



Prepared By:

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Combined Lease

Friends of Chapel Hill
531 Raleigh Rd
Chapel Hill, NC 27514

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North American Board of Certified Energy Practitioners
Certification Number: PV-102117-016491



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About Eagle Solar & Light

Our Mission:

Our mission is to be a leading modern energy solutions provider in the markets we serve.

Our Team:

Our team is a highly skilled group of certified professionals with decades of executive leadership in manufacturing, non-profit and public sectors.



Our Approach

We custom tailor every system to best fit our customers' buildings, energy consumption and savings goals. Our team will work with you to determine the best technology, system size, and financing offerings for your needs.

Our Warranty

We mirror the manufacturers' warranties on all of our projects including remote monitoring. For leased systems, we monitor and maintain the system, provide a kilowatt hour production guarantee, and perform an annual on-site inspection and maintenance visit.

Customer Testimonials

"Eagle Solar did an outstanding job installing a 10kw system on my house. Great team and outstanding customer service. I recommend them to others without reservation."

Jan Vermeiren
Chapel Hill, NC

"Eagle Solar & Light is a highly professional and thorough company that made installation of our solar electric system very easy. In addition to quality work, their staff were friendly and fun to work with."

Fred Gehrish
Highland Falls Country Club

"Eagle Solar was the first company to be approved to offer leasing in North Carolina, and the lease structure made an enormous amount of sense for us as a tax-exempt organization. Additionally, they have gone above and beyond our expectations to provide excellent service!"

Brett Fuhrman
Carolina Day School



CHES, Without Solar

Utility Details			Cost Details		
Utility Company	Current Rate Schedule	Utility Escalation Rate	Total Utility Bill	Total Usage (kWh)	Avg blended cost
DUKE	SGS (483168)	2.0%	\$3,670	29,443 kWh	\$0.125/kWh

Monthly usage & billing data:

Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges			
Bill Ranges & Seasons	Total	NC / Max	Other	Energy	Demand	Total
1/15/2019 - 2/15/2019 S1	1,614	9	\$20	\$188	-	\$208
2/15/2019 - 3/15/2019 S1	1,463	10	\$20	\$170	-	\$191
3/15/2019 - 4/15/2019 S1	1,540	9	\$20	\$179	-	\$200
4/15/2019 - 5/15/2019 S1	2,302	11	\$20	\$268	-	\$288
5/15/2019 - 6/15/2019 S1	3,640	15	\$20	\$423	-	\$444
6/15/2018 - 7/15/2018 S1	4,072	18	\$20	\$474	-	\$494
7/15/2018 - 8/15/2018 S1	3,271	12	\$20	\$380	-	\$401
8/15/2018 - 9/15/2018 S1	3,910	17	\$20	\$455	-	\$475
9/15/2018 - 10/15/2018 S1	2,998	16	\$20	\$349	-	\$369
10/15/2018 - 11/15/2018 S1	1,771	9	\$20	\$206	-	\$226
11/15/2018 - 12/15/2018 S1	1,399	11	\$20	\$163	-	\$183
12/15/2018 - 1/15/2019 S1	1,463	9	\$20	\$170	-	\$191
Totals:	29,443	-	\$245	\$3,425	-	\$3,670

Your Information

Friends of Chapel Hill
531 Raleigh Rd
Chapel Hill, NC {{Facility-1, Zip Code}}

About Your Utility

No Choice:

Duke Energy is a monopoly, meaning they don't have competition and they have guaranteed profits.

Rates are rising:

North Carolinians continue to see energy costs rise. On average we anticipate rates will increase by 2.0% annually.

Pollution:

Approximately 40% of Duke's generation comes from fossil-fuel plants, like coal or natural gas. This leads to pollution, climate change, and health impacts in our communities.



Meeting House, Without Solar

Utility Details			Cost Details		
Utility Company	Current Rate Schedule	Utility Escalation Rate	Total Utility Bill	Total Usage (kWh)	Avg blended cost
DUKE	SGS (483168)	2.0%	\$1,148	7,762 kWh	\$0.148/kWh

Monthly usage & billing data:

Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges			
Bill Ranges & Seasons	Total	NC / Max	Other	Energy	Demand	Total
1/15/2019 - 2/15/2019 S1	900	5	\$20	\$105	-	\$125
2/15/2019 - 3/15/2019 S1	450	5	\$20	\$52	-	\$73
3/15/2019 - 4/15/2019 S1	520	5	\$20	\$60	-	\$81
4/15/2019 - 5/15/2019 S1	327	5	\$20	\$38	-	\$58
5/15/2019 - 6/15/2019 S1	515	5	\$20	\$60	-	\$80
6/15/2018 - 7/15/2018 S1	800	5	\$20	\$93	-	\$113
7/15/2018 - 8/15/2018 S1	600	5	\$20	\$70	-	\$90
8/15/2018 - 9/15/2018 S1	800	5	\$20	\$93	-	\$113
9/15/2018 - 10/15/2018 S1	500	5	\$20	\$58	-	\$79
10/15/2018 - 11/15/2018 S1	550	5	\$20	\$64	-	\$84
11/15/2018 - 12/15/2018 S1	800	5	\$20	\$93	-	\$113
12/15/2018 - 1/15/2019 S1	1,000	5	\$20	\$116	-	\$137
Totals:	7,762	-	\$245	\$903	-	\$1,148

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About Your Utility

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Duke Energy is a monopoly, meaning they don't have competition and they have guaranteed profits.

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North Carolinians continue to see energy costs rise. On average we anticipate rates will increase by 2.0% annually.

Pollution:

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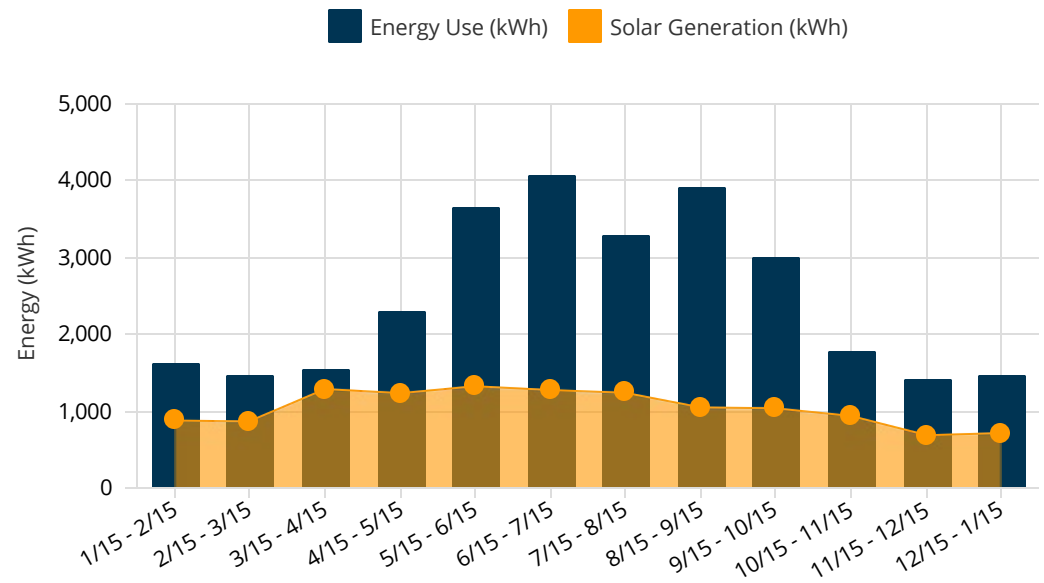
CHES PV System

System Size & Generation:

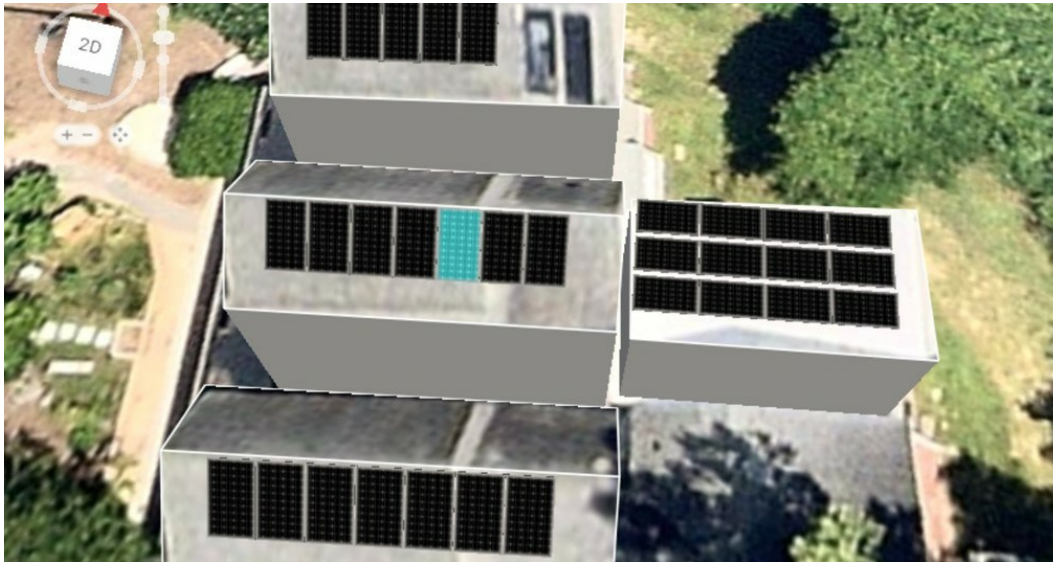
9,610 W-DC System Size (DC)

