



July 28, 2011

Doug Corbett
Ford Iroquois Public Health
235 N Taft
Paxton, IL 60957

Dear Mr. Corbett,

We are pleased to submit a proposal for your solar electric energy system.

We are proposing a system that achieves the best energy cost savings for you. And we believe this represents a good investment for your future well-being. In this proposal, we have taken into account your particular needs and desires, your energy requirements, and included a summary of any available local, state and federal incentives.

We are committed to a quality installation and to ensuring your total satisfaction with our products and service. The next step is to sign the necessary agreements so we can reserve your rebates and begin the engineering and permitting processes. This proposal is valid for 30 days.

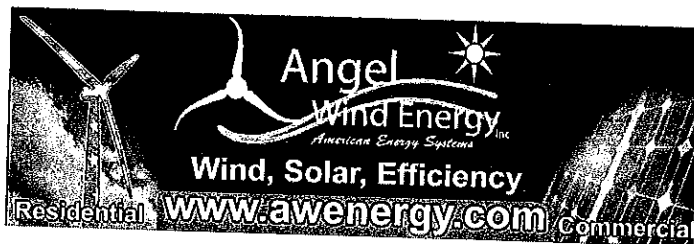
We look forward to helping you achieve more energy independence, providing a good investment for years to come, and helping you make a more positive environmental impact.

I will follow-up with you shortly to review our proposal in more detail and to answer any questions you may have.

Sincerely yours,

Ben Harroun Vice President Angel Wind Energy Inc.

Ben Harroun
Vice President
Angel Wind Energy Inc.
113 N Pine St
Onarga, IL 60955
Phone: 815-383-7509
eMail: ben@angelwindenergy.com



Performance & Financial Analysis

Prepared July 28, 2011 for

Doug Corbett

Ford Iroquois Public Health

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Paxton, IL 60957
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Prepared by Ben Harroun

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Executive Summary

Electric Utility Savings: The purchase of electricity (kWh) from your utility is expected to be reduced 12%. Expect a savings of \$379 in electric bills next year (12%). Annual utility electric costs will be reduced from \$3,252 to \$2,873. Savings will grow as electric utility rates are expected to rise 7.00% a year.

Over 40 years, annual utility savings are expected to average \$1,989, for a total utility savings of \$79,561.

System Performance Summary

Solar Electric (PV) System: 2.94 kW DC (2.837 kW AC, 2.567 kW CEC) producing 3,477 kWh annually

Purchase Price & Net Cost

Contract Price: \$23,620
 Incentives to Customer: **(\$7,086)**
 Net Purchase Cost: \$16,534
 Cash Gained over Life: \$59,805
 Customer Type: Government/Municipal

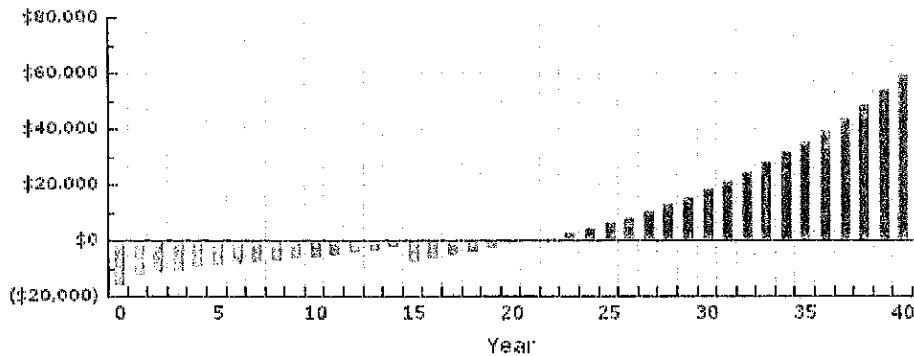
Financial Ratios

Customer's Profitability Index: 1.4
 Cashflow Payback: 21.2 years
 Internal Rate of Return (IRR): 7.2%
 Modified IRR (MIRR): 7.6%
 Net Present Value (NPV): \$7,035
 MACRS Bonus Depreciation: \$16,534

