

Take Control of Your Energy Destiny: Manage Rising Costs Through Efficiency and Renewable Energy

Presented to



California Dairy Sustainability Summit 2018

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Sunworks Solar Power
November 28, 2018

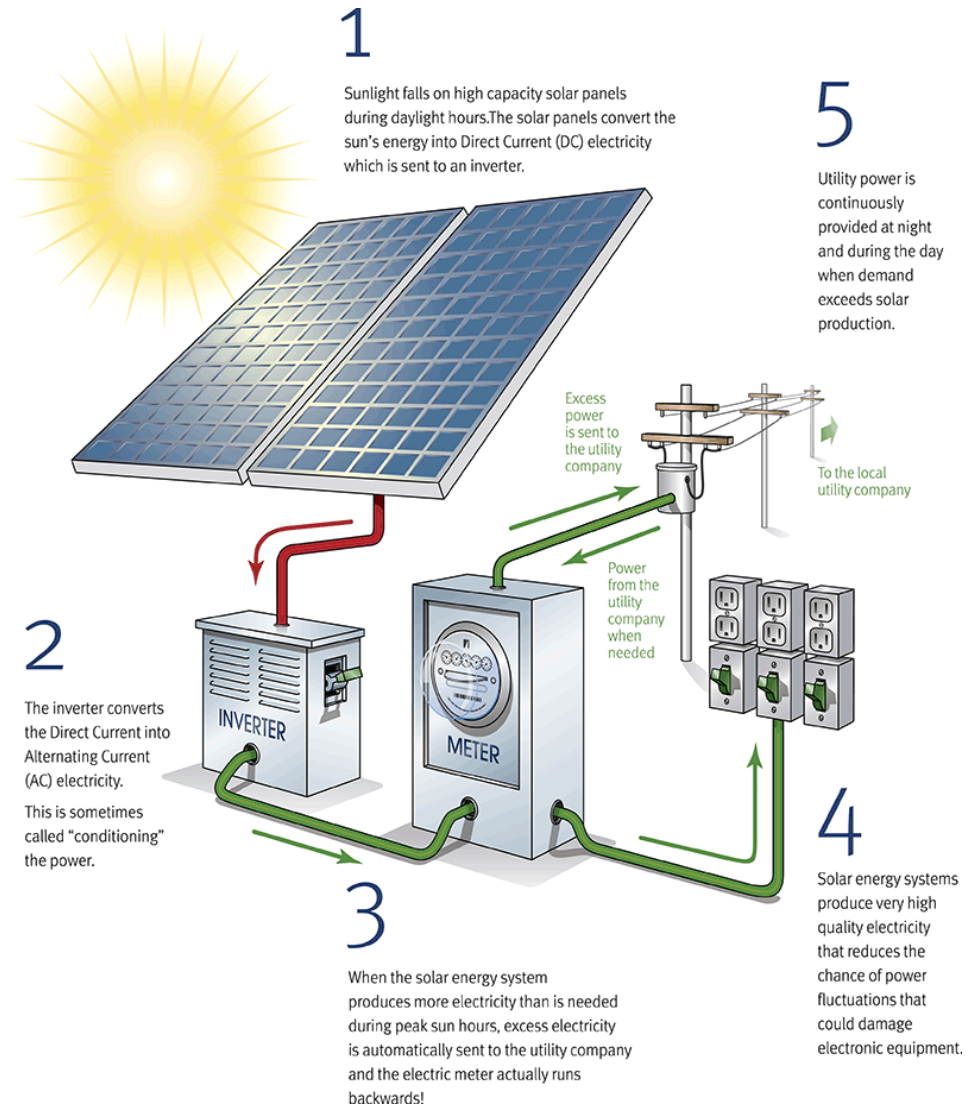


Why Go Solar?

