

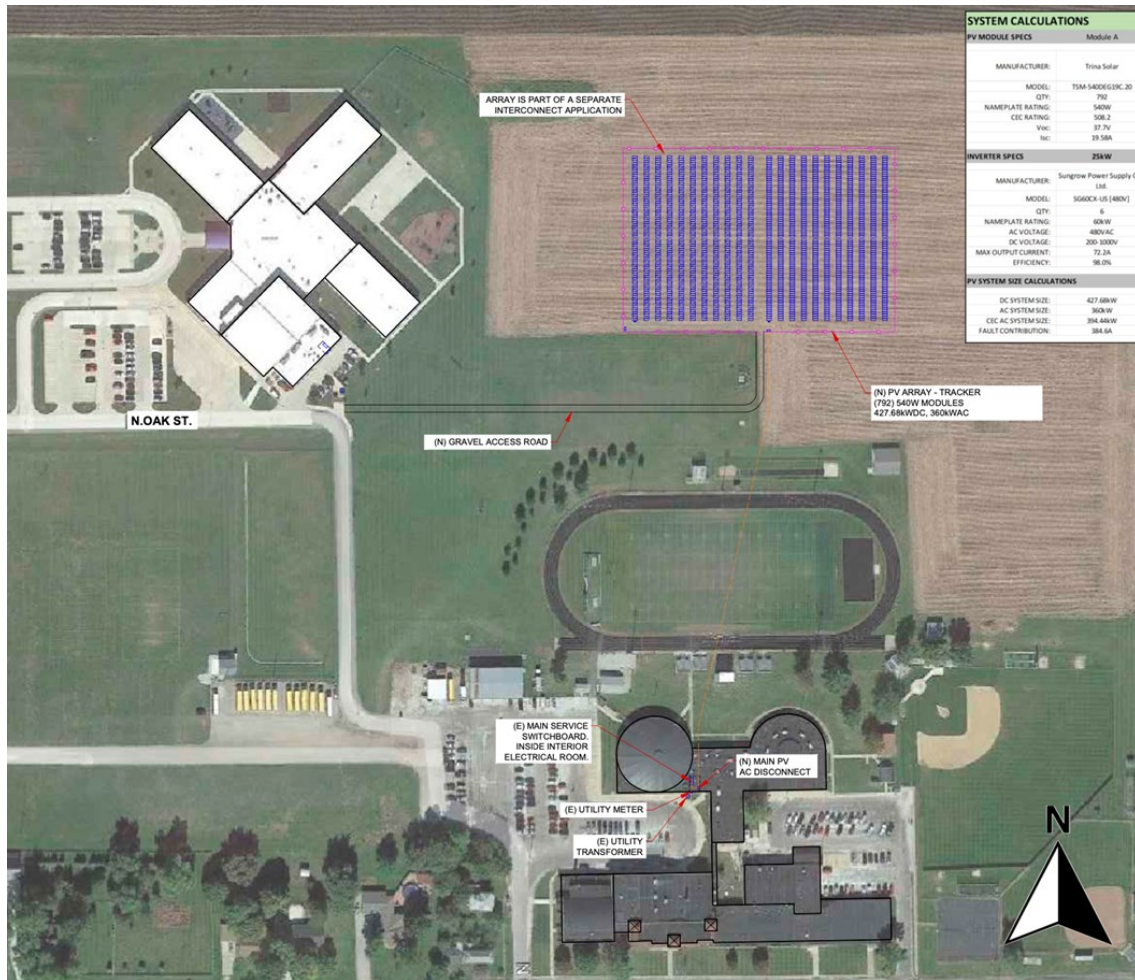


Energy Procurement Proposal

Prepared For
 New Berlin CUSD 16
 Jill Larson
 Superintendent

Prepared By
 Clean Energy Design Group
 888-961-4750
 info@cedg.us

9/1/2022



Project Summary

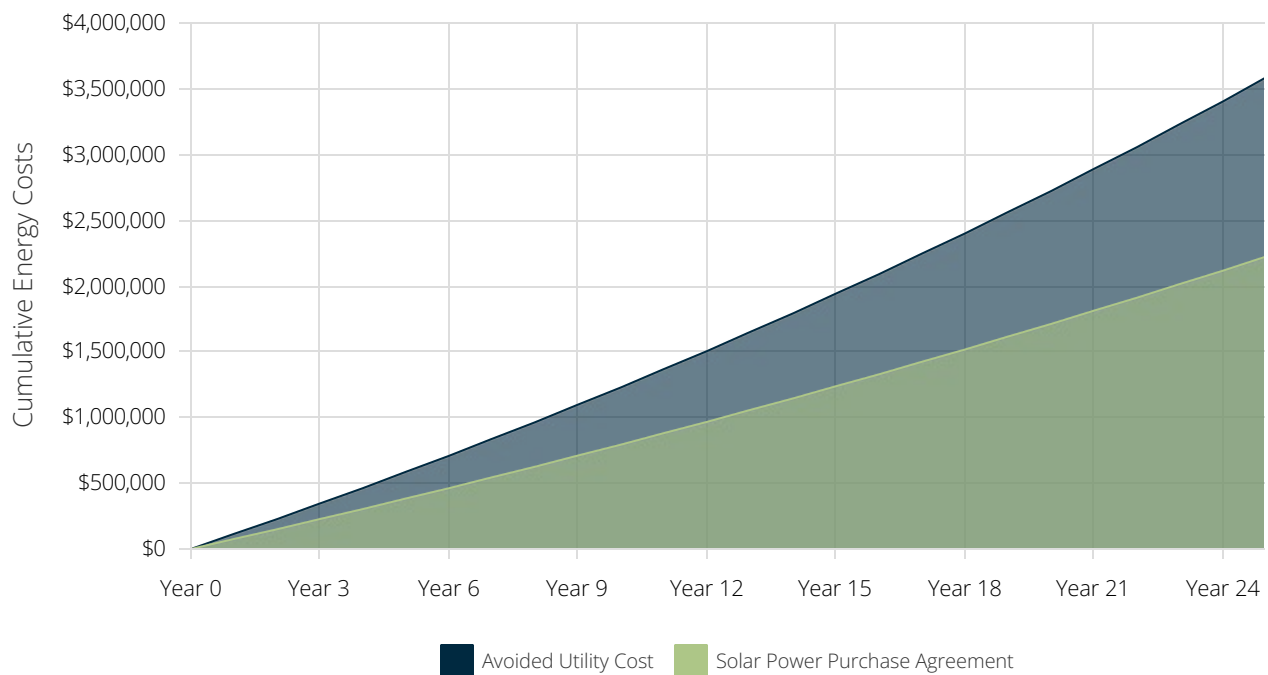
Payment Options	Solar Power Purchase Agreement
Upfront Payment, Engineering, and Construction	\$0
Solar Rate per kWh Yr-1	0.055
Solar Rate Annual Escalator (Fixed)	2%
Utility Rate Annual Inflation (Estimate)	2.5%
Net Savings End-of-Term	\$1,361,006
System Removal Cost	\$0

Combined Solar PV Rating

Power Rating: 855,360 W-DC

Power Rating: 745,070 W-AC-CEC

Cumulative Energy Costs By Payment Option



Solar Power Purchase Agreement

Assumptions and Key Financial Metrics

Years	PPA Cost	Electric Bill Savings	Total Cash Flow	Cumulative Cash Flow
Upfront	-	-	-	-
1	-\$74,174	\$112,325	\$38,151	\$38,151
2	-\$75,280	\$114,558	\$39,278	\$77,429
3	-\$76,399	\$116,832	\$40,432	\$117,862