- CO2 Saved over System Life: 114 tons. Equivalent to driving 228,000 auto miles

Finance: Cash

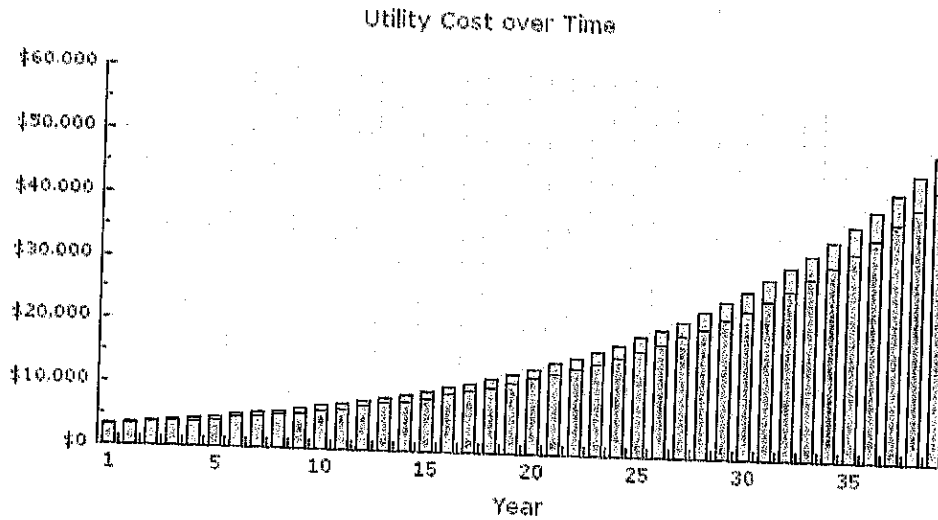
Cumulative Cash Flow



comb. = \$71,554 - after rebates

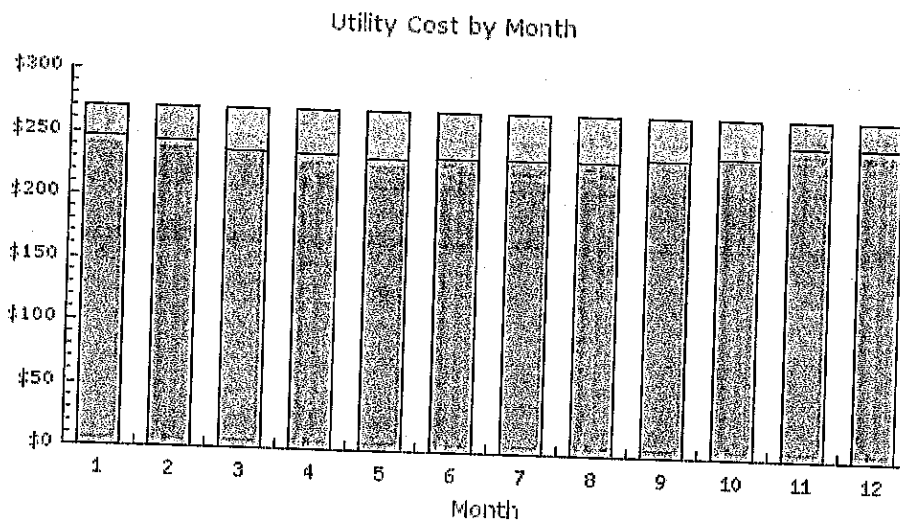


The Cost of Doing Nothing



Your Hedge Against Utility Inflation: Your investment in this project will protect you from utility rate inflation. The graph above represents the cost of utility bills over time. The red area represents the utility bills you can expect if you do nothing. The green area represents the utility bills you can expect by making this investment.

Utility Cost by Month





Carbon Footprint

Your carbon footprint will be reduced.

Over the life of your system 114 tons of carbon dioxide (CO₂) will be eliminated from your footprint.

114 Tons of CO₂ is Equivalent to:



Planting 570 trees.



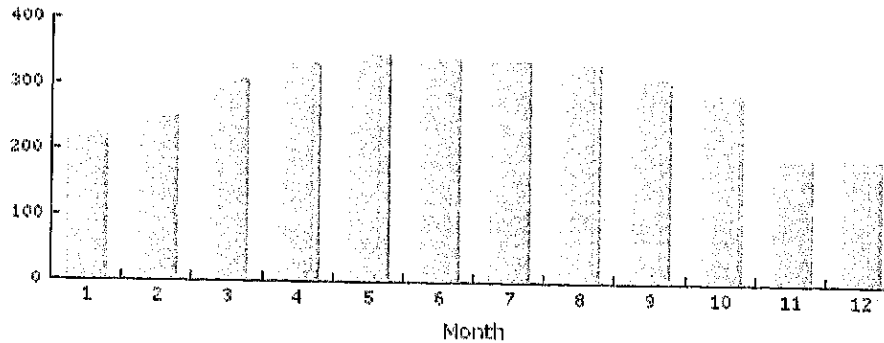
Reducing your driving by 228,000 auto miles.