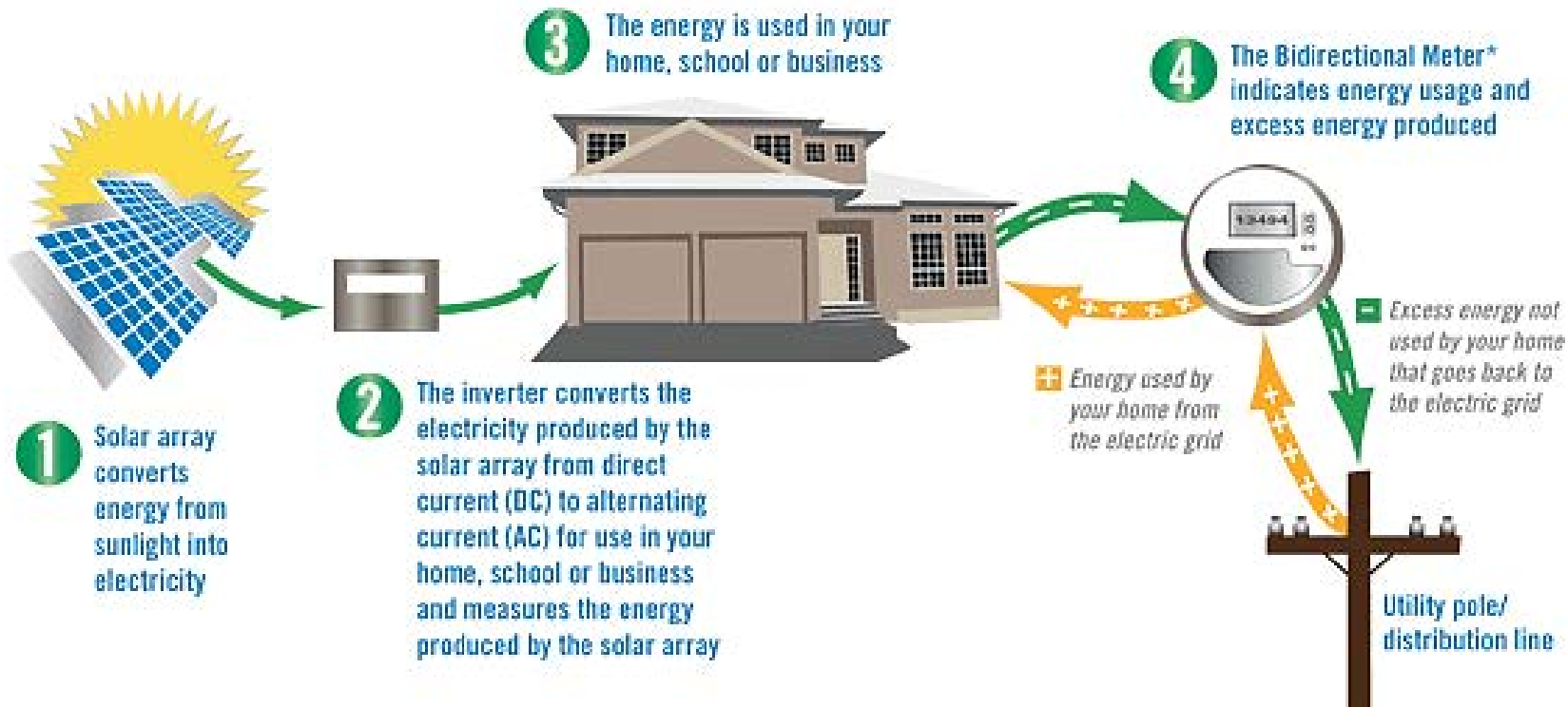
- Save energy
- Offset 80-85% electricity bill
- Lower operating costs
- Needed structure for equipment
- Future expansion
- Environmentally friendly



