DE10-212

From: David Wirth [mailto:dwirth@perkinshomecenter.com]
Sent: Sunday, August 15, 2010 11:55 AM
To: Bateman, Diane
Subject: RE: Order of Notice, DE 10-194, Residential Renewable Energy Generation Incentive Program
Hi Diane,

I think that the State is making a mistake with its commercial funding, which will have a significant negative impact on the residential side.

I have run a few spreadsheets to show why I feel this way. Commercial solar installations are already affordable with the Federal incentives that are already in place. The fact that commercial projects can get their federal funding as a grant instead of a tax credit, and the solar installation can be deprecated is a huge benefit.

To summarize the spreadsheets.

A C&I 45KW PV system without any incentives from the state will have a respectable 13% IRR, and a payback of less than 7 years. The 25 year fixed cost of power is this case would be .05KWH, about 1/3 of today's cost. A good investment.

A C&I 45KW PV system with proposed incentives will have an IRR of 21%, a payback in less than 3 years. This 25 year cost of power will only be .016KWH. That is less than 1/10 of today's cost.

In contrast A 2.7KW PV system at current funding will have an IRR of 11%, with a payback in 8 years With the state incentive halved, the IRR is only 7%, and payback stretched to 12 years.

The funding used in C&I installations will be exhausted after only twenty jobs. I will not add employees or expand my business to chase 20 jobs across the state.

The beauty of the residential funding we currently have is that it makes solar affordable to everyone regardless of your income, and the positive impact on lower and medium income families is greater than it is on higher income families. My experience has been that because of the positive feedback that you get daily from your PV system (inverter and meter spinning backwards) customer learn how to conserve. I have installed systems to satisfy ½ of a customer's electric load and they have stretched that system to provide all of the load by conservation.

By lowering the incentive solar will go back to selling only to people who are well off financially, and I am not sure that every member of that group will learn the conservation lesson that is available to them.

My recommendation is to leave the incentive level where it is, remove the 5KW cap and to allow commercial in at the $6,000.00 level.

Thank you. Please feel free to contact me if you have any questions.

David Wirth
Perkins Home Center
Solar Sales and Design

REBATE INFORMATION

System Type: Residential

Rebate Provider: NYSERDA

Size Limit in kW	Rebate	Total
4	$3.00	12,000
8	$2.00	8,000
TOTAL		20,000

REBATE INFORMATION

System Type: Residential

Rebate Provider: LIPA

Size Limit in kW	Rebate	Total
10	$3.50	35,000
0	$1.50	-15,000
0	$1.00	0
TOTAL		20,000

Perkins Home Center C & I With State Incentive

SYSTEM ASSUMPTIONS	
Residential/Commercial/School	Residential
Cost/Watt	$4.00
Estimated # of Panels	200
Watt/panel	225
Estimated Production per KW per day	3.47
Degradation Rate	0.5%
Installation Time (in Months)	1
In New York City?	No

SYSTEM DETAILS	
Cost of PV System	$180,000
Size of System in kW	45.0
Est. KWhr/year Production	56,050
BIPV?	No
Green Building?	No

TAX DETAILS	
Taxpayer's Federal Marginal Tax Rate	35.00%
Taxpayer's State Marginal Tax Rate	0.00%
Federal Tax Credit (30%)	$54,000
Rebate Program	
State Rebate	$50,000
Green Building Tax Credit	$0
NYC Property Tax Credit	$0
MACRS, Bonus, or 179?	Bonus

FINANCING INFORMATION	
Down Payment	$180,000
Loan Amount	$0
Loan Rate	0.00%
Loan Length (Years)	0
Monthly Payment Amount	-