4	-\$77,534	\$119,148	\$41,614	\$159,476
5	-\$78,683	\$121,507	\$42,824	\$202,300
6	-\$79,847	\$123,909	\$44,062	\$246,361
7	-\$81,026	\$126,355	\$45,329	\$291,690
8	-\$82,221	\$128,847	\$46,626	\$338,315
9	-\$83,431	\$131,383	\$47,953	\$386,268
10	-\$84,656	\$133,967	\$49,310	\$435,578
11	-\$85,897	\$136,597	\$50,700	\$486,278
12	-\$87,154	\$139,275	\$52,121	\$538,399
13	-\$88,427	\$142,001	\$53,575	\$591,973
14	-\$89,716	\$144,777	\$55,062	\$647,035
15	-\$91,021	\$147,603	\$56,583	\$703,617
16	-\$92,342	\$150,480	\$58,138	\$761,755
17	-\$93,680	\$153,408	\$59,728	\$821,484
18	-\$95,034	\$156,389	\$61,355	\$882,838
19	-\$96,405	\$159,422	\$63,018	\$945,856
20	-\$97,793	\$162,510	\$64,717	\$1,010,573
21	-\$99,197	\$165,653	\$66,455	\$1,077,029
22	-\$100,619	\$168,851	\$68,231	\$1,145,260
23	-\$102,058	\$172,105	\$70,047	\$1,215,307
24	-\$103,515	\$175,417	\$71,902	\$1,287,209
25	-\$104,988	\$178,786	\$73,798	\$1,361,006
Totals:	-\$2,221,096	\$3,582,103	\$1,361,006	-