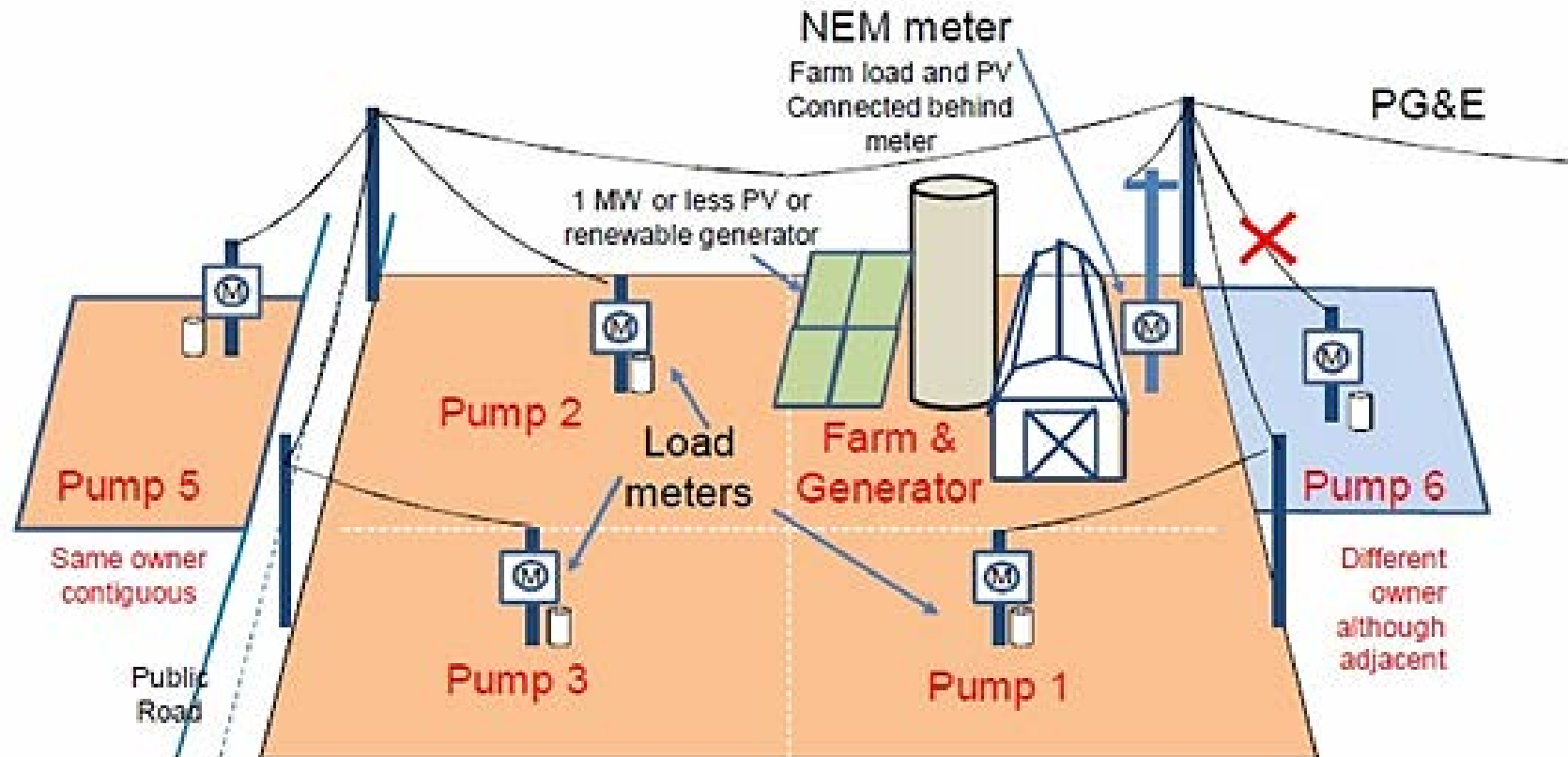
How Does Solar Work?



What is Net Energy Metering (NEM)?



What is Net Energy Metering Aggregation (NEMA)?



Warranty, Operation and Maintenance

- 25-year warranty
- Daily monitoring
- Minimize potential downtime
- Cleaning panels
- System check

