DE10-194

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 <u>without</u> 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



	REBA	TE INFORMATION	N	
System Type				Residential
Rebate Provide	r			NYSERDA
	Size Limit in kW	Rebate	Total	
	4	\$3.00	12,000	
	8	\$2.00	8,000	
	TOTAL		20,000	

s %

tem Type				Residentia
ebate Provider				LIPA
	Size Limit in kW	Rebate	Total	
Γ	10	\$3.50	35,000	
	0	\$1.50	-15,000	
	0	\$1.00	0	
	TOTA	۸L	20,000	

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Perkins Home Center

C & I With State Incentive

SYSTEM ASSUMPTION	Same of the second
Residential/Commercial/School	Residential
Cost/Watt	\$4.0
Estimated # of Panels	20
Watt/panel	22
Estimated Production per KW per day	3.4
Degradation Rate	0.59
Installation Time (in Months)	
In New York City?	No

Green Building?

In New York City?	No
SYSTEM DETA	LS Markel and the Second Second
Cost of PV System	\$180,000
Size of System in kW	45.0
Est. KWhr/year Production	56,050
BIPV?	No
Green Building?	No

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 INFOR	IMATION
Down Payment	\$180,000
Loan Amount	\$0
Loan Rate	0.00%
Loan Length (Years)	0
Monthly Payment Amount	-

INCOME & EXPENSE PROJECTIONS	
REC Value	
Contract Length	
REC Value	1
Contract Length	_
Green Building	
Contract Length	_
Utility Income (\$/KWhr)	
Monthly Seller Fee	_
Monthly Meter Fee	2005
Annual Operations & Maintenance Costs	No.
Insurance Expense per Year	
Annual % Increase in Energy Cost	1002

\$0.000 0.0 \$0.00 0.0 \$0.00 10.0 \$0.165

> Śſ \$0

5.00%

sis for De	preciation			153,00
	Fed	eral	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	
	(5	ivrs, MACRS, HY)	1	

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	0	1	2	3	4	5 2944	6	7	8	9	10 👘	11	12	13	14 🔗	15	16	17	18	19	<u>20</u>
Initial Cash Investment	-\$180,000																				
Financing	0	0	0	0	0	0	0	0	0	0	0	0									
Federal Tax Credit	1	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					1									
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	i	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Insurance		0	0	Q	<u>0</u>	<u>o</u>	0	<u>0</u>	<u>0</u>												
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



	Percent	Dollars
ROI (20 Years)	156%	\$281,393
RR	21%	

professional to determine if your specific circumstances allow you to be eligible for all of the credits/benefits demonstrated above.

System Type				Residentia
Rebate Provide	r			NYSERE
•	Size Limit in kW	Rebate	Total	
	4	\$3.00	12,000	
	8	\$2.00	8,000	
	TOTAL		20,000	

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Rebate Provide	r			LIPA
	Size Limit in kW	Rebate	Total	
	10	\$3.50	35,000	
	0	\$1.50	-15,000	
	0	\$1.00	0	
	ΤΟΤΑ	L	20,000	

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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				

SYSTEM DETAILS

Cost of PV System

Green Building?

BIPV?

Size of System in kW Est. KWhr/year Production \$180,000

No No

45.0

56,050

TAX DETAILS	en an the second state of the second seco
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

FINANCING INFOR	MATION
Down Payment	\$180,000
oan Amount	\$0
oan Rate	0.00%
oan Length (Years)	· 0
Monthly Payment Amount	-

INCOME & EXPENSE PROJECTIONS	
REC Value	
Contract Length	
REC Value	
Contract Length	_
Green Building	(SEE
Contract Length	-
Utility Income (\$/KWhr)	10000
Monthly Seller Fee	_
Monthly Meter Fee	
Annual Operations & Maintenance Costs	Onder O
Insurance Expense per Year	
Annual % Increase in Energy Cost	1000

