

Solar Array Payback Analysis Spreadsheet

Placed in Service	9/30/2008
Downpayment	\$ 21,000
Finance	\$ 50,000
Interest Rate	6.0%
Term	5 years
Estimated Monthly Pymt	\$ 966

Note: rough estimates are marked with *

	Expenses by Year							6 Year Total
	Nov - Dec 2008	2009	2010	2011	2012	2013	Jan - Oct 2014	
Interest Payments on Loan	\$ 496	\$ 2,671	\$ 2,121	\$ 1,537	\$ 917	\$ 263	\$ -	\$ 8,005
Depreciation on Hardware	\$ 36,210	\$ 9,656	\$ 5,794	\$ 3,476	\$ 3,476	\$ 1,738	\$ -	\$ 60,350
NC Add Back / Deduction	\$ (25,649)	\$ 5,130	\$ 5,130	\$ 5,130	\$ 5,130	\$ 5,130	\$ -	\$ 1
Total Expenses	\$ 11,057	\$ 17,457	\$ 13,045	\$ 10,143	\$ 9,523	\$ 7,131	\$ -	\$ 68,356

Savings

	Tax Writeoff on Expenses							6 Year Total
	Nov - Dec 2008	2009	2010	2011	2012	2013	Jan - Oct 2014	
Interest Payments on Loan (35%)	\$ 174	\$ 935	\$ 742	\$ 538	\$ 321	\$ 92	\$ -	\$ 2,802
Depreciation on Hardware (35%)	\$ 12,674	\$ 3,380	\$ 2,028	\$ 1,217	\$ 1,217	\$ 608	\$ -	\$ 21,124
NC Add Back / Deduction (7%)	\$ (1,795)	\$ 359	\$ 359	\$ 359	\$ 359	\$ 359	\$ -	\$ -
Total Saved on Taxes	\$ 11,053	\$ 4,674	\$ 3,129	\$ 2,114	\$ 1,897	\$ 1,059	\$ -	\$ 23,926

	Federal Tax Credit (30% * [total system cost])							6 Year Total
	Nov - Dec 2008	2009	2010	2011	2012	2013	Jan - Oct 2014	
Eric Henry Federal Credit	\$ 6,500	\$ 2,100	\$ 2,050	\$ -	\$ -	\$ -	\$ -	\$ 10,650
Tom Sineath Federal Credit	\$ 3,800	\$ 2,000	\$ 2,000	\$ 2,000	\$ 850	\$ -	\$ -	\$ 10,650
Total Saved on Taxes	\$ 10,300	\$ 4,100	\$ 4,050	\$ 2,000	\$ 850	\$ -	\$ -	\$ 21,300

	NC Tax Credit (35% * [total system cost])							6 Year Total
	Oct - Dec 2008	2009	2010	2011	2012	2013	Jan - Sep 2014	
Total Saved on Taxes	\$ 4,970	\$ 4,970	\$ 4,970	\$ 4,970	\$ 4,970	\$ -	\$ -	\$ 24,850

	Estimated Income from Power Generated after Taxes*							6 Year Total
	Nov - Dec 2008	2009	2010	2011	2012	2013	Jan - Oct 2014	
Total Earned	\$ 349	\$ 1,394	\$ 1,394	\$ 1,394	\$ 1,394	\$ 1,394	\$ 1,046	\$ 8,364

Costs

	Net Costs							6 Year Total
	Nov - Dec 2008	2009	2010	2011	2012	2013	Jan - Oct 2014	
Downpayment	\$ (21,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (21,000)
Loan Payment (\$966/month)	\$ (1,932)	\$ (11,592)	\$ (11,592)	\$ (11,592)	\$ (11,592)	\$ (9,660)	\$ -	\$ (57,960)
Additional Expenses (\$500/year)	\$ (83)	\$ (500)	\$ (500)	\$ (500)	\$ (500)	\$ (500)	\$ (418)	\$ (3,001)
Total Costs	\$ (23,015)	\$ (12,092)	\$ (12,092)	\$ (12,092)	\$ (12,092)	\$ (10,160)	\$ (418)	\$ (81,961)

Net

	Balance Calculation							6 Year Total
	Nov - Dec 2008	2009	2010	2011	2012	2013	Jan - Oct 2014	
Net Savings	\$ 26,672	\$ 15,138	\$ 13,543	\$ 10,478	\$ 9,111	\$ 2,453	\$ 1,046	\$ 78,440
Net Costs	\$ (23,015)	\$ (12,092)	\$ (12,092)	\$ (12,092)	\$ (12,092)	\$ (10,160)	\$ (418)	\$ (81,961)
Balance Value	\$ 3,656	\$ 3,046	\$ 1,451	\$ (1,614)	\$ (2,981)	\$ (7,707)	\$ 628	\$ (3,521)

Payback after 6 years = 95.7% (formula: \$78,440 net savings / \$81,961 net costs)