9.0 kW-AC System Size (AC)

12,535 kWh 1st Year Generation



System Layout Rendering: CHES



Equipment:

(31) Hanwha Q-Cells Q.PRO L 310 Solar Panels

(1) SolarEdge Technologies SE9K Inverter(s)

System Pricing & Incentives:

Solar PV System Cost \$29,280

NC Duke Solar Rebate **-\$6,750**

Net Solar PV System Cost: \$22,530

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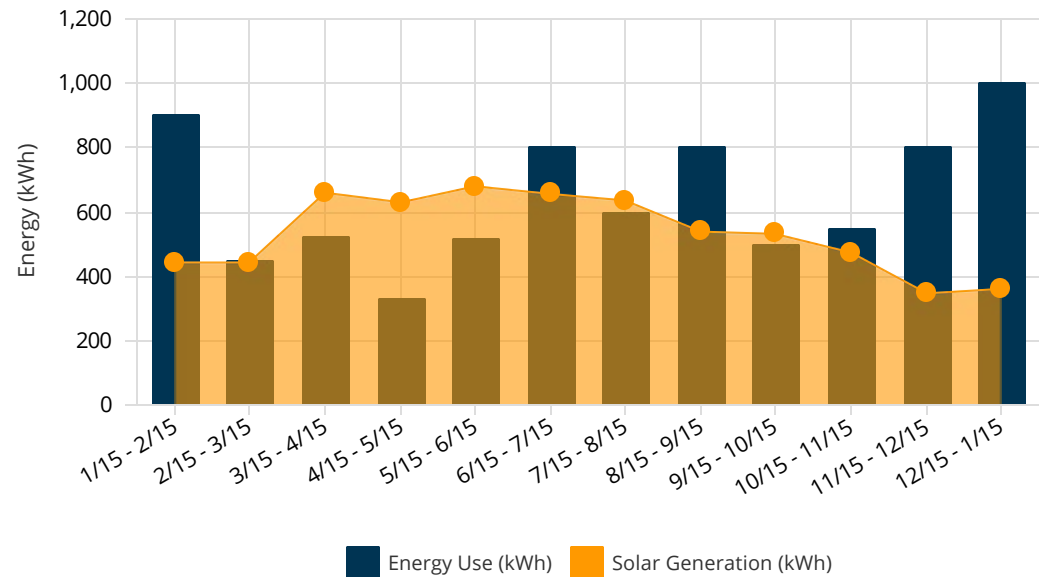
Meeting House PV System

System Size & Generation:

4,340 W-DC System Size (DC)

3.8 kW-AC System Size (AC)

6,401 kWh 1st Year Generation



System Layout Rendering: Meeting House



Equipment:

(14) Hanwha Q-Cells Q.PRO L 310

Solar
Panels

(1) SolarEdge Technologies SE3800 (240V) w/ -
ER-US or A-US

Inverter(s)

System Pricing & Incentives:

Solar PV System Cost \$13,330

NC Duke Solar Rebate **-\$2,850**

Net Solar PV System Cost: \$10,480

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CHES, With Solar

Utility Details			Savings Details		
Utility Company	Post-solar Rate Schedule	Annual usage	Total Savings	Total Solar Production	Avg blended savings
DUKE	SGS (483168)	29,443 kWh	\$1,458	12,535 kWh	\$0.116/kWh