\$0.000 0.0 \$0.00 0.0 \$0.00 10.0 \$0.165

\$0

\$0

5.00%

F. F. TENESSE	DEI	PRECIATION INFORM	ATION 🚕 🚲	
Basis for Dep	reciation			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)		

	deres a constante de la constan	1 - Sector D	2	3 Pri 1	· . 4 · SAGE	÷	6	7	1 8	ેવ દુઃ-9 સ્ટિકે	10	11	12	13	14	15	16	17	· · · 18 · · · · ·	19	20
Initial Cash Investment	-\$180,000											<u></u>								, , , , , , , , , , , , , , , , , , ,	
Financing	0	0	0	0	0	0	0	C) 0	0	0	()								
Federal Tax Credit	1	54,000								}											
State Rebate	1	0	Ĩ														ļ				
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									- 24 - 4 - 40 - 40 - 40 - 40 - 40 - 40 -					Sec
State Depr. Tax Benefit**		0	0	0	0	0	0										ļ			~	
REC Income	1	0	0	0	0	0	0	C	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	22,30
Meter Fee		0	0	0	0	0	0	C	0 0	0	0)	o c	0 0	0	0	0	0	0	0	ļ
Operations & Maintenance		0	0	0	0	0	0	(0 0	0	0) (0 C) 0	0	0	0	0	. 0	0	
Insurance		0	0	0	0	0	0	<u>(</u>	<u>)</u> <u>C</u>	<u>0</u>	<u>0</u>	2	<u>o</u> <u>c</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	Q	
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	4 15,718	16,421	17,156	17,924	18,726	19,564	20,439	21,354	22,30
Accumulated Cash Flow	-180.000	-84 159	-65.446	-49,705	-35.548	-20.894	-7.265	5.363	18,555	32,339	46,739	61,78	3 77,501	93,922	111,078	129,001	147,727	167,290	187,729	209,083	231,39



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

* 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.

ebate Provide	er			NYSERDA
	Size Limit in kW	Rebate	Total	
	4	\$3.00	8,100	
	8	\$2.00	-2,600	
	TOTAL		5,500	

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	REBA	TE INFORMATIO	NÉRESE
System Type Rebate Provider			
	Size Limit in kW	Rebate	Total
	10	\$3.50	9,450
	0	\$1.50	-15,000
	0	\$1.00	· 0
	τοτα	NL.	-5,550

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



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

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

60 000	Contraction of	DE	PRECIATION INFORM	ATION
\$0.000				
0.0	Basis for De	epreciation		
\$0.00				
0.0			Federal	Sta
\$0.00		Year 1	8,262	
10.0		Year 2	2,203	
\$0.165		Year 3	1,322	
0		Year 4	793	
0		Year 5	793	
\$0		Year 6	397	
\$0			(5yrs, MACRS, HY)	
5.00%		••••••		

and the second states and the	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	(
Utility Income	1	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	
Operations & Maintenance	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Insurance		<u>0</u>	<u></u>																		
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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13,770

State

2,410

3,374

2,492

1,964

1,964

1,567

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

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Rebate Provide	er			LIPA
	Size Limit in kW	Rebate	Total	
	10	\$3.50	9,450	
	0	\$1.50	-15,000	
	0	\$1.00	0	
	TOTA	۱L	-5,550	

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Perkins Home Center

residential With State Incentive

SYSTEM ASSUMPTIONS	- Wirth Colored Colored States
Residential/Commercial/School	Residential
Cost/Watt	\$6.0
Estimated # of Panels	1
Watt/panel	22
Estimated Production per KW per day	3.4
Degradation Rate	0.55
Installation Time (in Months)	tradition of the
In New York City?	No

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

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

TION
\$16,200
\$0
0.00%
0

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

\$0.000 0.0 \$0.00 \$0.00 \$0.00 10.0 \$0.165

\$0 5.00%

sis for Dep	preciation			1
	Fede	ral	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	
	Voor C	207	1 567	

Station and the state of the state of the	0	1	2	3	4	5 5 14 14	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	U									
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
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		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>]	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
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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