Edison
Solar & Wind

www.edisonsolar.net
phone: (419)499-0000
email: info@edisonsolar.net

COST, RECOVERY PERIOD, & SAVINGS FOR AN 8,160 WATT RESIDENTIAL SOLAR SYSTEM INSTALLED ON AN EXISTING STRUCTURE

ESTIMATE DATE: SEPTEMBER 2010

1. **Cost 8,160** watts at $7.00 per watt — **$57,120**

2. **State Grant** equals $3.00 per watt or $25,000 (whichever is less)
   $3.00 x 8,160 watts = $24.480.00 — -$24,480 (35%)
   $32,640 (balance)

3. **30% tax credit** equals $32,640 X .30% — -$9,792 (17%)
   $22,848 (balance)

4. **Renewable energy credits =** $288.42 per REC x 57 (12 RECs per year X 4 years 9 months) Based on system being installed by September 2010 with payments to 2024*) — -$16,440
   $6,408 (balance)

5. **Savings in electricity** equal 11,913 KWh's per year X .12 cents per KWh = $1,429.56 divided by 12 months = $119.13 per month divided into $6,408 = 4 years 6 months — -$6,433

Balance after 4 1/2 years — **($25)**

*REC PAYMENT ESTIMATES CONVERT TO A FINANCIAL GAIN OF $16,440

Year	Time Period	First Energy Corp Penalty Amount	Estimated Price to Seller per REC	Number of RECs	# of RECs x REC price
2010	Sept-Dec	$400	$337.50	4	$1,350.00
2011	Jan-Dec	$400	$337.50	12	$4,050.00
2012	Jan-Dec	$350	$290.00	12	$3,480.00
2013	Jan-Dec	$350	$290.00	12	$3,480.00
2014	Jan-Dec	$300	$240.00	12	$2,880.00
2015	Jan-May	$300	$240.00	5	$1,200.00
			$288.42 (avg)	57	$16,440.00

Things To Know

A. Estimate does not include any charges you may have for financing.

B. Solar panels are warranted by manufacturer for 25 years and inverters for 10 years. Does not include moving parts and normal maintenance.

C. 8,160 kilowatts will produce approximately 12,000 KWh's per year in northern Ohio.

D. **Renewable Energy Credits**: A renewable energy credit is one megawatt hour, which is 1,000 KWhs. Ohio passed a law requiring energy companies to provide a percentage of their power from renewable energy by 2024. They will have to pay a fine if they do not reach that percentage. However, they can offset that fine by purchasing energy credits or RECs from renewable energy producers.

   For the remainder of 2010 and 2011, the energy companies would have to pay $400 as a penalty for 1,000 KWh's or offset the penalty by buying one REC. Obviously, they will buy RECs for a figure less than the penalty amount with RECs presently trading at $337.50. Every two years after 2011, the penalty figure drops by $50 dollars until 2024.

   Consequently any person or business in the State of Ohio with a solar system can sell their credit for generated electricity every time they produce 1,000 KWh's or one REC. The 8,160-watt system in this estimate would produce an average of 12 credits (12,000 KWhs) per year.

   REC income is presently worth about 2 1/2 times as much as the value of the energy generated by a solar system at 12 cents per KWH.

E. Edison Solar & Wind will enroll you with a broker who will register your system with the various agencies required for selling RECs and then sell your RECs as they are generated. You can sell and receive a check for every REC your system generates on a monthly basis.

F. 12,000 KWh X 12 cents per KWh hour = $1,440 savings in electricity per year. Deducting the 4 1/2 years electricity production (figured in the system payoff above) from the 25-year warranted life of solar panels would leave 20 1/2 years of free electricity. At the current rate of .12 cents per KWh, this would result in a savings of $29,520.

   In addition, renewable energy credits can be sold until 2024. The total credit years minus the 4 years 9 months (figured in the system payoff above) leaves 9 years 7 months of REC credits remaining. At an average price of as little as $75 per REC, this would amount to an additional income per year of $900 times, which times 9 years 7 months = $8,625. **After 25 years, the solar system would be paid for and a profit of approximately $37,933.44 is realized.**

G. If energy prices go up, the savings would be greater. Although the warranty period is 25 years, the overall period of energy generation will exceed 25 years even perhaps by decades, adding years to the period of free energy production.

H. **Electricity prices will go up!**

I. In general, every dollar of energy savings adds $20 dollars to property values. In researching this increase in value in north central Ohio, I was told by Re/Max real estate appraiser Dale Kaufman that energy saving improvements are capitalized by taking the yearly savings times 7 to 9% times the length of the savings (in this case at least 25 years) for the **total capital improvement to be added to the value of the property.** Having a system that produces onsite electricity can also be an advantage in selling a property.

J. The 8,160-watt system in this estimate consists of one S.M.A. inverter and 34 Sharp 240 watt panels that are 39.1" wide and 64.5" high. Panels weigh 44 lbs. each.

K. Greatest savings is to replace power during summer months June through August when the rate is the highest.

N. Total outlay would be $34,560 ($69,120 divided by 2). Balance after roughly 15 months, including 3 months to get system operational and assuming 30% tax credit is taken, is $34,560 minus $5,923 (1 year energy savings of $1,373 + 14 RECs at $325 each for $4,550)= $28,637.

Payment Procedures

1. Estimates are free.

2. If you wish to continue after seeing the estimate, a non-refundable fee of $1,000 is required. This pays for the grant application process including all tests, compilation of technical information, and the completion and submission of grant application forms. Requirement provisions apply to grant recipients.

3. If you wish to continue, a contract will be drawn requiring a 25% down payment when signed. The $1,000 dollars already advanced counts as part of this payment.

4. A second payment of 25% of the total cost is required the day installation begins.

5. Remaining 50% must be paid when the grant money is received, usually 4-6 weeks after the system is producing electricity.

6. From the signing date of a contract, it is normally about 6-8 weeks until the system is installed and producing electricity. This means that the buyer can expect to have 50% of the cost of the system outstanding for roughly 4 months until grants are received.