PV System Details

General Information

Facility: New Berlin Junior High
 Address: 300 W Ellis St New Berlin IL 62670

Solar PV System Rating

Power Rating: 427,680 W-DC
 Power Rating: 372,535 W-AC-CEC

Solar PV Equipment Description

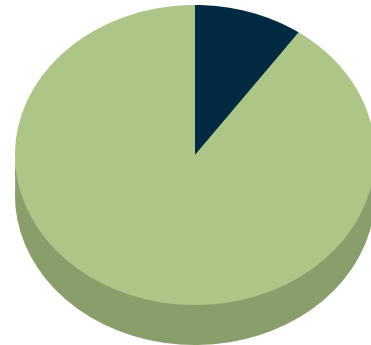
Solar Panels: 427.7 kW-DC Standard Modules
 Inverters: Standard Inverter

Solar PV Equipment Typical Lifespan

Solar Panels: Greater than 30 Years
 Inverters: 15 Years

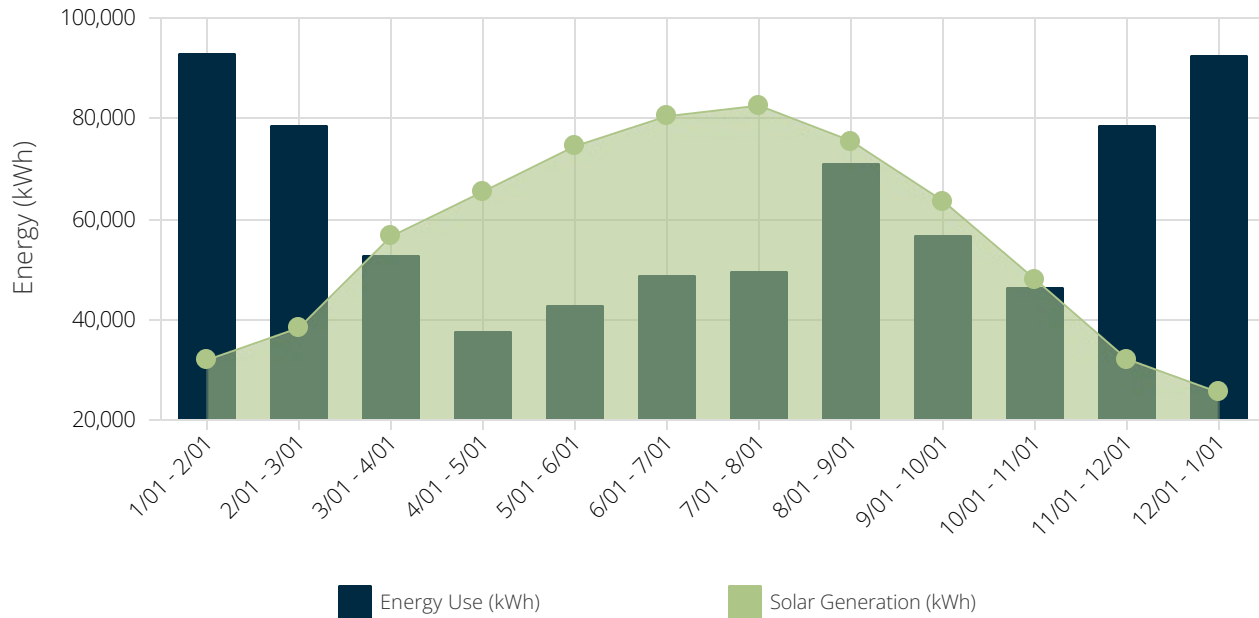
Energy Consumption Mix

Annual Energy Use: 747,373 kWh



Utility	73,059 kWh (9.78%)
Solar PV	674,314 kWh (90.22%)

Monthly Energy Use vs Solar Generation



Utility Rates

The table below shows the rates associate with your current utility rate schedule (DS-3 Rate Zone III (NEW BERLIN) - UPDATED). Your estimated electric bills after solar are shown on the following page.