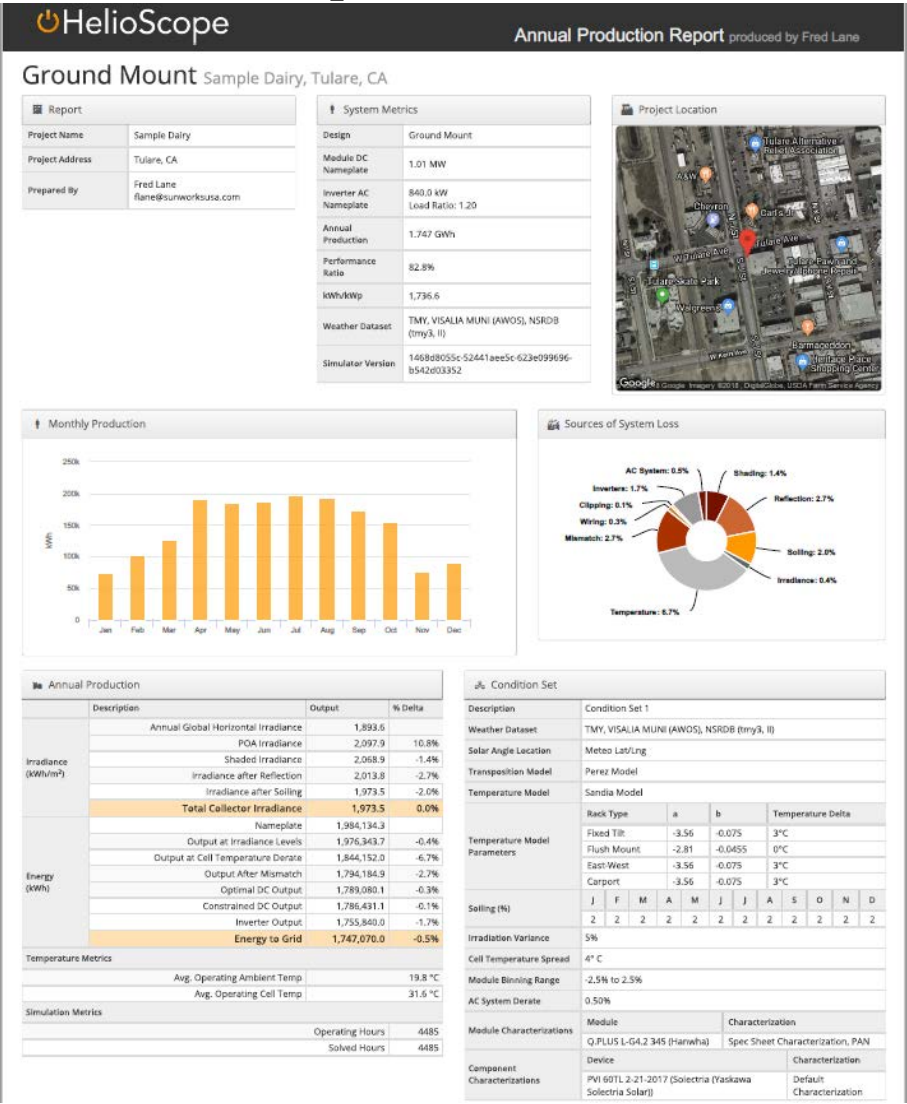


Financing Options

- Cash
- Loan
- Capital Lease
- Tax-Oriented Lease
- Power Purchase Agreement (PPA)
- Property Assessed Clean Energy (PACE)



