

## SOLAR PV PROPOSAL

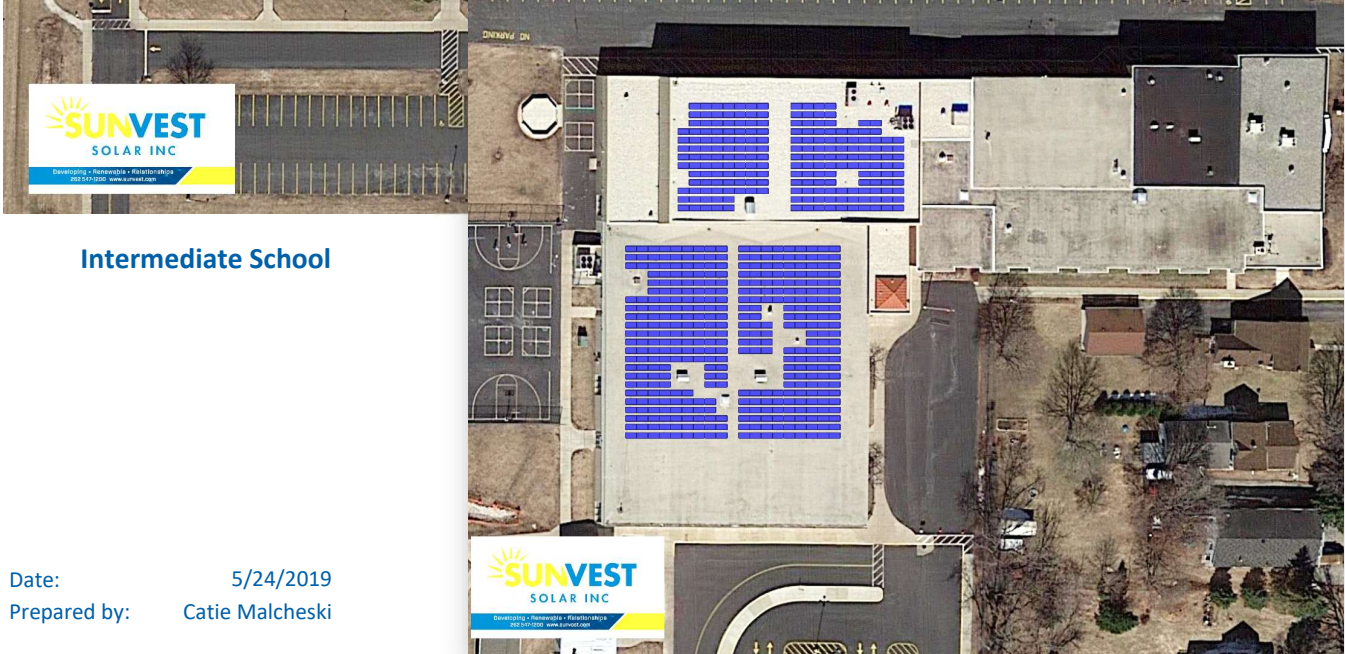
Prepared for:

### Merton School District - Combined

N68w28460 Sussex Rd Merton, WI



Primary School



Intermediate School

Date: 5/24/2019  
Prepared by: Catie Malcheski



# Merton School District - Combined

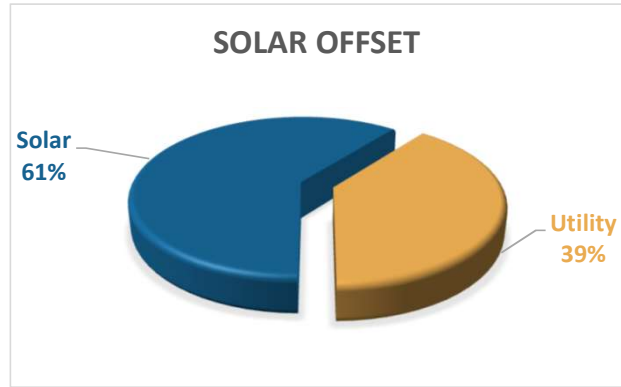
N68w28460 Sussex Rd Merton, WI

Date: 5/24/2019  
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## ARRAY SUMMARY

<b>System Size:</b>	<b>389.435 kW-DC</b>
<b>Estimated Year 1 Production:</b>	<b>491,120 kWh</b> <b>1,261 kWh/kW</b>

Proposed Solar Equipment:	
Solar Modules:	(1097) 72 Cell Tier 1 355W
Inverter:	SolarEdge + DC Optimizers
Racking:	Ballasted Non Penetrating
Monitoring:	Inverter-integrated



## FINANCIAL SUMMARY

System Economics		
<b>Total System Price</b>	(\$1459/kW)	<b>\$ 568,185.67</b>
<b>Net Year 1 System Cost \$ 568,185.67</b>		