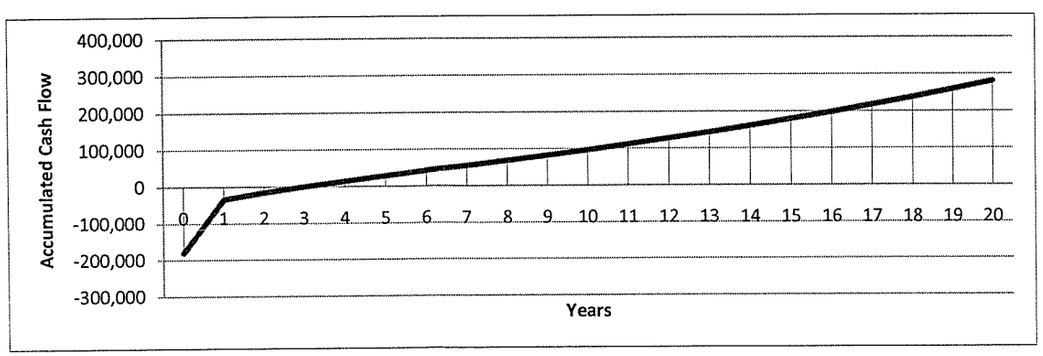
INCOME & EXPENSE PROJECTIONS	
REC Value	$0.000
Contract Length	0.0
REC Value	$0.00
Contract Length	0.0
Green Building	$0.00
Contract Length	10.0
Utility Income ($/KWhr)	$0.165
Monthly Seller Fee	0
Monthly Meter Fee	0
Annual Operations & Maintenance Costs	$0
Insurance Expense per Year	$0
Annual % Increase in Energy Cost	5.00%

DEPRECIATION INFORMATION

Basis for Depreciation 153,000

	Federal	State
Year 1	91,800	26,775
Year 2	24,480	37,485
Year 3	14,688	27,693
Year 4	8,813	21,818
Year 5	8,813	21,818
Year 6	4,406	17,411
	(5yrs, MACRS, HY)	

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Initial Cash Investment	-$180,000																				
Financing	0	0	0	0	0	0	0	0	0	0	0	0									
Federal Tax Credit		54,000																			
State Rebate		50,000																			
Green Building Tax Credit		0	0	0	0																
NYC Property Tax Credit		0	0	0	0																
Federal Depr. Tax Benefit		32,130	8,568	5,141	3,084	3,084	1,542														
State Depr. Tax Benefit**		0	0	0	0	0	0														
REC Income		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utility Income		9,711	10,145	10,599	11,074	11,569	12,087	12,628	13,193	13,783	14,400	15,044	15,718	16,421	17,156	17,924	18,726	19,564	20,439	21,354	22,309
Meter Fee		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations & Maintenance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Insurance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cash Flow	-180,000	145,841	18,713	15,740	14,158	14,654	13,629	12,628	13,193	13,783	14,400	15,044	15,718	16,421	17,156	17,924	18,726	19,564	20,439	21,354	22,309
Accumulated Cash Flow	-180,000	-34,159	-15,446	294	14,452	29,106	42,735	55,363	68,555	82,339	96,739	111,783	127,501	143,922	161,078	179,001	197,727	217,290	237,729	259,083	281,393



PAYBACK RESULTS	Percent	Dollars
ROI (20 Years)	156%	$281,393
IRR	21%	

* This model should not be used as tax advice. You should consult an accounting professional to determine if your specific circumstances allow you to be eligible for all of the credits/benefits demonstrated above.

REBATE INFORMATION

System Type: Residential

Rebate Provider: NYSERDA

Size Limit in kW	Rebate	Total
4	$3.00	12,000
8	$2.00	8,000
TOTAL		20,000

REBATE INFORMATION

System Type: Residential

Rebate Provider: LIPA

Size Limit in kW	Rebate	Total
10	$3.50	35,000
0	$1.50	-15,000
0	$1.00	0
TOTAL		20,000

Perkins Home Center C & I Without State Incentive

SYSTEM ASSUMPTIONS	
Residential/Commercial/School	Residential
Cost/Watt	$4.00
Estimated # of Panels	200
Watt/panel	225
Estimated Production per KW per day	3.47
Degradation Rate	0.5%
Installation Time (in Months)	1
In New York City?	No

TAX DETAILS	
Taxpayer's Federal Marginal Tax Rate	35.00%
Taxpayer's State Marginal Tax Rate	0.00%
Federal Tax Credit (30%)	$54,000
Rebate Program	
State Rebate	$0
Green Building Tax Credit	$0
NYC Property Tax Credit	$0
MACRS, Bonus, or 179?	Bonus