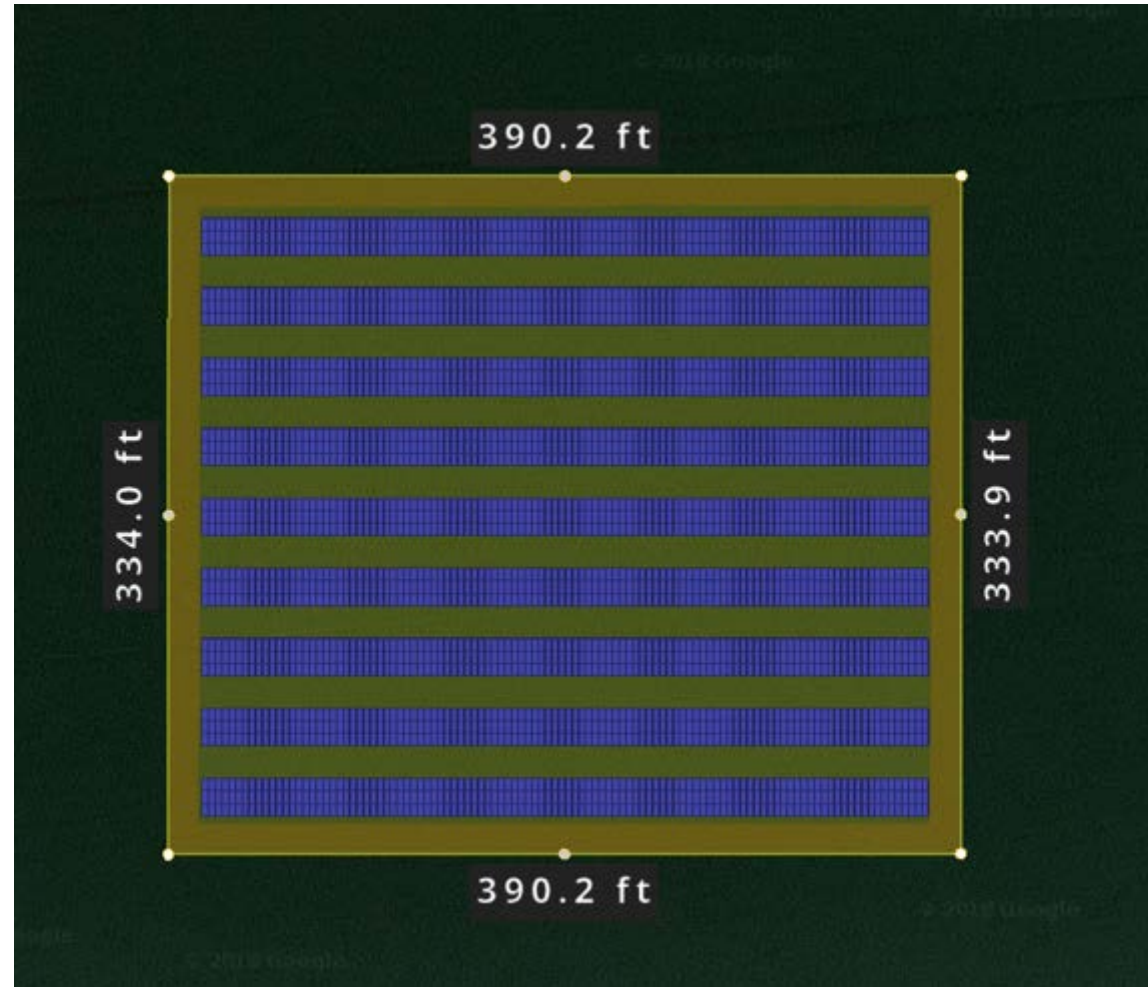
1 MW Example: HelioScope



1 MW Example: HelioScope



1 MW Example: System Drawing



1 MW Example: Cash Flow

Company Name: Sample DairyDate: 11/14/18Finance Type: CashGross Expenditure: \$1,600,000

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Model Assumptions	
Federal Tax	21.00%
State Tax	9.00%
FITC	30%
MACRS Bonus	Yes
Upfront Rebate	\$ -
Degradation	0.70%
Inflation	4.00%

Current Utility (kWh) Overview	2,000,000
Year 1 Production kWh	1,700,000
Utility Rate Per kWh	\$ 0.15000
Solar Offset Per kWh	\$ 0.13750
25 year kWh Usage	50,000,000
25 year kWh Production	39,114,426
Levelized Cost of Solar Over 25 years	0.01820
Rebate Eligible Production	0

Cash	\$ -
Term	0
kW DC System Size	1000.00
Cost per DC Watt	\$1.60
Rebate	0
EPBB Rebate kWh	
PBI Rebate kWh	0
ROI	2.95