Monthly Utility Bills, Post-Solar

Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges			
Bill Ranges & Seasons	Total	NC / Max	Other	Energy	Demand	Total
1/15/2019 - 2/15/2019 S1	736	5	\$20	\$86	-	\$106
2/15/2019 - 3/15/2019 S1	596	8	\$20	\$69	-	\$90
3/15/2019 - 4/15/2019 S1	252	4	\$20	\$29	-	\$50
4/15/2019 - 5/15/2019 S1	1,067	9	\$20	\$124	-	\$145
5/15/2019 - 6/15/2019 S1	2,315	11	\$20	\$269	-	\$290
6/15/2018 - 7/15/2018 S1	2,797	15	\$20	\$325	-	\$346
7/15/2018 - 8/15/2018 S1	2,031	9	\$20	\$236	-	\$257
8/15/2018 - 9/15/2018 S1	2,861	14	\$20	\$333	-	\$353
9/15/2018 - 10/15/2018 S1	1,960	15	\$20	\$228	-	\$248
10/15/2018 - 11/15/2018 S1	833	6	\$20	\$97	-	\$117
11/15/2018 - 12/15/2018 S1	712	11	\$20	\$83	-	\$103
12/15/2018 - 1/15/2019 S1	748	5	\$20	\$87	-	\$107
Totals:	16,908	-	\$245	\$1,967	-	\$2,212

Solar Production Offset %:



Utility	16,908 kWh (57.43%)
Solar PV	12,535 kWh (42.57%)

Avoided Cost calculation:

Pre-solar utility bill: \$3,670

Post-solar utility bill: \$2,212

Savings: \$1,458

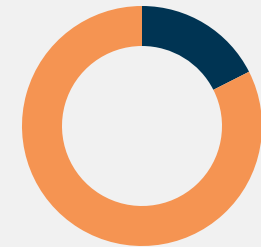
Meeting House, With Solar

Utility Details			Savings Details		
Utility Company	Post-solar Rate Schedule	Annual usage	Total Savings	Total Solar Production	Avg blended savings
DUKE	SGS (483168)	7,762 kWh	\$1,458	6,401 kWh	\$0.116/kWh

Monthly Utility Bills, Post-Solar

Time Periods	Energy Use (kWh)	Charges			
Bill Ranges & Seasons	Total	Other	Energy	Demand	Total
1/15/2019 - 2/15/2019 S1	458	\$20	\$53	-	\$74
2/15/2019 - 3/15/2019 S1	7	\$20	\$1	-	\$21
3/15/2019 - 4/15/2019 S1	-140	\$20	-\$16	-	\$4
4/15/2019 - 5/15/2019 S1	-303	\$20	-\$35	-	-\$15
5/15/2019 - 6/15/2019 S1	-166	\$20	-\$19	-	\$1
6/15/2018 - 7/15/2018 S1	144	\$20	\$17	-	\$37
7/15/2018 - 8/15/2018 S1	-37	\$20	-\$4	-	\$16
8/15/2018 - 9/15/2018 S1	260	\$20	\$30	-	\$51
9/15/2018 - 10/15/2018 S1	-32	\$20	-\$4	-	\$17
10/15/2018 - 11/15/2018 S1	76	\$20	\$9	-	\$29
11/15/2018 - 12/15/2018 S1	453	\$20	\$53	-	\$73
12/15/2018 - 1/15/2019 S1	639	\$20	\$74	-	\$95
Totals:	1,359	\$245	\$158	-	\$403

Solar Production Offset %:



Utility	1,361 kWh (17.53%)
Solar PV	6,401 kWh (82.47%)

Avoided Cost calculation:

Pre-solar utility bill: \$1,148

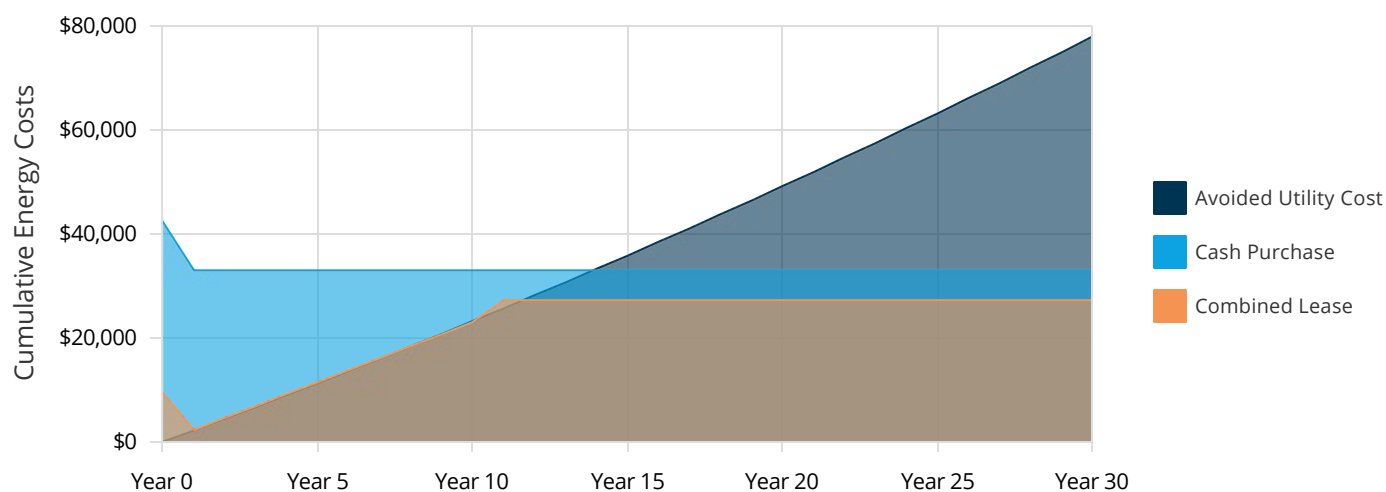
Post-solar utility bill: \$403

Savings: \$745

Financing Summary

Payment Options	Cash Purchase	Combined Lease
Upfront Payment	\$42,610	\$9,600
Monthly Payment	-	\$192
Term	-	10 Years
Total Payments	\$42,610	\$36,860
Rebates and Incentives	\$9,600	\$9,600
Net Payments	\$33,010	\$27,260
30-Year Electric Bill Savings	\$77,948	\$77,948
30-Year IRR	6.16%	19.33%
30-Year LCOE PV	\$0.066	\$0.054
30-Year NPV	\$4,972	\$17,732
Payback Period	13.9 Years	11.6 Years

Cummulative Energy Costs By Payment Option



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Benefits of Payment Options:

Cash Purchase:

- Maximize your savings by owning a secure long-term investment.
- Use federal investment tax credit to reduce your tax liability.
- Increase the market value of your home.

Lease or PPA:

- Receive the benefits of having solar, with little or no money down.
- Avoid the responsibility of maintenance and repairs.
- Do not have tax liability to monetize the federal tax credit.

Loan:

- Numerous low-cost, low interest rate loan programs are available.
- 'Own' an asset that generates significant financial value, unlike other home improvement loans.
- Achieve immediate savings, as you repay the loan over time.



Cash Purchase - Cash Flow Analysis

Years	Project Costs	NC Duke Solar Rebate	Electric Bill Savings	PV Generation (kWh)	Total Cash Flow	Cumulative Cash Flow
Upfront	-\$42,610	-	-	-	-\$42,610	-\$42,610
1	-	\$9,600	\$2,203	18,936	\$11,803	-\$30,807
2	-	-	\$2,229	18,785	\$2,229	-\$28,578
3	-	-	\$2,255	18,633	\$2,255	-\$26,323
4	-	-	\$2,282	18,482	\$2,282	-\$24,041
5	-	-	\$2,308	18,330	\$2,308	-\$21,733
6	-	-	\$2,335	18,179	\$2,335	-\$19,398
7	-	-	\$2,362	18,027	\$2,362	-\$17,036
8	-	-	\$2,389	17,876	\$2,389	-\$14,647
9	-	-	\$2,416	17,724	\$2,416	-\$12,231
10	-	-	\$2,443	17,573	\$2,443	-\$9,788
11	-	-	\$2,471	17,421	\$2,471	-\$7,318
12	-	-	\$2,498	17,270	\$2,498	-\$4,820
13	-	-	\$2,526	17,118	\$2,526	-\$2,294
14	-	-	\$2,553	16,967	\$2,553	\$259
15	-	-	\$2,581	16,815	\$2,581	\$2,841
16	-	-	\$2,609	16,664	\$2,609	\$5,450
17	-	-	\$2,637	16,512	\$2,637	\$8,087
18	-	-	\$2,665	16,361	\$2,665	\$10,752
19	-	-	\$2,693	16,209	\$2,693	\$13,445
20	-	-	\$2,721	16,058	\$2,721	\$16,167
21	-	-	\$2,750	15,906	\$2,750	\$18,916
22	-	-	\$2,778	15,755	\$2,778	\$21,694
23	-	-	\$2,806	15,603	\$2,806	\$24,501
24	-	-	\$2,835	15,452	\$2,835	\$27,335
25	-	-	\$2,863	15,300	\$2,863	\$30,198
26	-	-	\$2,891	15,149	\$2,891	\$33,090
27	-	-	\$2,920	14,997	\$2,920	\$36,009
28	-	-	\$2,948	14,846	\$2,948	\$38,957
29	-	-	\$2,976	14,694	\$2,976	\$41,933
30	-	-	\$3,004	14,543	\$3,004	\$44,938
Totals:	-\$42,610	\$9,600	\$77,948	502,183	\$44,938	-