PAXTON



Solar Electric (PV) System Summary

Solar Electric (PV) kWh Production by Month



Array Configuration: Tilt: 14° Azimuth: 180° 3" Standoff
Shade: 0%

PV Panels: 14 x Kyocera Solar, Model: KD210GX-LFBS

Inverters: 1 x SMA America, Model: SB3000HFUS-30 (240V)

Total Panel Area: 215 sq-ft

System Peak Power: 2.94 kW DC (2.837 kW AC, 2.567 kW CEC)

Annual Production: 3,477 kWh. Supplying 12% of annual electric use

Contract Price Summary: Solar Electric (PV) System

Contract Amount: \$23,620 (\$8.03 per watt DC)

Incentives to be received by Customer in 1st Year

DCEO - Solar and Wind Energy Rebate Program: (\$7,086)

Net Cost at Install (after incentives): \$16,534

Net Installed Price per Watt: \$5.62 per watt DC (\$5.83 per watt AC)



How to Interpret Financial Ratios and Measures

A Measure of Security: Cashflow Payback: 21.2 years - 21.2 years (modified)

The most common measure of the security of a proposed investment is its payback, defined as the length of time until one gets one's money back. Cashflow Payback is when cumulative cash flow stays positive for good. Modified Cashflow Payback is when the cumulative cash in-flows exceed the total of all cash out-flows (over the system life).

Profitability Index: 1.4

What PI Means: Generally, if $PI > 1$ then accept the project. If $PI < 1$ then "qualitative" factors may justify the project.

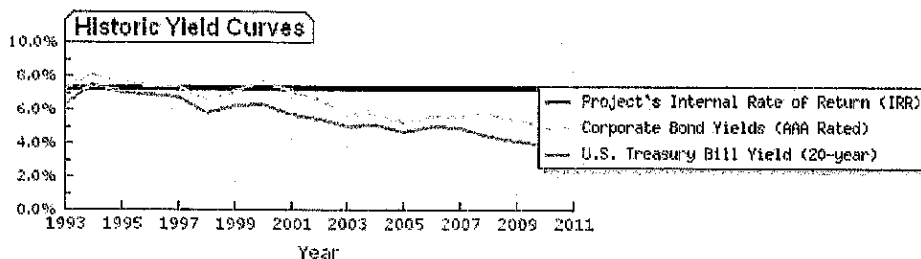
Profitability Index (PI) is a measure of investment efficiency. It identifies the relationship of investment to its return. Profitability Index (PI) is calculated as: (Net-Present Value of the Returns plus the Initial Investment) divided by the Initial Investment. For example: If \$10,000 is invested and the NPV of the returns is \$2,000, then the $PI = (\$10,000 + \$2,000) / \$10,000 = 1.2$

Net Present Value (NPV): \$7,035.

What NPV Means: NPV is an indicator of how much value an investment or project adds to the customer. If NPV is positive then the investment would add value. If NPV is zero or negative then other "qualitative" factors may add adequate value to justify the project (for example, lengthening a swimming pool season). *Net Present Value (NPV)* is one way to account for the time value of money. NPV calculates the current value of each future cash flow. For example, \$1.00 received two years from now is equivalent to something less today, if it can be invested now at some interest rate. This allows us to "discount" the cash flows (whether positive or negative) that the proposed investment is expected to generate at various times in the future back to their equivalent value today (that is, their "present value"). If one then subtracts the cost of the proposed investment from the sum of the present values of the ongoing cash inflows, one obtains the net present value (NPV) of the investment.

Internal Rate of Return (IRR): 7.2%

Internal Rate of Return (IRR) is another common measure of investment efficiency. It is defined as the interest rate that causes the project's net present value (NPV) to equal zero, and is equivalent to the yield to maturity of a bond. The internal rate of return (IRR) on an investment or potential investment is the annualized effective compounded rate of return that can be earned on the invested capital.