Year	UTILITY		SOLAR		REMAINING		INCENTIVES		Depr. Sched.	Net \$	Loan/Lease	Cash Flows	
	Current kWh Usage	Current Cost	kWh Production	Cost Offset	Remaining Usage	Remaining Cost	Fed Tax Credit	Estimated Utility Rebate	6 Year	Energy Savings	Payment	Total Annual Cash Flow	Cumulative Cash Flow
0								-					\$ (1,600,000)
1	2,000,000	\$ 300,000.00	1,700,000	\$ 233,750.00	300,000	\$ 66,250.00	\$ 480,000	\$ -	\$ 408,000	\$ 233,750.00	\$ -	\$ 1,121,750.00	\$ (478,250)
2	2,000,000	\$ 312,000.00	1,688,100	\$ 241,398.30	311,900	\$ 70,601.70		\$ -	\$ -	\$ 241,398.30	\$ -	\$ 241,398.30	\$ (236,852)
3	2,000,000	\$ 324,480.00	1,676,283	\$ 249,296.85	323,717	\$ 75,183.15		\$ -	\$ -	\$ 249,296.85	\$ -	\$ 249,296.85	\$ 12,445
4	2,000,000	\$ 337,459.20	1,664,549	\$ 257,453.85	335,451	\$ 80,005.35		\$ -	\$ -	\$ 257,453.85	\$ -	\$ 257,453.85	\$ 269,899
5	2,000,000	\$ 350,957.57	1,652,897	\$ 265,877.74	347,103	\$ 85,079.83		\$ -	\$ -	\$ 265,877.74	\$ -	\$ 265,877.74	\$ 535,777
6	2,000,000	\$ 364,995.87	1,641,327	\$ 274,577.25	358,673	\$ 90,418.62			\$ -	\$ 274,577.25	\$ -	\$ 274,577.25	\$ 810,354
7	2,000,000	\$ 379,595.71	1,629,838	\$ 283,561.42	370,162	\$ 96,034.28				\$ 283,561.42	\$ -	\$ 283,561.42	\$ 1,093,915
8	2,000,000	\$ 394,779.53	1,618,429	\$ 292,839.55	381,571	\$ 101,939.98				\$ 292,839.55	\$ -	\$ 292,839.55	\$ 1,386,755
9	2,000,000	\$ 410,570.72	1,607,100	\$ 302,421.26	392,900	\$ 108,149.45				\$ 302,421.26	\$ -	\$ 302,421.26	\$ 1,689,176
10	2,000,000	\$ 426,993.54	1,595,850	\$ 312,316.49	404,150	\$ 114,677.06				\$ 312,316.49	\$ -	\$ 312,316.49	\$ 2,001,493
11	2,000,000	\$ 444,073.29	1,584,679	\$ 322,535.48	415,321	\$ 121,537.80				\$ 322,535.48	\$ -	\$ 322,535.48	\$ 2,324,028
12	2,000,000	\$ 461,836.22	1,573,587	\$ 333,088.84	426,413	\$ 128,747.37				\$ 333,088.84	\$ -	\$ 333,088.84	\$ 2,657,117
13	2,000,000	\$ 480,309.67	1,562,572	\$ 343,987.51	437,428	\$ 136,322.16				\$ 343,987.51	\$ -	\$ 343,987.51	\$ 3,001,105
14	2,000,000	\$ 499,522.05	1,551,634	\$ 355,242.78	448,366	\$ 144,279.27				\$ 355,242.78	\$ -	\$ 355,242.78	\$ 3,356,347
15	2,000,000	\$ 519,502.93	1,540,772	\$ 366,866.32	459,228	\$ 152,636.61				\$ 366,866.32	\$ -	\$ 366,866.32	\$ 3,723,214
16	2,000,000	\$ 540,283.05	1,529,987	\$ 378,870.19	470,013	\$ 161,412.86				\$ 378,870.19	\$ -	\$ 378,870.19	\$ 4,102,084
17	2,000,000	\$ 561,894.37	1,519,277	\$ 391,266.82	480,723	\$ 170,627.55				\$ 391,266.82	\$ -	\$ 391,266.82	\$ 4,493,351
18	2,000,000	\$ 584,370.15	1,508,642	\$ 404,069.07	491,358	\$ 180,301.07				\$ 404,069.07	\$ -	\$ 404,069.07	\$ 4,897,420
19	2,000,000	\$ 607,744.95	1,498,081	\$ 417,290.21	501,919	\$ 190,454.74				\$ 417,290.21	\$ -	\$ 417,290.21	\$ 5,314,710
20	2,000,000	\$ 632,054.75	1,487,595	\$ 430,943.95	512,405	\$ 201,110.80				\$ 430,943.95	\$ -	\$ 430,943.95	\$ 5,745,654
21	2,000,000	\$ 657,336.94	1,477,182	\$ 445,044.44	522,818	\$ 212,292.51				\$ 445,044.44	\$ -	\$ 445,044.44	\$ 6,190,698
22	2,000,000	\$ 683,630.42	1,466,841	\$ 459,606.29	533,159	\$ 224,024.13				\$ 459,606.29	\$ -	\$ 459,606.29	\$ 6,650,305
23	2,000,000	\$ 710,975.64	1,456,573	\$ 474,644.61	543,427	\$ 236,331.03				\$ 474,644.61	\$ -	\$ 474,644.61	\$ 7,124,949
24	2,000,000	\$ 739,414.66	1,446,377	\$ 490,174.98	553,623	\$ 249,239.68				\$ 490,174.98	\$ -	\$ 490,174.98	\$ 7,615,124
25	2,000,000	\$ 768,991.25	1,436,253	\$ 506,213.50	563,747	\$ 262,777.75				\$ 506,213.50	\$ -	\$ 506,213.50	\$ 8,121,338



1 MW Example: Environmental Benefits



Solar production in kWh in year 1: **1,700,000**

Your New, Lower Carbon Footprint

Your solar system will reduce Green House Gas emissions by approximately
7,609 tons of CO₂ over the next 25 years.

Equivalent CO₂ Reductions

Small Car:	25,791,481	Miles
Medium Car:	13,833,612	Miles
SUV:	9,692,340	Miles
Air Miles:	15,687,602	Miles
Trees Planted:	304,339	Trees
CO ₂ From Trash & Waste:	13,834	Persons



Company Name: **Sample Dairy**Date: **11/14/18**Finance Type: **Tax Lease**Gross Expenditure: **\$1,600,000**

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Model Assumptions	
Federal Tax	0.00%
State Tax	0.00%
FTTC	0%
MACRS Bonus	No
Uprfront Rebate	\$ -
Degradation	0.70%
Inflation	4.00%

Current Utility (kWh) Overview	
Year 1 Production kWh	1,700,000
Utility Rate Per kWh	\$ 0.15000
Solar Offset Per kWh	\$ 0.13750
25 year kWh Usage	50,000,000
25 year kWh Production	39,114,626
Levelized Cost of Solar Over 25 years	0.04091
Rebate Eligible Production	0

Tax Lease	
Term	0
kW DC System Size	1000.00
Cost per DC Watt	\$1.60
Rebate	0
EPBB Rebate kWh	
PRI Rebate kWh	0
ROI	11.22