Financial Highlights	
<b>Payback Period (in years)</b>	<b>10.1</b>
5-Year Internal Rate of Return	-20.7%
10-Year Internal Rate of Return	-0.1%
20-Year Internal Rate of Return	8.5%
30-Year Internal Rate of Return	10.3%
<b>Cumulative cashflow yrs 1-30</b>	<b>\$1,419,921</b>

Cost of solar-produced energy over 30 years (Net Year 1 Cost plus Long-Term Maintenance Cost):	Cost of same amount of energy purchased from Utility:
<b>\$732,488</b>	<b>\$2,152,409</b>
<b>Solar Saves \$1,419,921</b>	

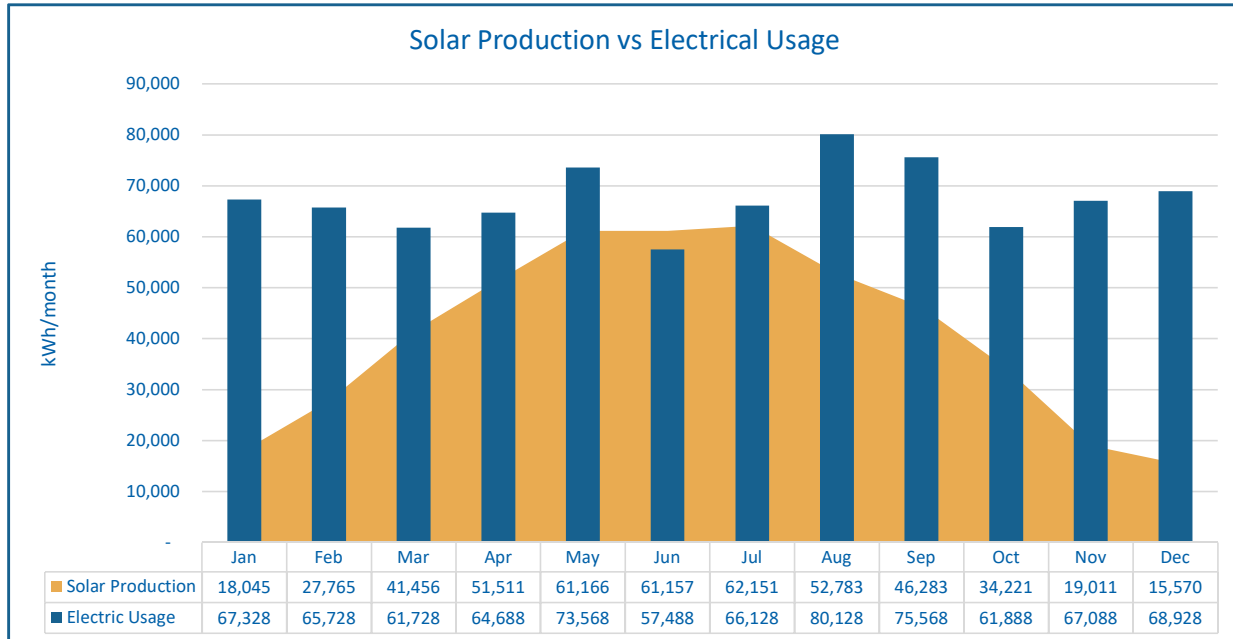
\*Cost of buying electricity from utility company using assumed initial (Blended) utility rate of \$0.09176/kWh and an inflation rate of 3% per year over the next 30 years. The rate is a blend between the Primary School's CG3 rate and the Intermediate School's two CG2 rates

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### MONTHLY SUMMARY



### ENVIRONMENTAL BENEFITS

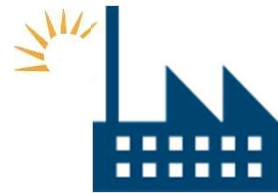
Clean energy generation of 491120 kWh per year:



Electrical usage of 41 average homes offset



291640 miles not driven (based on greenhouse gas emissions)



654830 pounds of coal not burned (based on CO2 emissions)

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## FINANCIAL PROFORMA

<b>Total System Price</b> (\$1459/kW) <b>\$ 568,186</b>	<b>Payback Period (yrs)</b> <b>10.1</b>	<b>System Size:</b> <b>389.435 kW-DC</b>
	5-Yr IRR -20.7%	Solar production value: \$0.106/kWh
	10-Yr IRR -0.1%	Blended utility rate: \$0.092/kWh
	20-Yr IRR 8.5%	Effective tax rate: 30%
	30-Yr IRR 10.3%	Utility Rate escalator: 3.0%
		Annual solar degradation: 0.7%
<b>Net Price</b> <b>\$ 568,186</b>	<b>30-Yr cashflow</b> <b>\$ 1,419,921</b>	<b>Est Year 1 Production:</b> <b>491,120</b>