Modified Internal Rate of Return (MIRR): 7.6% -- *Modified Internal Rate of Return (MIRR)*, as the name implies, is a modification of the internal rate of return (IRR) and as such aims to resolve some problems with the IRR. First, IRR assumes that positive cash flows are reinvested at the same rate of return as that of the project that generated them. A more likely situation is that the funds will be reinvested at a rate closer to the cost of capital. For determining MIRR, we assumed a finance rate of 5.00% and a reinvestment rate of 8%.



Assessing Option Value

The option value of a proposed investment represents the value of future opportunities that would be made available only if the investment were made. Like the ante in a poker game, the investment may promise no return other than the opportunity to look at the cards being dealt, at which point one can either fold or "exercise the option" by making additional investments in an attempt to win the pot. To realize future value here new investments are not necessarily required to "exercise the options" - ownership is enough. In the case of renewable energy systems in general, there are primarily two opportunities, or options, which may have future value: Property value appreciation, and Renewable energy certificates (RECs or SRECs):

Property Value Appreciation

As a non-residential customer we have assumed you depreciate property value and equipment value. Therefore no property value appreciation is applicable to this analysis.

Renewable Energy and/or Carbon Credits or Certificate (REC or SREC)

Renewable Energy Certificates (sometimes called "solar renewable energy credits/certificates" - SRECs, S-RECs, or simply RECs) are a new and evolving method to ascribe future financial value to a renewable energy system. RECs represent the bundle of legal rights to the "green" part of each unit of energy produced by a renewable energy system. This green part can be sold for a value, which generates additional revenue for the seller. These certificates can be sold and traded or bartered and the owner of the REC can claim to have purchased renewable energy.



Utility Energy Summary: Electric

Electric Utility Rates

<u>Current Rate</u>	<u>Post Project Rate</u>
Fixed Price per unit \$0.1100/kWh	Fixed Price per unit
Average Cost: \$0.11 per kWh	Average Cost: \$0.11 per kWh
Tiered Rate: No	Tiered Rate: No
Time-of-Use Rate: No	Time-of-Use Rate: No
Demand Charges: No	Demand Charges: No

Summary of Utility & New Source Electricity

Electric by Month (kWh)	1	2	3	4	5	6	7	8	9	10	11	12	<u>Total</u>
<u>Entered into Software (historical)</u>													
Monthly Use	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	29,592
Historical Cost	\$249	\$249	\$249	\$249	\$249	\$249	\$249	\$249	\$249	\$249	\$249	\$249	\$2,998
<u>Estimated by Software at Current Rates</u> (Includes any planned energy increases)													
Estimated Use	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	29,592
Current Cost	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$3,252
Baseline Use after Efficiency	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	2466	29,592
Baseline Cost after Efficiency	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$271	\$3,252
Post Project Use	2239	2214	2156	2132	2117	2125	2128	2130	2155	2175	2272	2272	26,115
Post Project Cost	\$246	\$244	\$237	\$235	\$233	\$234	\$234	\$234	\$237	\$239	\$250	\$250	\$2,873



Cash Flow Details for the System

Cash Flows In Year	0	1	2	3	4
Gross Cost: PV	(23620)				
O&M Cost: PV		(36)	(37)	(38)	(40)
Ref: Utility Bill Savings with Inflation Applied	0	406	432	461	492
Utility Bill Net Cash Savings after Tax Effects		406	432	461	492
<u>Solar Electric (PV) Incentives</u>					
DCEO - Solar and Wind Energy Rebate Program	7086				
Total Incentives	7086	0	0	0	0
Ref: Amount Depreciated (\$16,534 total)	0	9921	2645	1588	952
MACRS Bonus Depreciation Tax Savings	0	3274	873	524	314
Net Annual Cash Flow	(16534)	3644	1268	947	766
Cumulative Cash Flow	(16534)	(12890)	(11622)	(10675)	(9909)

* - Indicates Contractor to receive this incentive.

