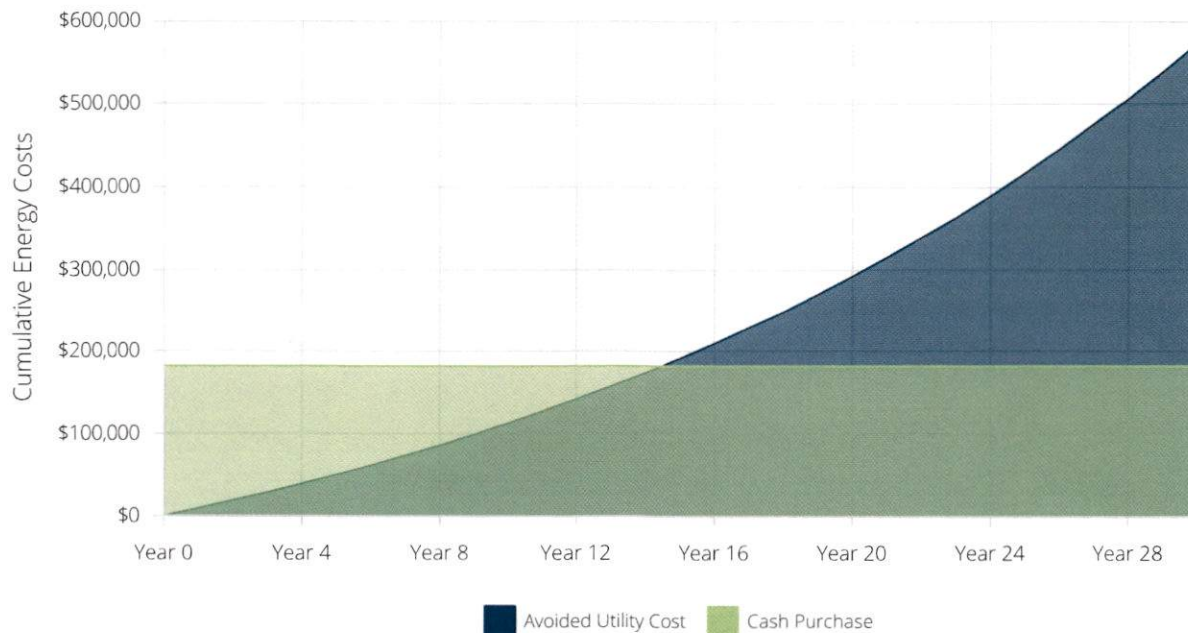
Payment Options	Cash Purchase
IRR - Term	7.3%
LCOE PV Generation	\$0.054 /kWh
Net Present Value	\$66,264
Payback Period	14.5 Years
Total Payments	\$182,628
Total Incentives	\$0
Net Payments	\$182,628
Electric Bill Savings - Term	\$572,353
Upfront Payment	\$182,628

