

New Hampshire Solar Power Worksheet	November 7, 2014
Grid Interactive Photovoltaic System Size (Watts DC)	9,360
Assumptions	Taxable entity
Roof rack - sloped roof	No financing

Taxable entity project financials

Equipment	Item	Watts	List Price	Cost	Qty	Extended	Total Watts	\$/Watt
Manufacturer								
Enphase	M250-60-2LL-S24		\$ 189.00	\$ 181.35	36	\$ 6,528.60		\$ 0.70
Enphase	IEMU-03		\$ 719.00	\$ 504.01	1	\$ 504.01		\$ 0.05
Canadian Solar	CS6P-260M	260	\$ 325.00	\$ 259.00	36	\$ 9,324.00	9,360	\$ 1.00
Panel Shipping						\$ 400.41		\$ 0.04
Iron Ridge Roof Mount	XR100		\$ 3,270.00	\$ 2,245.47	1	\$ 2,245.47		\$ 0.24
Rack material shipping				\$ 275.00	1	\$ 275.00		
Utility grade electric meter	CENTRON C1S		110.89	\$ 110.89	1			
Electric, installation and other balance of system						\$ 6,022.51		\$ 0.64
Total						\$ 25,300.00		\$ 2.67

Expenses								
Total project capital cost	(estimated)		\$ 25,300.00			\$ 25,300.00		\$ 2.70
Federal Tax Credit		30%	-\$ 7,590.00			-\$ 7,590.00		-\$ 0.81
NH State Rebate \$0.80 per Watt D/C, up to \$50,000)	\$	0.80	-\$ 7,488.00			-\$ 7,488.00		-\$ 0.80
NH Corporate tax Credit?			\$ -					
Total Install Cost after credits and rebate			\$ 10,222.00	40%		\$ 10,222.00	40%	\$ 1.09

Income/Tax Credits Per Year (Year 1-5)		\$ Per year	
First-Year PV Watts Prod. Estimate (kWh)		10,410	
PPA (or offset cost of each kWh generated)	\$	0.16	\$ 1,655.19
Tax Bracket		33%	
MACRS Deduction (85% of capital cost)	\$	21,505.00	\$ 4,301.00
Renewable Energy Credits (No SREC market in NH)		0	\$ -
Total Income/Value of Tax Credits Per Year		\$ 5,956.19	\$ 3,074.52

Project payback term (in years)	1.72
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Income Per Year (Year 5+)			
PPA	\$	0.16	\$ 1,655.19
Total		\$ 1,655.19	\$ 1,655.19

	kWp	kWh/kWp	Price (per kWp)
PVCalc	9.36	1,112.18	1,092.09

PVCalc Cash Flow (Adjusted for Enhanced MACRs)

PVCalc

Year	1	2	3	4	5	6	7	8	9	10
Energy produced (kWh)	10,410	10,358	10,306	10,254	10,202	10,150	10,098	10,046	9,994	9,942
Gross income Year 1-5, Value of Energy Year 6+	\$1,655	\$1,647	\$1,639	\$1,630	\$1,622	\$1,871	\$1,917	\$1,964	\$2,013	\$2,062
Lease	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1
Insurance	-\$300	-\$300	-\$300	-\$300	-\$300	-\$98	-\$100	-\$102	-\$104	-\$106
Maintenance	-\$500	-\$500	-\$500	-\$500	-\$500	-\$98	-\$100	-\$102	-\$104	-\$106
Interest	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Income bef. tax	\$854	\$846	\$838	\$829	\$821	\$1,673	\$1,715	\$1,759	\$1,803	\$1,849
Depreciation	\$4,301	\$4,301	\$4,301	\$4,301	\$4,301	\$0	\$0	\$0	\$0	\$0
Taxable income	\$0	\$0	\$0	\$0	\$0	\$1,673	\$1,715	\$1,759	\$1,803	\$1,849
Tax	\$0	\$0	\$0	\$0	\$0	-\$552	-\$566	-\$580	-\$595	-\$610
Net inc. after tax	\$5,155	\$5,147	\$5,139	\$5,130	\$5,122	\$1,121	\$1,149	\$1,178	\$1,208	\$1,239
Income cumul.	\$5,155	\$10,302	\$15,441	\$20,571	\$25,693	\$26,814	\$27,964	\$29,142	\$30,350	\$31,589
Net investment	-\$5,067	\$80	\$5,219	\$10,349	\$15,471	\$16,592	\$17,742	\$18,920	\$20,128	\$21,367
% amortized	-20.0%	0.3%	20.6%	40.9%	61.2%	65.6%	70.1%	74.8%	79.6%	84.5%