Customer Charges				Energy Charges				Demand Charges			
Season	Charge Type	Rate Type	DS-3 Rate Zone III (NEW BERLIN) - UPDATED	Season	Charge Type	Rate Type	DS-3 Rate Zone III (NEW BERLIN) - UPDATED	Season	Charge Type	Rate Type	DS-3 Rate Zone III (NEW BERLIN) - UPDATED
S1	Flat Rate per billing period		\$110.74	S1	T < 2,000 kw	Import	\$0.08301	S1	Flat Rate Import		\$0.59
				S1	2,000 kw < T < 50,000 kw	Import	\$0.0829	S1	On Peak Import		\$7.62
				S1	50,000 kw < T < 100,000 kw	Import	\$0.08274				
				S1	100,000 kw < T < 500,000 kw	Import	\$0.08268				
				S1	500,000 kw < T	Import	\$0.08257				

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: Ameren-IL - DS-3 Rate Zone III (NEW BERLIN) - UPDATED

Time Periods	Energy Use (kWh)	Max Demand (kW)		Charges				
		NC / Max	On Peak	Other	NBC	Energy	Demand	Total
1/1/2021 - 2/1/2021 S1	93,028	210	210	\$111	\$290	\$7,415	\$1,737	\$9,553
2/1/2021 - 3/1/2021 S1	78,671	207	207	\$111	\$247	\$6,271	\$1,714	\$8,342
3/1/2021 - 4/1/2021 S1	52,749	154	154	\$111	\$168	\$4,205	\$1,310	\$5,793
4/1/2021 - 5/1/2021 S1	37,582	132	132	\$111	\$120	\$2,996	\$1,142	\$4,369
5/1/2021 - 6/1/2021 S1	42,506	133	133	\$111	\$136	\$3,388	\$1,150	\$4,784
6/1/2021 - 7/1/2021 S1	48,854	124	124	\$111	\$156	\$3,894	\$1,081	\$5,242
7/1/2021 - 8/1/2021 S1	49,574	135	135	\$111	\$158	\$3,952	\$1,165	\$5,386
8/1/2021 - 9/1/2021 S1	70,889	211	211	\$111	\$223	\$5,651	\$1,744	\$7,729
9/1/2021 - 10/1/2021 S1	56,531	181	181	\$111	\$180	\$4,506	\$1,516	\$6,312
10/1/2021 - 11/1/2021 S1	46,290	164	164	\$111	\$148	\$3,690	\$1,386	\$5,335
11/1/2021 - 12/1/2021 S1	78,364	207	207	\$111	\$246	\$6,247	\$1,714	\$8,317
12/1/2021 - 1/1/2022 S1	92,335	230	230	\$111	\$288	\$7,360	\$1,889	\$9,648
Total	747,373	-	-	\$1,329	\$2,359	\$59,575	\$17,547	\$80,810

New Electric Bill

Rate Schedule: Ameren-IL - DS-3 Rate Zone III (NEW BERLIN) - UPDATED

Time Periods Bill Ranges & Seasons	Energy Use (kWh)	Max Demand (kW)		Charges				
	Total	NC / Max	On Peak	Other	NBC	Energy	Demand	Total
1/1/2021 - 2/1/2021 S1	61,102	204	203	\$111	\$212	\$4,934	\$1,683	\$6,940
2/1/2021 - 3/1/2021 S1	40,351	188	188	\$111	\$166	\$3,336	\$1,569	\$5,182
3/1/2021 - 4/1/2021 S1	-3,762	115	115	\$111	\$88	\$21	\$1,012	\$1,232
4/1/2021 - 5/1/2021 S1	-27,847	84	84	\$111	\$50	\$1,776	\$776	\$839
5/1/2021 - 6/1/2021 S1	-31,968	89	89	\$111	\$48	\$2,069	\$814	\$1,096
6/1/2021 - 7/1/2021 S1	-31,585	106	106	\$111	\$57	\$2,014	\$944	\$902
7/1/2021 - 8/1/2021 S1	-32,982	98	98	\$111	\$56	\$2,112	\$883	\$1,063
8/1/2021 - 9/1/2021 S1	-4,633	157	157	\$111	\$92	\$27	\$1,333	\$1,508
9/1/2021 - 10/1/2021 S1	-7,049	135	135	\$111	\$81	\$231	\$1,165	\$1,125
10/1/2021 - 11/1/2021 S1	-1,708	109	109	\$111	\$72	\$113	\$967	\$1,263
11/1/2021 - 12/1/2021 S1	46,262	183	183	\$111	\$173	\$3,769	\$1,531	\$5,584
12/1/2021 - 1/1/2022 S1	66,879	230	230	\$111	\$224	\$5,374	\$1,889	\$7,598
Total	73,060	-	-	\$1,329	\$1,318	\$9,318	\$14,566	\$26,532