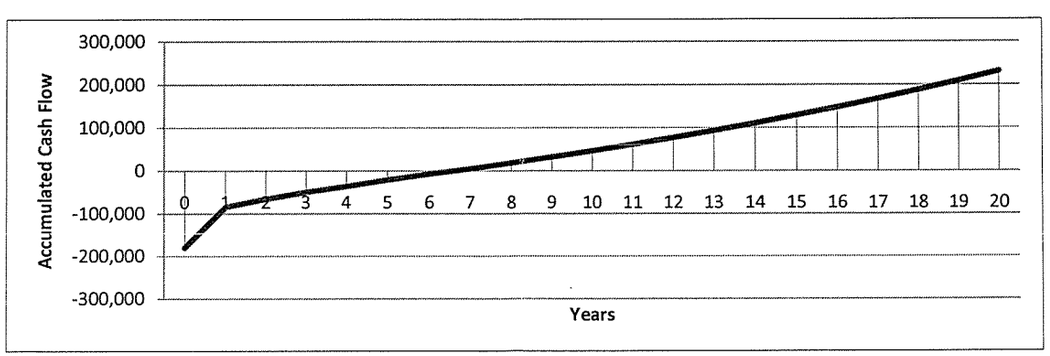
INCOME & EXPENSE PROJECTIONS	
REC Value	$0.000
Contract Length	0.0
REC Value	$0.00
Contract Length	0.0
Green Building	$0.00
Contract Length	10.0
Utility Income ($/KWhr)	$0.165
Monthly Seller Fee	0
Monthly Meter Fee	0
Annual Operations & Maintenance Costs	$0
Insurance Expense per Year	$0
Annual % Increase in Energy Cost	5.00%

DEPRECIATION INFORMATION		
Basis for Depreciation	153,000	
	Federal	State
Year 1	91,800	26,775
Year 2	24,480	37,485
Year 3	14,688	27,693
Year 4	8,813	21,818
Year 5	8,813	21,818
Year 6	4,406	17,411
(5yrs, MACRS, HY)		

SYSTEM DETAILS	
Cost of PV System	$180,000
Size of System in kW	45.0
Est. KWhr/year Production	56,050
BIPV?	No
Green Building?	No

FINANCING INFORMATION	
Down Payment	$180,000
Loan Amount	$0
Loan Rate	0.00%
Loan Length (Years)	0
Monthly Payment Amount	-

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Initial Cash Investment	-$180,000																				
Financing	0	0	0	0	0	0	0	0	0	0	0	0									
Federal Tax Credit		54,000																			
State Rebate		0																			
Green Building Tax Credit		0	0	0	0																
NYC Property Tax Credit		0	0	0	0																
Federal Depr. Tax Benefit		32,130	8,568	5,141	3,084	3,084	1,542														
State Depr. Tax Benefit**		0	0	0	0	0	0														
REC Income		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utility Income		9,711	10,145	10,599	11,074	11,569	12,087	12,628	13,193	13,783	14,400	15,044	15,718	16,421	17,156	17,924	18,726	19,564	20,439	21,354	22,309
Meter Fee		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations & Maintenance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Insurance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cash Flow	-180,000	95,841	18,713	15,740	14,158	14,654	13,629	12,628	13,193	13,783	14,400	15,044	15,718	16,421	17,156	17,924	18,726	19,564	20,439	21,354	22,309
Accumulated Cash Flow	-180,000	-84,159	-65,446	-49,706	-35,548	-20,894	-7,265	5,363	18,555	32,339	46,739	61,783	77,501	93,922	111,078	129,001	147,727	167,290	187,729	209,083	231,393



PAYBACK RESULTS	Percent	Dollars
ROI (20 Years)	129%	$231,393
IRR	13%	

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REBATE INFORMATION

System Type: Residential

Rebate Provider: NYSERDA

Size Limit in kW	Rebate	Total
4	$3.00	8,100
8	$2.00	-2,600
TOTAL		5,500

REBATE INFORMATION

System Type: Residential

Rebate Provider: LIPA

Size Limit in kW	Rebate	Total
10	$3.50	9,450
0	$1.50	-15,000
0	$1.00	0
TOTAL		-5,550

Perkins Home Center residential With State Incentive halved

SYSTEM ASSUMPTIONS	
Residential/Commercial/School	Residential
Cost/Watt	$6.00
Estimated # of Panels	12
Watt/panel	225
Estimated Production per KW per day	3.47
Degradation Rate	0.5%
Installation Time (in Months)	1
In New York City?	No