Combined Solar PV Rating

Power Rating: 102.6 kW-DC

Power Rating: 75.0 kW-AC

Cumulative Energy Costs By Payment Option



2.1 PV System Details

General Information

Facility: WCCB Nature Center
Address: 4500 Sioux River Rd Sioux City IA 51109

Solar PV Equipment Description

Solar Panels: Best Quality Solar Panels
Inverters: Best Quality Solar Inverters

Solar PV Equipment Typical Lifespan

Solar Panels: Greater than 30 Years
Inverters: 15 Years

Solar PV System Cost and Incentives

Solar PV System Cost \$182,628

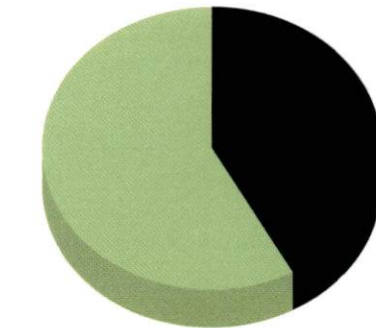
Net Solar PV System Cost \$182,628

Solar PV System Rating

Power Rating: 102.6 kW-DC
Power Rating: 75.0 kW-AC

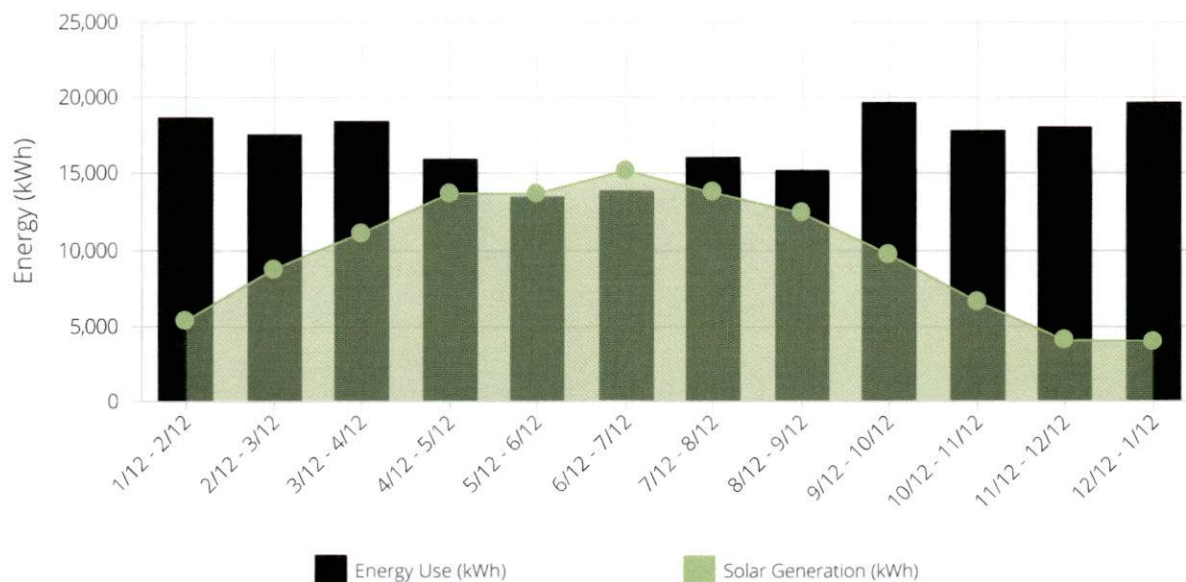
Energy Consumption Mix

Annual Energy Use: 204,180 kWh



Utility	85,888 kWh (42.06%)
Solar PV	118,292 kWh (57.94%)

Monthly Energy Use vs Solar Generation



2.2 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.

2.2.1 Utility Rates

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

Customer Charges				Energy Charges			
Season	Charge Type	Rate Type	GE	Season	Charge Type	Rate Type	GE
S	Flat Rate	per billing period	\$10.00	S	T < 5,000 kw	Import	\$0.10864
W	Flat Rate	per billing period	\$10.00	S	5,000 kw < T < 40,000 kw	Import	\$0.09903
				S	40,000 kw < T	Import	\$0.11693
				W	T < 5,000 kw	Import	\$0.0805
				W	5,000 kw < T < 40,000 kw	Import	\$0.05333
				W	40,000 kw < T	Import	\$0.08167

