

CIRCUIT ENERGY SOLUTIONS



Morningside Recreational Complex

Circuit Energy Solutions

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2 PROJECT SUMMARY

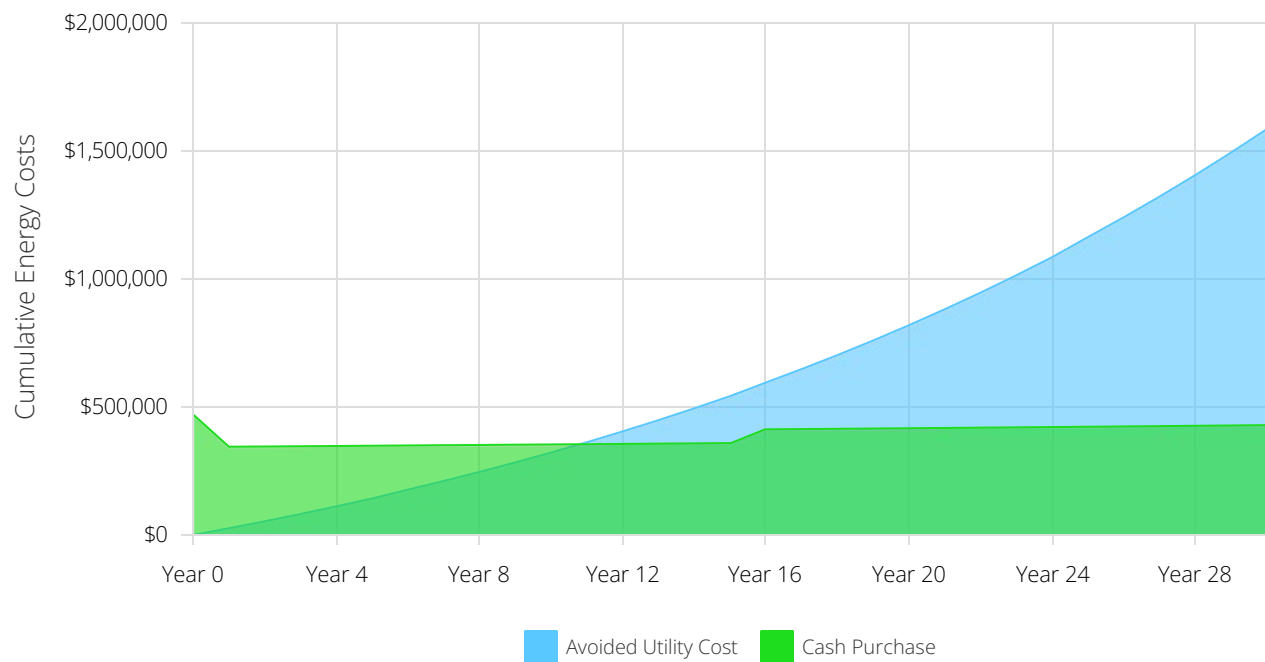
Payment Options	Cash Purchase
IRR - Term	9.9%
LCOE PV Generation	\$0.044 /kWh
Net Present Value	\$305,147
Payback Period	10.8 Years
Total Payments	\$471,041
Total Incentives	\$127,181
Net Payments	\$343,860
Electric Bill Savings - Term	\$1,585,906
Upfront Payment	\$471,041

COMBINED SOLAR PV RATING

Power Rating: 187,450 W-DC

Power Rating: 163,280 W-AC-CEC

CUMULATIVE ENERGY COSTS BY PAYMENT OPTION



3.1.1 PV SYSTEM DETAILS

GENERAL INFORMATION

Facility: Meter #1
 Address: 2548 30th Ave N St. Petersburg FL 33713

SOLAR PV SYSTEM RATING

Power Rating: 187,450 W-DC
 Power Rating: 163,280 W-AC-CEC

SOLAR PV EQUIPMENT DESCRIPTION

Solar Panels: (326) Hanwha Q Cells Q.PEAK DUO XL-G11.2 575
 Inverters: (5) Solis Solis 30K US

ENERGY CONSUMPTION MIX

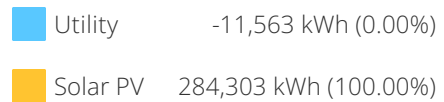
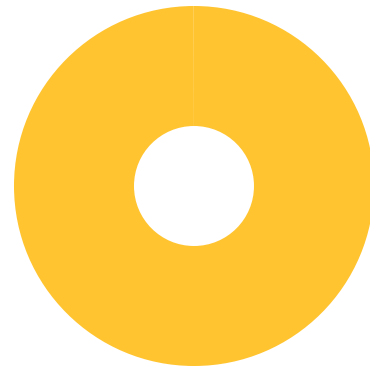
Annual Energy Use: 272,740 kWh