Year	11	12	13	14	15	16	17	18	19	20
Energy produced (kWh)	9,890	9,837	9,785	9,733	9,681	9,629	9,577	9,525	9,473	9,421
Value of Energy Produced	\$2,113	\$2,165	\$2,218	\$2,273	\$2,328	\$2,385	\$2,444	\$2,503	\$2,564	\$2,627
Lease	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1
Insurance	-\$109	-\$111	-\$113	-\$115	-\$118	-\$120	-\$122	-\$125	-\$127	-\$130
Maintenance	-\$109	-\$111	-\$113	-\$115	-\$118	-\$120	-\$122	-\$125	-\$127	-\$130
Interest	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Income bef. tax	\$1,895	\$1,943	\$1,991	\$2,041	\$2,092	\$2,145	\$2,198	\$2,253	\$2,309	\$2,366
Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Taxable income	\$1,895	\$1,943	\$1,991	\$2,041	\$2,092	\$2,145	\$2,198	\$2,253	\$2,309	\$2,366
Tax	-\$625	-\$641	-\$657	-\$674	-\$690	-\$708	-\$725	-\$743	-\$762	-\$781
Net inc. after tax	\$1,270	\$1,302	\$1,334	\$1,368	\$1,402	\$1,437	\$1,473	\$1,509	\$1,547	\$1,585
Income cumul.	\$32,858	\$34,160	\$35,494	\$36,862	\$38,264	\$39,701	\$41,173	\$42,683	\$44,230	\$45,815
Net investment	\$22,636	\$23,938	\$25,272	\$26,640	\$28,042	\$29,479	\$30,951	\$32,461	\$34,008	\$35,593
% amortized	129.88%	135.02%	140.29%	145.70%	151.24%	156.92%	162.74%	168.71%	174.82%	181.09%

Year	21	22	23	24	25	26	27	28	29	30
Energy produced (kWh)	9,369	9,317	9,265	9,213	9,161	9,109	9,057	9,005	8,953	8,901
Value of Energy Produced	\$2,691	\$2,756	\$2,823	\$2,891	\$2,961	\$3,032	\$3,106	\$3,180	\$3,257	\$3,335
Lease	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1	-\$1
Insurance	-\$132	-\$135	-\$138	-\$140	-\$143	-\$146	-\$149	-\$152	-\$155	-\$158

Maintenance	-\$132	-\$135	-\$138	-\$140	-\$143	-\$146	-\$149	-\$152	-\$155	-\$158
Interest	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Income bef. tax	\$2,425	\$2,485	\$2,546	\$2,609	\$2,673	\$2,739	\$2,806	\$2,875	\$2,946	\$3,018
Depreciation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Taxable income	\$2,425	\$2,485	\$2,546	\$2,609	\$2,673	\$2,739	\$2,806	\$2,875	\$2,946	\$3,018
Tax	-\$800	-\$820	-\$840	-\$861	-\$882	-\$904	-\$926	-\$949	-\$972	-\$996
Net inc. after tax	\$1,625	\$1,665	\$1,706	\$1,748	\$1,791	\$1,835	\$1,880	\$1,926	\$1,974	\$2,022
Income cumul.	\$47,440	\$49,105	\$50,811	\$52,559	\$54,350	\$56,185	\$58,065	\$59,992	\$61,965	\$63,987
Net investment	\$37,218	\$38,883	\$40,589	\$42,337	\$44,128	\$45,963	\$47,843	\$49,770	\$51,743	\$53,765
% amortized	187.51%	194.09%	200.83%	207.74%	214.82%	222.08%	229.51%	237.12%	244.92%	252.91%

http://pvcalc.org/PVcalc?scale=1&t_useful=30&nominal_power=9.36&annual_yield=1112.18&r_degradation=0.5&t_guarantee=0&p_guarantee=0&p_guar_own=0&cons_own=0&p_income

year	\$ / kWh		act cost	
1	0.1686831	1,755.99	1,655.19	100.80
2	0.17374359	1,747.21	1,646.91	100.30
3	0.1789559	1,738.43	1,638.64	99.79
4	0.18432458	1,729.65	1,630.36	99.29
5	0.18985432	1,720.87	1,622.09	98.79
		8,692.16	8,193.19	498.97

20% investor	\$ 5,060.00
ITC	-\$ 1,518.00
NH CIS	-\$ 1,497.60
PPA	\$1,639
Opex	-\$800.0
Depreciation	-\$ 4,301.00
Return	-\$ 6,477.96