2.2.2 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: MAE-IA - GE

Time Periods	Energy Use (kWh)	Charges		
		Other	Energy	Total
Bill Ranges & Seasons	Total			
1/12/2020 - 2/12/2020 W	18,660	\$10	\$1,131	\$1,141
2/12/2020 - 3/12/2020 W	17,580	\$10	\$1,073	\$1,083
3/12/2020 - 4/12/2020 W	18,420	\$10	\$1,118	\$1,128
4/12/2020 - 5/12/2020 W	15,900	\$10	\$984	\$994
5/12/2020 - 6/12/2020 W / S	13,380	\$10	\$1,134	\$1,144
6/12/2020 - 7/12/2020 S	13,860	\$10	\$1,421	\$1,431
7/12/2020 - 8/12/2020 S	16,080	\$10	\$1,640	\$1,650
8/12/2020 - 9/12/2020 S	15,180	\$10	\$1,551	\$1,561
9/12/2020 - 10/12/2020 S / W	19,680	\$10	\$1,773	\$1,783
10/12/2020 - 11/12/2020 W	17,820	\$10	\$1,086	\$1,096
11/12/2020 - 12/12/2020 W	18,000	\$10	\$1,096	\$1,106
12/12/2019 - 1/12/2020 W	19,620	\$10	\$1,182	\$1,192
Total	204,180	\$120	\$15,190	\$15,310

2.2.3 New Electric Bill

Rate Schedule: MAE-IA - GE

Time Periods	Energy Use (kWh)	Charges		
Bill Ranges & Seasons	Total	Other	Energy	Total
1/12/2020 - 2/12/2020 W	13,291	\$10	\$845	\$855
2/12/2020 - 3/12/2020 W	8,831	\$10	\$607	\$617
3/12/2020 - 4/12/2020 W	7,323	\$10	\$526	\$536
4/12/2020 - 5/12/2020 W	2,206	\$10	\$178	\$188
5/12/2020 - 6/12/2020 W / S	-326	\$10	\$21	\$11
6/12/2020 - 7/12/2020 S	-1,315	\$10	\$143	\$133
7/12/2020 - 8/12/2020 S	2,322	\$10	\$252	\$262
8/12/2020 - 9/12/2020 S	2,774	\$10	\$301	\$311
9/12/2020 - 10/12/2020 S / W	9,983	\$10	\$954	\$964
10/12/2020 - 11/12/2020 W	11,238	\$10	\$735	\$745
11/12/2020 - 12/12/2020 W	13,948	\$10	\$880	\$890
12/12/2019 - 1/12/2020 W	15,613	\$10	\$968	\$978
Total	85,888	\$120	\$6,083	\$6,203

Annual Electricity Savings: \$9,107

3.1 Rebates and Incentives

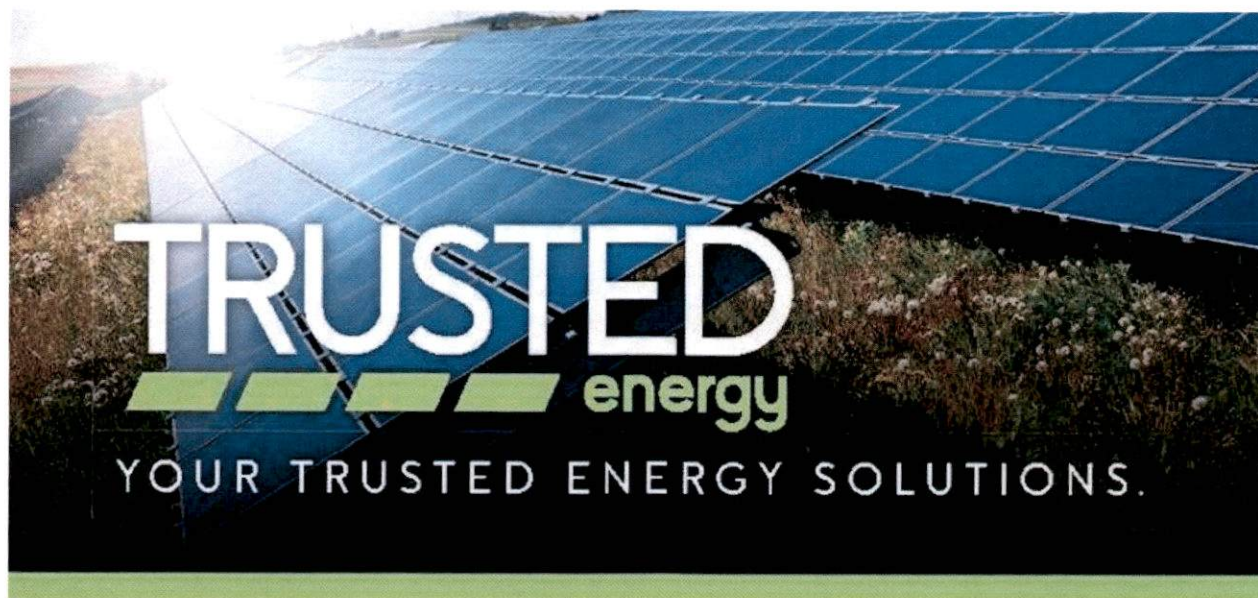
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3.2 Cash Purchase