SOLAR PV EQUIPMENT TYPICAL LIFESPAN

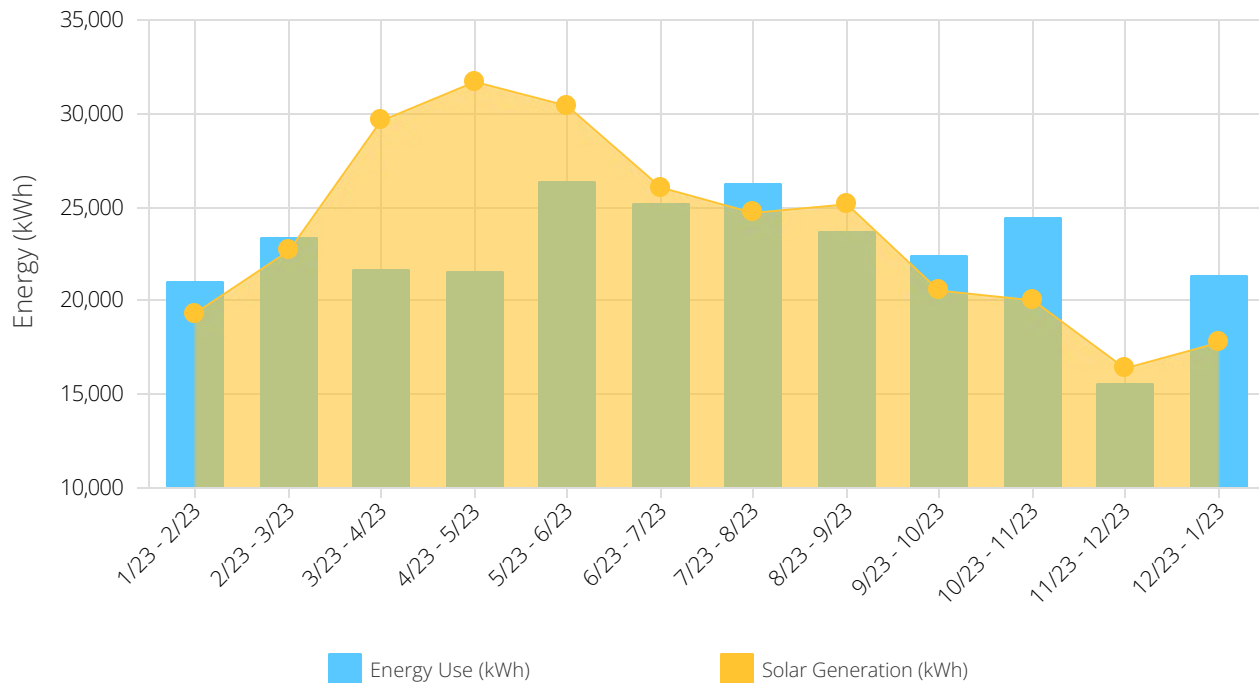
Solar Panels: Greater than 30 Years
 Inverters: 15 Years

Solar PV System Cost and Incentives

Solar PV System Cost	\$471,041
Federal ITC	-\$127,181
Net Solar PV System Cost	\$343,860



MONTHLY ENERGY USE VS SOLAR GENERATION



3.1.2 REBATES & INCENTIVES

This section summarizes all incentives available for this project. The actual rebate and incentive amounts for this project are shown in each example.

Investment Tax Credit (ITC) - 30% (with Adders)