Annual Electricity Savings: \$54,278

PV System Details

General Information

Facility: New Berlin Elementary
 Address: 600 Cedar St New Berlin IL 62670

Solar PV System Rating

Power Rating: 427,680 W-DC
 Power Rating: 372,535 W-AC-CEC

Solar PV Equipment Description

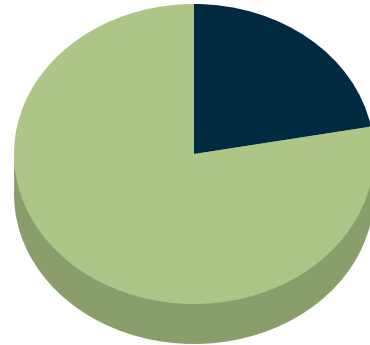
Solar Panels: 427.7 kW-DC Standard Modules
 Inverters: Standard Inverter

Solar PV Equipment Typical Lifespan

Solar Panels: Greater than 30 Years
 Inverters: 15 Years

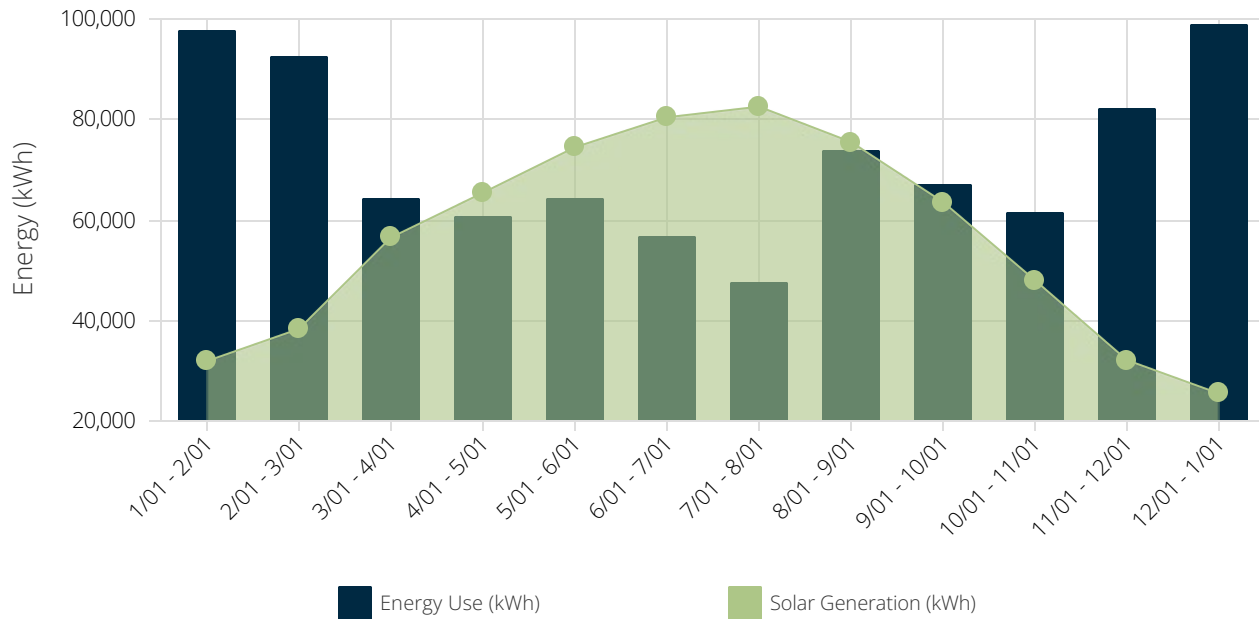
Energy Consumption Mix

Annual Energy Use: 865,366 kWh



Utility	191,052 kWh (22.08%)
Solar PV	674,314 kWh (77.92%)

Monthly Energy Use vs Solar Generation



Utility Rates

The table below shows the rates associate with your current utility rate schedule (DS-3 Rate Zone III (NEW BERLIN) - UPDATED). Your estimated electric bills after solar are shown on the following page.

