



Alachua
County.us

Date: July 21, 2023

To: Board of County Commissioners

From: Daniel Whitcraft, Director of Facilities Management

RE: Court Complex Solar PV System Return on Investment (ROI).

The “estimated” ROI being used currently for the Court Complex is calculated based on the following:

1. Determine “Value of Energy Produced Over Time”.
 - a. Assumptions made using current industry standards.
 - i. Solar Panel “Face Area” = 18watts/Square Foot (SF)
 - ii. 50% Roof Ratio (amount of Roof Area used for panels).
 - iii. Industry estimated \$7/watt of system cost = \$7000/kwh of system cost.
 - iv. GRU Electricity Cost (FY23) \$0.1348 per KWH.
 - v. Electricity Escalation Cost factor 6% (assumption).

PV Annual Energy Yield (KWH/KW) = 1350 (18watts per panel x SF of Roof Area (75ksf).

Years	Current Energy Cost \$/KWH (6% annual escalator)	Value of Energy Produced	Value of Energy produced over time.
1	.13	\$181.98	\$181.98
2	.14	\$192.90	\$374.88
3	.15	\$204.47	\$579.35
4	.16	\$216.74	\$796.09
5	.17	\$229.75	\$1,025.84
6	.18	\$243.53	\$1,269.37
7	.19	\$258.14	\$1,527.51
8	.20	\$273.63	\$1,801.14
9	.21	\$290.05	\$2,091.19
10	.23	\$307.45	\$2,398.64
11	.24	\$325.90	\$2,724.54
12	.26	\$345.45	\$3,069.99
13	.27	\$366.18	\$3,436.17
14	.29	\$388.15	\$3,824.32
15	.30	\$411.44	\$4,235.76
16	.32	\$436.13	\$4,671.89
17	.34	\$462.29	\$5,134.18
18	.36	\$490.03	\$5,624.21
19	.38	\$519.43	\$6,143.64
20	.41	\$550.60	\$6,694.24
21	.43	\$583.63	\$7,277.88
22	.46	\$618.65	\$7,896.53

Note: Analysis does not consider Time Value of First Cost or Maintenance Cost.