The Inflation Reduction Act (IRA) of 2022 establishes and extends the federal Investment Tax Credit (ITC) for solar photovoltaic (PV) systems at a rate of 30% of the total PV system cost. The 30% ITC was extended for 10 years, through 2032. Unlike tax deductions, this tax credit can be used to directly offset your tax liability dollar for dollar. The IRA extended the carryback period to 3 years, and the carryforward period to 22 years, in cases where the tax credit exceeds a customer's tax liability in the 'placed-in-service' year. For PV projects greater than 1 MW AC in size, the IRA established prevailing wage and apprenticeship requirements in order to qualify for the full 30% "increased rate", rather than a "base rate" which would only qualify for a 6% ITC. Projects with an output of less than 1 megawatt qualify for the "increased rate" irrespective of if prevailing wage or apprenticeship requirements are met. In addition to the 30% ITC, the IRA establishes three different types of ITC "Adders", which provide additional tax credits of up to 10% each, for projects that meet specified requirements. (1) Energy Community, projects sited in an "energy community", which includes brownfield sites, census tracts where a coal mine closed after 1999 or a coal-fired power plant was retired after 2009, or areas where 25% of local tax revenues are related to the extraction, processing or storage of coal, oil, or natural gas at any time beginning in 2010. (2) Low-income, projects located in a qualified "low-income community", which is defined as a census tract with a poverty rate of at least 20%, as well as a census tract where the median family income (MFI) is 80% or less of statewide MFI, or on "Indian land", which is defined as land located within the boundaries of an Indian reservation or lands held by a tribe. (3) Domestic Content, for projects that meet specified domestic content requirements which will be set by Treasury, including 100% steel/iron for manufactured products with a 40% requirement through 2024 followed by 45% in 2025, 50% in 2026, and 55% in 2027 and beyond. Manufactured content is further explained: the products which are components of a qualified facility upon completion will be deemed to have been produced in the United States if the adjusted percentage of the total costs of all such manufactured products of the facility are attributable to manufactured products which are mined, produced, or manufactured in the United States.

Total Incentive Value: \$127,181



3.1.3 UTILITY RATES

The table below shows the rates associated with your current utility rate schedule (GSD-1). Your estimated electric bills after solar are shown on the following page.

Customer Charges				Energy Charges				Demand Charges			
Season	Charge Type	Rate Type	GSD-1	Season	Charge Type	Rate Type	GSD-1	Season	Charge Type	Rate Type	GSD-1
S1	Flat Rate	per billing period	\$16.51	S1	Flat Rate	Import	\$0.08861	S1	Flat Rate	Import	\$11.80



3.1.4 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: DUKE-FL - GSD-1

Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges			
Bill Ranges & Seasons	Total	NC / Max	Other	Energy	Demand	Total
1/23/2024 - 2/23/2024 S1	21,042	203	\$17	\$1,865	\$2,395	\$4,276
2/23/2024 - 3/23/2024 S1	23,372	203	\$17	\$2,071	\$2,395	\$4,483
3/23/2023 - 4/23/2023 S1	21,675	203	\$17	\$1,921	\$2,395	\$4,333
4/23/2023 - 5/23/2023 S1	21,530	203	\$17	\$1,908	\$2,395	\$4,320
5/23/2023 - 6/23/2023 S1	26,345	203	\$17	\$2,334	\$2,395	\$4,746
6/23/2023 - 7/23/2023 S1	25,190	203	\$17	\$2,232	\$2,395	\$4,644
7/23/2023 - 8/23/2023 S1	26,224	214	\$17	\$2,324	\$2,525	\$4,865
8/23/2023 - 9/23/2023 S1	23,630	214	\$17	\$2,094	\$2,525	\$4,636
9/23/2023 - 10/23/2023 S1	22,390	214	\$17	\$1,984	\$2,525	\$4,526
10/23/2023 - 11/23/2023 S1	24,432	214	\$17	\$2,165	\$2,525	\$4,707
11/23/2023 - 12/23/2023 S1	15,563	214	\$17	\$1,379	\$2,525	\$3,921
12/23/2023 - 1/23/2024 S1	21,347	214	\$17	\$1,892	\$2,525	\$4,433
Total	272,740	-	\$198	\$24,167	\$29,524	\$53,889



3.1.5 NEW ELECTRIC BILL

RATE SCHEDULE: DUKE-FL - GSD-1

Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges			
Bill Ranges & Seasons	Total	NC / Max	Other	Energy	Demand	Total
1/23/2024 - 2/23/2024 S1	1,716	192	\$17	\$152	\$2,260	\$2,428
2/23/2024 - 3/23/2024 S1	705	189	\$17	\$62	\$2,233	\$2,312
3/23/2023 - 4/23/2023 S1	-7,931	195	\$17	\$703	\$2,301	\$1,615
4/23/2023 - 5/23/2023 S1	-10,161	192	\$17	\$900	\$2,266	\$1,382
5/23/2023 - 6/23/2023 S1	-4,068	196	\$17	\$360	\$2,313	\$1,969
6/23/2023 - 7/23/2023 S1	-856	179	\$17	\$76	\$2,109	\$2,050
7/23/2023 - 8/23/2023 S1	1,532	207	\$17	\$136	\$2,440	\$2,592
8/23/2023 - 9/23/2023 S1	-1,522	193	\$17	\$135	\$2,274	\$2,156
9/23/2023 - 10/23/2023 S1	1,849	208	\$17	\$164	\$2,457	\$2,638
10/23/2023 - 11/23/2023 S1	4,410	211	\$17	\$391	\$2,493	\$2,900
11/23/2023 - 12/23/2023 S1	-824	209	\$17	\$73	\$2,460	\$2,404
12/23/2023 - 1/23/2024 S1	3,587	206	\$17	\$318	\$2,428	\$2,762
Total	-11,563	-	\$198	\$578	\$28,034	\$27,654