SYSTEM DETAILS	
Cost of PV System	$16,200
Size of System in kW	2.7
Est. KWhr/year Production	3,363
BIPV?	No
Green Building?	No

TAX DETAILS	
Taxpayer's Federal Marginal Tax Rate	0.00%
Taxpayer's State Marginal Tax Rate	0.00%
Federal Tax Credit (30%)	$4,860
Rebate Program	
State Rebate	$3,000
Green Building Tax Credit	$0
NYC Property Tax Credit	$0
MACRS, Bonus, or 179?	Bonus

FINANCING INFORMATION	
Down Payment	$16,200
Loan Amount	$0
Loan Rate	0.00%
Loan Length (Years)	0
Monthly Payment Amount	-

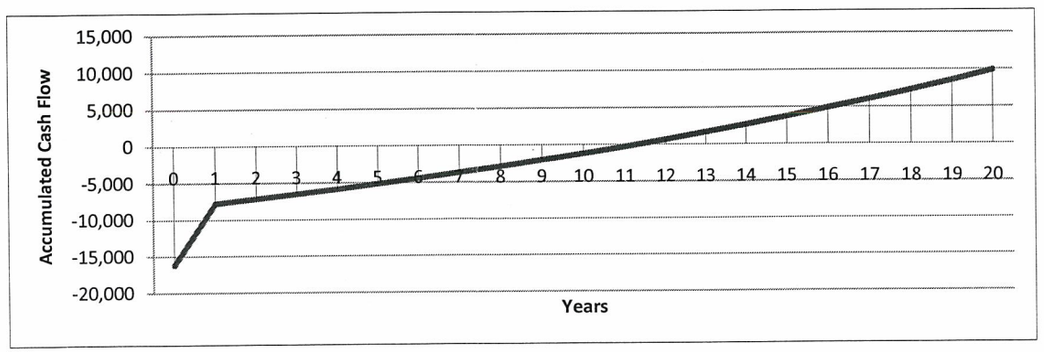
INCOME & EXPENSE PROJECTIONS	
REC Value	$0.000
Contract Length	0.0
REC Value	$0.00
Contract Length	0.0
Green Building	$0.00
Contract Length	10.0
Utility Income ($/KWhr)	$0.165
Monthly Seller Fee	0
Monthly Meter Fee	0
Annual Operations & Maintenance Costs	$0
Insurance Expense per Year	$0
Annual % Increase in Energy Cost	5.00%

DEPRECIATION INFORMATION

Basis for Depreciation 13,770

	Federal	State
Year 1	8,262	2,410
Year 2	2,203	3,374
Year 3	1,322	2,492
Year 4	793	1,964
Year 5	793	1,964
Year 6	397	1,567
(5yrs, MACRS, HY)		

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Initial Cash Investment	-$16,200																				
Financing	0	0	0	0	0	0	0	0	0	0	0	0									
Federal Tax Credit		4,860																			
State Rebate		3,000																			
Green Building Tax Credit		0	0	0	0																
NYC Property Tax Credit		0	0	0	0																
Federal Depr. Tax Benefit		0	0	0	0	0	0														
State Depr. Tax Benefit**		0	0	0	0	0	0														
REC Income		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utility Income		583	609	636	664	694	725	758	792	827	864	903	943	985	1,029	1,075	1,124	1,174	1,226	1,281	1,339
Meter Fee		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations & Maintenance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Insurance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cash Flow	-16,200	8,443	609	636	664	694	725	758	792	827	864	903	943	985	1,029	1,075	1,124	1,174	1,226	1,281	1,339
Accumulated Cash Flow	-16,200	-7,757	-7,149	-6,513	-5,848	-5,154	-4,429	-3,671	-2,880	-2,053	-1,189	-286	657	1,642	2,672	3,747	4,871	6,044	7,271	8,552	9,891



PAYBACK RESULTS	Percent	Dollars
ROI (20 Years)	61%	$9,891
IRR	7%	

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REBATE INFORMATION

System Type: Residential

Rebate Provider: NYSERDA

Size Limit in kW	Rebate	Total
4	$3.00	8,100
8	$2.00	-2,600
TOTAL		5,500

REBATE INFORMATION

System Type: Residential

Rebate Provider: LIPA

Size Limit in kW	Rebate	Total
10	$3.50	9,450
0	$1.50	-15,000
0	$1.00	0
TOTAL		-5,550