Assumptions and Key Financial Metrics

IRR - Term	7.3%	Net Present Value	\$66,264	Payback Period	14.5 Years
ROI	213.4%	PV Degradation Rate	0.30%	Discount Rate	5.0%
Energy Cost Escalation Rate	5.0%	Federal Income Tax Rate	21.0%	State Income Tax Rate	8.0%
Total Project Costs	\$182,628				

Years	Project Costs	Electric Bill Savings	Total Cash Flow	Cumulative Cash Flow
Upfront	-\$182,628	-	-\$182,628	-\$182,628
1	-	\$9,107	\$9,107	-\$173,521
2	-	\$9,534	\$9,534	-\$163,987
3	-	\$9,981	\$9,981	-\$154,006
4	-	\$10,448	\$10,448	-\$143,558
5	-	\$10,937	\$10,937	-\$132,621
6	-	\$11,449	\$11,449	-\$121,171
7	-	\$11,985	\$11,985	-\$109,186
8	-	\$12,546	\$12,546	-\$96,640
9	-	\$13,133	\$13,133	-\$83,508
10	-	\$13,747	\$13,747	-\$69,761
11	-	\$14,390	\$14,390	-\$55,371
12	-	\$15,063	\$15,063	-\$40,308
13	-	\$15,767	\$15,767	-\$24,541
14	-	\$16,504	\$16,504	-\$8,038
15	-	\$17,275	\$17,275	\$9,237
16	-	\$18,082	\$18,082	\$27,319
17	-	\$18,926	\$18,926	\$46,245
18	-	\$19,810	\$19,810	\$66,054
19	-	\$20,734	\$20,734	\$86,789
20	-	\$21,702	\$21,702	\$108,491
21	-	\$22,715	\$22,715	\$131,206
22	-	\$23,774	\$23,774	\$154,980
23	-	\$24,883	\$24,883	\$179,863
24	-	\$26,043	\$26,043	\$205,906
25	-	\$27,257	\$27,257	\$233,164
26	-	\$28,528	\$28,528	\$261,691
27	-	\$29,857	\$29,857	\$291,548
28	-	\$31,248	\$31,248	\$322,796
29	-	\$32,703	\$32,703	\$355,499
30	-	\$34,226	\$34,226	\$389,725
Totals:	-\$182,628	\$572,353	\$389,725	-



Solar Project Analysis and Installation

2 days

Getting Started

Review 12 months of electric bills to estimate project size.

6 weeks

Engineering & Design and Interconnection

Engineer project design, apply for utility interconnection and permits.

2 weeks

Purchase Agreement

Once customer signs purchase agreement & makes equipment payment, equipment is procured and delivered.

Varies on
system
size

Array Installation

First a racking system is installed to support the panels, then panels are installed. All electrical wires are safely installed beneath array or in conduit.

1 week

Project Inspection

Local/county require their own inspection before system is given approval to be turned on.

Based on
Utility's
Schedule

System Operational

The array is connected to the grid and energy production begins.

VISIT TRUSTEDNRG.COM FOR DETAILS OR CALL (712) 291-8012

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