Year	UTILITY		SOLAR		REMAINING		INCENTIVES		Depr. Sched.	Net \$	Loan/Lease	Cash Flows	
	Current kWh Usage	Current Cost	kWh Production	Cost Offset	Remaining Usage	Remaining Cost	Fed Tax Credit	Estimated Utility Rebate	0 Year	Energy Savings	Payment	Total Annual Cash Flow	Cumulative Cash Flow
0													
1	2,000,000	\$ 300,000.00	1,700,000	\$ 253,750.00	300,000	\$ 86,250.00	\$ -	\$ -	\$ -	\$ 233,750.00	\$ (127,634)	\$ 106,116.00	\$ 106,116
2	2,000,000	\$ 312,000.00	1,688,100	\$ 241,398.30	311,900	\$ 70,601.70		\$ -	\$ -	\$ 241,398.30	\$ (127,816)	\$ 123,582.30	\$ 229,698
3	2,000,000	\$ 324,480.00	1,676,283	\$ 249,296.85	323,717	\$ 75,183.15		\$ -	\$ -	\$ 249,296.85	\$ (127,816)	\$ 121,480.85	\$ 361,179
4	2,000,000	\$ 337,458.20	1,664,549	\$ 257,458.85	335,451	\$ 80,005.35		\$ -	\$ -	\$ 257,458.85	\$ (127,816)	\$ 139,657.85	\$ 500,817
5	2,000,000	\$ 350,957.57	1,652,897	\$ 265,877.74	347,103	\$ 85,079.83		\$ -	\$ -	\$ 265,877.74	\$ (127,816)	\$ 148,061.74	\$ 648,879
6	2,000,000	\$ 364,995.87	1,641,327	\$ 274,577.25	358,673	\$ 90,418.62			\$ -	\$ 274,577.25	\$ (127,816)	\$ 156,761.25	\$ 805,640
7	2,000,000	\$ 379,595.71	1,629,838	\$ 283,561.42	370,162	\$ 96,034.28				\$ 283,561.42	\$ (127,816)	\$ 165,745.42	\$ 971,585
8	2,000,000	\$ 394,778.53	1,618,429	\$ 292,839.55	381,571	\$ 101,910.98				\$ 292,839.55	\$ (127,816)	\$ 175,023.55	\$ 1,146,409
9	2,000,000	\$ 410,570.72	1,607,100	\$ 302,421.26	392,900	\$ 108,149.45				\$ 302,421.26	\$ (127,816)	\$ 184,605.26	\$ 1,331,014
10	2,000,000	\$ 426,993.54	1,595,850	\$ 312,316.49	404,150	\$ 114,677.06				\$ 312,316.49	\$ (127,816)	\$ 194,500.49	\$ 1,525,515
11	2,000,000	\$ 444,073.28	1,584,679	\$ 322,535.48	415,321	\$ 121,537.80				\$ 322,535.48	\$ (120,000)	\$ 2,535.48	\$ 1,528,050
12	2,000,000	\$ 461,836.22	1,573,567	\$ 333,088.86	426,413	\$ 128,747.37				\$ 333,088.84	\$ -	\$ 333,088.84	\$ 1,661,139
13	2,000,000	\$ 480,309.67	1,562,572	\$ 343,987.51	437,428	\$ 136,322.16				\$ 343,987.51	\$ -	\$ 343,987.51	\$ 2,205,127
14	2,000,000	\$ 499,523.05	1,551,634	\$ 355,242.78	448,398	\$ 144,279.37				\$ 355,242.78	\$ -	\$ 355,242.78	\$ 2,560,369
15	2,000,000	\$ 519,502.93	1,540,772	\$ 366,866.32	459,228	\$ 152,636.61				\$ 366,866.32	\$ -	\$ 366,866.32	\$ 2,927,236
16	2,000,000	\$ 540,283.05	1,529,987	\$ 378,870.19	470,013	\$ 161,412.86				\$ 378,870.19	\$ -	\$ 378,870.19	\$ 3,306,106
17	2,000,000	\$ 561,894.37	1,519,277	\$ 391,266.62	480,723	\$ 170,627.55				\$ 391,266.62	\$ -	\$ 391,266.62	\$ 3,697,373
18	2,000,000	\$ 584,370.15	1,508,642	\$ 404,069.07	491,258	\$ 180,301.07				\$ 404,069.07	\$ -	\$ 404,069.07	\$ 4,101,442
19	2,000,000	\$ 607,744.95	1,498,081	\$ 417,290.21	501,919	\$ 190,454.74				\$ 417,290.21	\$ -	\$ 417,290.21	\$ 4,518,732