Perkins Home Center residential With State Incentive

SYSTEM ASSUMPTIONS	
Residential/Commercial/School	Residential
Cost/Watt	$6.00
Estimated # of Panels	12
Watt/panel	225
Estimated Production per KW per day	3.47
Degradation Rate	0.5%
Installation Time (in Months)	1
In New York City?	No

SYSTEM DETAILS	
Cost of PV System	$16,200
Size of System in kW	2.7
Est. KWhr/year Production	3,363
BIPV?	No
Green Building?	No

TAX DETAILS	
Taxpayer's Federal Marginal Tax Rate	0.00%
Taxpayer's State Marginal Tax Rate	0.00%
Federal Tax Credit (30%)	$4,860
Rebate Program	
State Rebate	$6,000
Green Building Tax Credit	$0
NYC Property Tax Credit	$0
MACRS, Bonus, or 179?	Bonus

FINANCING INFORMATION	
Down Payment	$16,200
Loan Amount	$0
Loan Rate	0.00%
Loan Length (Years)	0
Monthly Payment Amount	-

INCOME & EXPENSE PROJECTIONS	
REC Value	$0.000
Contract Length	0.0
REC Value	$0.00
Contract Length	0.0
Green Building	$0.00
Contract Length	10.0
Utility Income ($/KWhr)	$0.165
Monthly Seller Fee	0
Monthly Meter Fee	0
Annual Operations & Maintenance Costs	$0
Insurance Expense per Year	$0
Annual % Increase in Energy Cost	5.00%

DEPRECIATION INFORMATION

Basis for Depreciation 13,770

	Federal	State
Year 1	8,262	2,410
Year 2	2,203	3,374
Year 3	1,322	2,492
Year 4	793	1,964
Year 5	793	1,964
Year 6	397	1,567
(5yrs, MACRS, HY)		

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Initial Cash Investment	-$16,200																				
Financing	0	0	0	0	0	0	0	0	0	0	0	0									
Federal Tax Credit		4,860																			
State Rebate		6,000																			
Green Building Tax Credit		0	0	0	0																
NYC Property Tax Credit		0	0	0	0																
Federal Depr. Tax Benefit		0	0	0	0	0	0														
State Depr. Tax Benefit**		0	0	0	0	0	0														
REC Income		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utility Income		583	609	636	664	694	725	758	792	827	864	903	943	985	1,029	1,075	1,124	1,174	1,226	1,281	1,339
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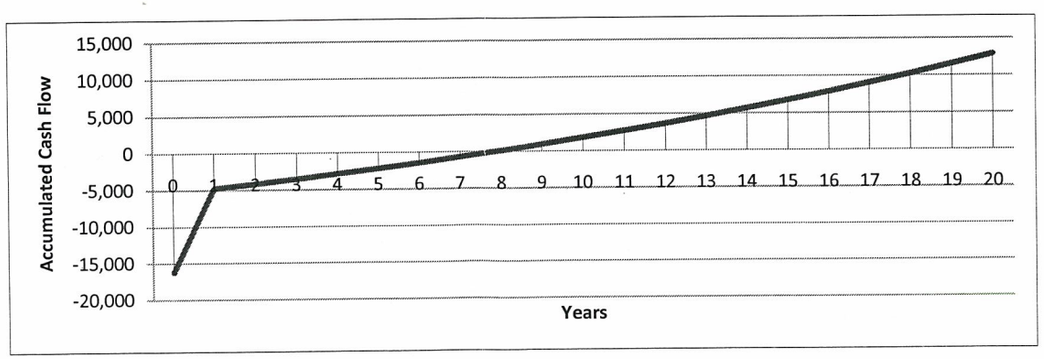
Operations & Maintenance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Insurance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cash Flow	-16,200	11,443	609	636	664	694	725	758	792	827	864	903	943	985	1,029	1,075	1,124	1,174	1,226	1,281	1,339
Accumulated Cash Flow	-16,200	-4,757	-4,149	-3,513	-2,848	-2,154	-1,429	-671	120	947	1,811	2,714	3,657	4,642	5,672	6,747	7,871	9,044	10,271	11,552	12,891



PAYBACK RESULTS	Percent	Dollars
ROI (20 Years)	80%	$12,891
IRR	11%	

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