ANNUAL ELECTRICITY SAVINGS: \$26,235



4.1 Cash Purchase

Assumptions and Key Financial Metrics

IRR - Term	9.9%	Net Present Value	\$305,147	Payback Period	10.8 Years
ROI	245.6%	PV Degradation Rate	0.50%	Discount Rate	5.0%
Energy Cost Escalation Rate	5.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	\$471,041				

Years	Project Costs	O&M / Equipment Replacement	Electric Bill Savings	Federal Tax Effect	Total Cash Flow	Cumulative Cash Flow
Upfront	-\$471,041	-	-	-	-\$471,041	-\$471,041
1	-	-\$937	\$26,235	\$127,181	\$152,479	-\$318,562
2	-	-\$947	\$27,409	-	\$26,463	-\$292,099
3	-	-\$956	\$28,635	-	\$27,679	-\$264,420
4	-	-\$966	\$29,915	-	\$28,950	-\$235,470
5	-	-\$975	\$31,251	-	\$30,276	-\$205,194
6	-	-\$985	\$32,647	-	\$31,662	-\$173,532
7	-	-\$995	\$34,103	-	\$33,108	-\$140,424
8	-	-\$1,005	\$35,624	-	\$34,619	-\$105,805
9	-	-\$1,015	\$37,211	-	\$36,196	-\$69,609
10	-	-\$1,025	\$38,868	-	\$37,843	-\$31,766
11	-	-\$1,035	\$40,598	-	\$39,563	\$7,797
12	-	-\$1,046	\$42,403	-	\$41,358	\$49,155
13	-	-\$1,056	\$44,288	-	\$43,232	\$92,387
14	-	-\$1,067	\$46,255	-	\$45,188	\$137,575
15	-	-\$1,077	\$48,308	-	\$47,231	\$184,806
16	-	-\$53,588	\$50,451	-	-\$3,137	\$181,669
17	-	-\$1,099	\$52,687	-	\$51,588	\$233,257
18	-	-\$1,110	\$55,021	-	\$53,911	\$287,168
19	-	-\$1,121	\$57,456	-	\$56,335	\$343,503
20	-	-\$1,132	\$59,997	-	\$58,865	\$402,368
21	-	-\$1,144	\$62,649	-	\$61,506	\$463,873
22	-	-\$1,155	\$65,416	-	\$64,261	\$528,135
23	-	-\$1,167	\$68,303	-	\$67,137	\$595,271
24	-	-\$1,178	\$71,316	-	\$70,137	\$665,409
25	-	-\$1,190	\$74,458	-	\$73,268	\$738,677
26	-	-\$1,202	\$77,737	-	\$76,535	\$815,212
27	-	-\$1,214	\$81,157	-	\$79,944	\$895,156
28	-	-\$1,226	\$84,726	-	\$83,499	\$978,655
29	-	-\$1,238	\$88,448	-	\$87,209	\$1,065,864
30	-	-\$1,251	\$92,330	-	\$91,079	\$1,156,944
Totals:	-\$471,041	-\$85,102	\$1,585,906	\$127,181	\$1,156,944	-



5 ENVIRONMENTAL BENEFITS

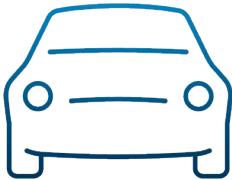


OVER THE NEXT 20 YEARS, YOUR SYSTEM WILL DO MORE THAN JUST SAVE YOU MONEY. ACCORDING TO THE EPA'S GREENHOUSE GAS EQUIVALENCIES CALCULATOR ([SOURCE](#)), YOUR SOLAR PV SYSTEM WILL HAVE THE IMPACT OF REDUCING:



4,454

tons of CO₂ Offset



10,127,347

Miles Driven By Cars



66,811

Trees Planted