Cash Flows In Year	5	6	7	8	9
O&M Cost: PV	(41)	(42)	(43)	(44)	(45)
Ref: Utility Bill Savings with Inflation Applied	524	559	598	639	683
Utility Bill Net Cash Savings after Tax Effects	524	559	598	639	683
Ref: Amount Depreciated (\$16,534 total)	952	476	0	0	0
MACRS Bonus Depreciation Tax Savings	314	157			
Net Annual Cash Flow	797	674	555	595	638
Cumulative Cash Flow	(9112)	(8438)	(7883)	(7288)	(6650)
Cash Flows in Year	10	11	12	13	14
O&M Cost: PV	(47)	(48)	(49)	(51)	(52)
Ref: Utility Bill Savings with Inflation Applied	729	780	834	892	954
Utility Bill Net Cash Savings after Tax Effects	729	780	834	892	954
Net Annual Cash Flow	682	732	785	841	902
Cumulative Cash Flow	(5968)	(5236)	(4451)	(3610)	(2708)
Cash Flows in Year	15	16	17	18	19
O&M Cost: PV	(6106)	(55)	(57)	(58)	(60)
Ref: Utility Bill Savings with Inflation Applied	1020	1092	1168	1251	1338
Utility Bill Net Cash Savings after Tax Effects	1020	1092	1168	1251	1338
Net Annual Cash Flow	(5086)	1037	1111	1193	1278
Cumulative Cash Flow	(7794)	(6757)	(5646)	(4453)	(3175)



Cash Flow Details for the System

Cash Flows in Year	20	21	22	23	24
O&M Cost: PV	(62)	(63)	(65)	(67)	(69)
Ref: Utility Bill Savings with Inflation Applied	1432	1533	1642	1757	1881
Utility Bill Net Cash Savings after Tax Effects	1432	1533	1642	1757	1881
Net Annual Cash Flow	1370	1470	1577	1690	1812
Cumulative Cash Flow	(1805)	(335)	1242	2932	4744
Cash Flows in Year	25	26	27	28	29
O&M Cost: PV	(71)	(73)	(75)	(77)	(79)
Ref: Utility Bill Savings with Inflation Applied	2014	2157	2308	2472	2647
Utility Bill Net Cash Savings after Tax Effects	2014	2157	2308	2472	2647
Net Annual Cash Flow	1943	2084	2233	2395	2568
Cumulative Cash Flow	6687	8771	11004	13399	15967
Cash Flows in Year	30	31	32	33	34
O&M Cost: PV	(81)	(83)	(86)	(88)	(91)
Ref: Utility Bill Savings with Inflation Applied	2833	3033	3247	3477	3723
Utility Bill Net Cash Savings after Tax Effects	2833	3033	3247	3477	3723
Net Annual Cash Flow	2752	2950	3161	3389	3632
Cumulative Cash Flow	18719	21669	24830	28219	31851
Cash Flows in Year	35	36	37	38	39
O&M Cost: PV	(93)	(96)	(98)	(101)	(104)
Ref: Utility Bill Savings with Inflation Applied	3985	4267	4568	4891	5236
Utility Bill Net Cash Savings after Tax Effects	3985	4267	4568	4891	5236
Net Annual Cash Flow	3892	4171	4470	4790	5132
Cumulative Cash Flow	35743	39914	44384	49174	54306
Cash Flows in Year	40	41	42	43	44
O&M Cost: PV	(107)				
Ref: Utility Bill Savings with Inflation Applied	5606	0	0	0	0
Utility Bill Net Cash Savings after Tax Effects	5606				
Net Annual Cash Flow	5499	0	0	0	0
Cumulative Cash Flow	59805	0	0	0	0



Other Assumptions Used in this Analysis

Tax Effects Applied to Utility Savings: We have assumed utility bill savings will not increase your income tax liabilities. As a business customer, utility savings may result in lower business expenses (a tax deduction or "write off") for utility services.

System Life: PV System: 40 years, Inverters: 15 years,

Performance Degradation and O&M Costs: We have assumed performance will degrade by 0.50% per year due to soiling and general wear. Annual operating and maintenance (O&M) costs are inflated 2.80% per year, and are estimated as a percent of gross system price, as follows: Solar Electric (PV): 0.15%.

Income Tax Rates: Federal: 28%, State: 5%

Annual Inflation Rates: Consumer price index: 2.80%, Electric Rates: 7.00%

Discount Rate: 5.00%. Used to estimate net present value of future cash flows. This is also assumed to be the finance rate, as used to calculate MIRR.

Reinvestment Rate: 8%. Used to calculate MIRR.

The following renewable resource assumptions were used to develop estimates for the job location:

Solar Resources: Flat-Plate, South-facing Tilted at Latitude												
Month	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
kWh/m ² /day	3.27	4.11	4.70	5.48	5.76	6.01	5.83	5.76	5.42	4.61	3.10	2.90