Financial Metrics

Payback: 13.9 Years

ROI: 105.5%

10 Year IRR: (5.6%)

20 Year IRR: 3.9%

Assumptions

Utility Escalator: 2.0%

Federal tax rate: 0.0%

State tax rate: 0.0%

Modeling: Before Tax

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Combined Lease - Cash Flow Analysis

Years	Lease Payments	NC Duke Solar Rebate	Electric Bill Savings	PV Generation (kWh)	Total Cash Flow	Cumulative Cash Flow
Upfront	-\$9,600	-	-	-	-\$9,600	-\$9,600
1	-\$2,300	\$9,600	\$2,203	18,936	\$9,503	-\$97
2	-\$2,300	-	\$2,229	18,785	-\$71	-\$168
3	-\$2,300	-	\$2,255	18,633	-\$45	-\$213
4	-\$2,300	-	\$2,282	18,482	-\$18	-\$231
5	-\$2,300	-	\$2,308	18,330	\$8	-\$222
6	-\$2,300	-	\$2,335	18,179	\$35	-\$187
7	-\$2,300	-	\$2,362	18,027	\$62	-\$126
8	-\$2,300	-	\$2,389	17,876	\$89	-\$37
9	-\$2,300	-	\$2,416	17,724	\$116	\$79
10	-\$2,300	-	\$2,443	17,573	\$143	\$223
11	-\$4,261	-	\$2,471	17,421	-\$1,790	-\$1,568
12	-	-	\$2,498	17,270	\$2,498	\$930
13	-	-	\$2,526	17,118	\$2,526	\$3,456
14	-	-	\$2,553	16,967	\$2,553	\$6,009
15	-	-	\$2,581	16,815	\$2,581	\$8,590
16	-	-	\$2,609	16,664	\$2,609	\$11,199
17	-	-	\$2,637	16,512	\$2,637	\$13,836
18	-	-	\$2,665	16,361	\$2,665	\$16,502
19	-	-	\$2,693	16,209	\$2,693	\$19,195
20	-	-	\$2,721	16,058	\$2,721	\$21,916
21	-	-	\$2,750	15,906	\$2,750	\$24,666
22	-	-	\$2,778	15,755	\$2,778	\$27,444
23	-	-	\$2,806	15,603	\$2,806	\$30,250
24	-	-	\$2,835	15,452	\$2,835	\$33,085
25	-	-	\$2,863	15,300	\$2,863	\$35,948
26	-	-	\$2,891	15,149	\$2,891	\$38,839
27	-	-	\$2,920	14,997	\$2,920	\$41,759
28	-	-	\$2,948	14,846	\$2,948	\$44,707
29	-	-	\$2,976	14,694	\$2,976	\$47,683
30	-	-	\$3,004	14,543	\$3,004	\$50,688
Totals:	-\$36,860	\$9,600	\$77,948	502,183	\$50,688	-

Financial Metrics

Payback: 11.6 Years

ROI: 528.0%

10 Year IRR: 1.8%

20 Year IRR: 18.0%

Assumptions

Utility Escalator: 2.0%

Federal tax rate: 0.0%

State tax rate: 0.0%

Modeling: Before Tax

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Process

Steps	Details	Charge
Site Assessment	ESL will conduct an on-site assessment to finalize cost estimate and design.	
Provide Proposal	ESL will provide the system size, expected output, cost, and financial analysis.	
Interconnection Request	ESL will submit all the required paperwork (single line drawings, formal request et al) to the utility. Once Duke Energy deems the request complete, you may apply for the NC Solar Rebate.	\$1500 to cover the cost of the NC Utility Commission notification and Interconnection Request.
Materials Order	After Duke's review, we will order materials and schedule your installation. We will also begin the permitting process at this time.	Reserved Rebate Amount
Installation	ESL's installation team will start you on the path of generating your own clean energy!	
Commissioning	Duke will install a bi-directional meter and shortly afterward we will schedule an orientation your system will be operational!	
Rebate!	Approximately one month after commissioning, you will receive the NC Solar Rebate. We will then bill you for the first year's lease payment.	First Annual Payment