Customer Charges				Energy Charges				Demand Charges			
Season	Charge Type	Rate Type	DS-3 Rate Zone III (NEW BERLIN) - UPDATED	Season	Charge Type	Rate Type	DS-3 Rate Zone III (NEW BERLIN) - UPDATED	Season	Charge Type	Rate Type	DS-3 Rate Zone III (NEW BERLIN) - UPDATED
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				S1	2,000 kw < T < 50,000 kw	Import	\$0.0829	S1	On Peak Import		\$7.62
				S1	50,000 kw < T < 100,000 kw	Import	\$0.08274				
				S1	100,000 kw < T < 500,000 kw	Import	\$0.08268				
				S1	500,000 kw < T	Import	\$0.08257				

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: Ameren-IL - DS-3 Rate Zone III (NEW BERLIN) - UPDATED

Time Periods	Energy Use (kWh)	Max Demand (kW)		Charges			
		NC / Max	On Peak	Other	Energy	Demand	Total
1/1/2021 - 2/1/2021 S1	97,441	233	233	\$111	\$8,071	\$1,914	\$10,095
2/1/2021 - 3/1/2021 S1	92,623	215	215	\$111	\$7,672	\$1,777	\$9,559
3/1/2021 - 4/1/2021 S1	63,995	215	215	\$111	\$5,303	\$1,777	\$7,191
4/1/2021 - 5/1/2021 S1	60,685	204	204	\$111	\$5,029	\$1,693	\$6,833
5/1/2021 - 6/1/2021 S1	63,995	178	178	\$111	\$5,303	\$1,495	\$6,909
6/1/2021 - 7/1/2021 S1	56,574	175	175	\$111	\$4,689	\$1,472	\$6,272
7/1/2021 - 8/1/2021 S1	47,490	127	127	\$111	\$3,937	\$1,106	\$5,154
8/1/2021 - 9/1/2021 S1	73,707	218	218	\$111	\$6,107	\$1,800	\$8,017
9/1/2021 - 10/1/2021 S1	66,945	204	204	\$111	\$5,547	\$1,693	\$7,351
10/1/2021 - 11/1/2021 S1	61,283	192	192	\$111	\$5,079	\$1,601	\$6,791
11/1/2021 - 12/1/2021 S1	81,913	196	196	\$111	\$6,786	\$1,632	\$8,528
12/1/2021 - 1/1/2022 S1	98,715	212	212	\$111	\$8,176	\$1,754	\$10,041
Total	865,366	-	-	\$1,329	\$71,700	\$19,711	\$92,740

New Electric Bill

Rate Schedule: Ameren-IL - DS-3 Rate Zone III (NEW BERLIN) - UPDATED

Time Periods Bill Ranges & Seasons	Energy Use (kWh) Total	Max Demand (kW)		Charges			
		NC / Max	On Peak	Other	Energy	Demand	Total
1/1/2021 - 2/1/2021 S1	65,514	226	225	\$111	\$5,429	\$1,849	\$7,388
2/1/2021 - 3/1/2021 S1	54,303	199	199	\$111	\$4,501	\$1,651	\$6,263
3/1/2021 - 4/1/2021 S1	7,485	176	176	\$111	\$621	\$1,475	\$2,207
4/1/2021 - 5/1/2021 S1	-4,744	141	141	\$111	\$327	\$1,208	\$992
5/1/2021 - 6/1/2021 S1	-10,479	124	124	\$111	\$723	\$1,079	\$466
6/1/2021 - 7/1/2021 S1	-23,865	144	144	\$111	\$1,647	\$1,231	\$305
7/1/2021 - 8/1/2021 S1	-35,065	91	91	\$111	\$2,419	\$827	\$1,482
8/1/2021 - 9/1/2021 S1	-1,815	163	163	\$111	\$125	\$1,376	\$1,362
9/1/2021 - 10/1/2021 S1	3,365	157	157	\$111	\$279	\$1,330	\$1,720
10/1/2021 - 11/1/2021 S1	13,285	144	144	\$111	\$1,102	\$1,231	\$2,444
11/1/2021 - 12/1/2021 S1	49,812	175	175	\$111	\$4,130	\$1,468	\$5,708
12/1/2021 - 1/1/2022 S1	73,259	212	212	\$111	\$6,070	\$1,750	\$7,930
Total	191,055	-	-	\$1,329	\$16,890	\$16,475	\$34,693

Annual Electricity Savings: \$58,047