Year	Net Price	*Long-Term Maintenance	**Value of Solar (Self-Consumed)	***Value of Solar (Overproduced)	Total Value of Solar	Annual cashflow	Cumulative cashflow
1	\$ (568,186)		\$ 51,564	\$ 388.14	\$ 51,952	\$ (516,233)	\$ (516,233)
2			\$ 51,518	\$ 387.79	\$ 51,906	\$ 51,906	\$ (464,328)
3			\$ 52,692	\$ 396.63	\$ 53,088	\$ 53,088	\$ (411,239)
4			\$ 53,893	\$ 405.67	\$ 54,298	\$ 54,298	\$ (356,941)
5			\$ 55,121	\$ 414.91	\$ 55,536	\$ 55,536	\$ (301,405)
6			\$ 56,377	\$ 424.37	\$ 56,802	\$ 56,802	\$ (244,604)
7			\$ 57,662	\$ 434.04	\$ 58,096	\$ 58,096	\$ (186,508)
8			\$ 58,976	\$ 443.93	\$ 59,420	\$ 59,420	\$ (127,088)
9			\$ 60,320	\$ 454.05	\$ 60,774	\$ 60,774	\$ (66,313)
10			\$ 61,695	\$ 464.40	\$ 62,159	\$ 62,159	\$ (4,154)
11			\$ 63,101	\$ 474.98	\$ 63,576	\$ 63,576	\$ 59,422
12			\$ 64,539	\$ 485.81	\$ 65,025	\$ 65,025	\$ 124,447
13			\$ 66,010	\$ 496.88	\$ 66,507	\$ 66,507	\$ 190,953
14			\$ 67,514	\$ 508.20	\$ 68,022	\$ 68,022	\$ 258,976
15		-\$164,302	\$ 69,053	\$ 519.78	\$ 69,573	\$ (94,730)	\$ 164,246
16			\$ 70,627	\$ 531.63	\$ 71,158	\$ 71,158	\$ 235,404
17			\$ 72,236	\$ 543.74	\$ 72,780	\$ 72,780	\$ 308,184
18			\$ 73,882	\$ 556.14	\$ 74,438	\$ 74,438	\$ 382,622
19			\$ 75,566	\$ 568.81	\$ 76,135	\$ 76,135	\$ 458,757
20			\$ 77,288	\$ 581.77	\$ 77,870	\$ 77,870	\$ 536,627
21			\$ 79,050	\$ 595.03	\$ 79,645	\$ 79,645	\$ 616,272
22			\$ 80,851	\$ 608.59	\$ 81,460	\$ 81,460	\$ 697,732
23			\$ 82,694	\$ 622.46	\$ 83,316	\$ 83,316	\$ 781,048
24			\$ 84,578	\$ 636.65	\$ 85,215	\$ 85,215	\$ 866,263
25			\$ 86,506	\$ 651.16	\$ 87,157	\$ 87,157	\$ 953,420
26			\$ 88,477	\$ 666.00	\$ 89,143	\$ 89,143	\$ 1,042,564
27			\$ 90,494	\$ 681.18	\$ 91,175	\$ 91,175	\$ 1,133,739
28			\$ 92,556	\$ 696.70	\$ 93,253	\$ 93,253	\$ 1,226,992
29			\$ 94,666	\$ 712.58	\$ 95,378	\$ 95,378	\$ 1,322,370
30			\$ 96,823	\$ 728.82	\$ 97,552	\$ 97,552	\$ 1,419,921
<b>Total</b>			<b>\$ 2,136,329</b>	<b>\$ 16,080.83</b>	<b>\$ 2,152,409</b>		<b>\$ 1,419,921</b>

Version 2.3.3

\*Replace Inverters, Remove/Reinstall Panels upon roof replacements, & "Fluff" (best guess at future pricing)

\*\*\$0.09176 x kWh self-consumed  
\*\*\*\$0.045 x kWh overproduced



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### Attachment A

<b>System Size:</b>	<b>389.435 kW-DC</b>
<b>Estimated Year 1 Production:</b>	<b>491,120 kWh</b>

Material:	Services:
<b>Solar Modules:</b> (1097) 355W 72 Cell Tier 1 <b>Inverter(s):</b> SolarEdge + DC Optimizers <b>Racking:</b> Ballasted Non Penetrating <b>Monitoring:</b> Inverter-integrated	<b>System Design:</b> in accordance with local and state codes, including shade analysis if applicable <b>Submittals:</b> applicable permits, utility/interconnection and any incentive paperwork <b>Installation:</b> all necessary labor including a 5-year Limited Workmanship Warranty

**Total System Price** **\$ 568,185.67**

**Payment Terms:**

Cash to Contractor upon contract execution	\$ 170,455.70
Cash to Contractor at material order	\$ 170,455.70
Cash to Contractor at construction completion	\$ 170,455.70
Cash to Contractor at system commissioning	\$ 56,818.57

Authorized By (SunVest Solar, Inc.)		Accepted By (Building Owner)	
Signature:		Signature:	
Name:		Name:	
Title:		Title:	
Date:		Date:	