20	2,000,000	\$ 632,054.75	1,487,595	\$ 430,943.95	512,405	\$ 201,110.80				\$ 430,943.95	\$ -	\$ 430,943.95	\$ 4,949,676
21	2,000,000	\$ 657,336.94	1,477,182	\$ 445,044.44	522,818	\$ 212,292.51				\$ 445,044.44	\$ -	\$ 445,044.44	\$ 5,394,720
22	2,000,000	\$ 683,630.42	1,466,841	\$ 459,606.29	533,159	\$ 224,024.13				\$ 459,606.29	\$ -	\$ 459,606.29	\$ 5,854,327
23	2,000,000	\$ 710,975.84	1,456,573	\$ 474,644.61	543,427	\$ 236,331.05				\$ 474,644.61	\$ -	\$ 474,644.61	\$ 6,328,973
24	2,000,000	\$ 739,414.86	1,446,377	\$ 490,174.98	553,623	\$ 249,219.88				\$ 490,174.98	\$ -	\$ 490,174.98	\$ 6,819,146
25	2,000,000	\$ 768,991.25	1,436,253	\$ 506,213.50	563,747	\$ 262,777.75				\$ 506,213.50	\$ -	\$ 506,213.50	\$ 7,325,360
26	2,000,000	\$ 799,750.90	1,426,199	\$ 522,776.81	573,801	\$ 276,974.09				\$ 522,776.81		\$ 522,776.81	\$ 7,848,137
27	2,000,000	\$ 831,740.94	1,416,216	\$ 539,882.07	583,784	\$ 291,858.87				\$ 539,882.07		\$ 539,882.07	\$ 8,388,019
28	2,000,000	\$ 865,010.57	1,406,302	\$ 557,547.01	593,698	\$ 307,463.56				\$ 557,547.01		\$ 557,547.01	\$ 8,945,566
29	2,000,000	\$ 899,611.00	1,396,458	\$ 575,789.95	603,542	\$ 323,821.05				\$ 575,789.95		\$ 575,789.95	\$ 9,521,536
30	2,000,000	\$ 935,595.44	1,386,683	\$ 594,629.79	613,317	\$ 340,965.64				\$ 594,629.79		\$ 594,629.79	\$ 10,115,985
31	2,000,000	\$ 973,019.25	1,376,976	\$ 614,086.08	623,024	\$ 358,933.17				\$ 614,086.08		\$ 614,086.08	\$ 10,730,071
32	2,000,000	\$ 1,011,940.02	1,367,337	\$ 634,178.98	632,683	\$ 377,761.05				\$ 634,178.98		\$ 634,178.98	\$ 11,364,250
33	2,000,000	\$ 1,052,417.63	1,357,766	\$ 654,928.31	642,234	\$ 397,488.11				\$ 654,929.31		\$ 654,929.31	\$ 12,019,180
34	2,000,000	\$ 1,094,514.33	1,348,261	\$ 676,358.60	651,729	\$ 418,155.73				\$ 676,358.60		\$ 676,358.60	\$ 12,695,538
35	2,000,000	\$ 1,138,294.90	1,338,824	\$ 698,489.05	661,176	\$ 439,805.85				\$ 698,489.05		\$ 698,489.05	\$ 13,394,027
36	2,000,000	\$ 1,183,828.70	1,329,452	\$ 721,343.62	670,548	\$ 462,483.08				\$ 721,343.62		\$ 721,343.62	\$ 14,115,371
37	2,000,000	\$ 1,231,179.77	1,320,146	\$ 744,945.98	679,854	\$ 486,233.79				\$ 744,945.98		\$ 744,945.98	\$ 14,860,317
38	2,000,000	\$ 1,280,426.96	1,310,905	\$ 769,320.61	689,095	\$ 511,106.35				\$ 769,320.61		\$ 769,320.61	\$ 15,629,638
39	2,000,000	\$ 1,331,644.04	1,301,728	\$ 794,492.78	698,272	\$ 537,151.25				\$ 794,492.78		\$ 794,492.78	\$ 16,424,130
40	2,000,000	\$ 1,384,909.60	1,292,616	\$ 820,488.59	707,384	\$ 564,421.21				\$ 820,488.59		\$ 820,488.59	\$ 17,244,619
Totals	80,000,000	\$ 28,507,655	59,499,294	\$ 18,752,597	20,509,706	\$ 9,755,058	\$ -	\$ -	\$ -	\$ 18,752,597	\$ (1,507,998)	\$ 17,244,619	\$ 254,300,629





THANK YOU!

Dean Swanson

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