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PowerLight Corporation Comments on the
California Energy Commission Staff Draft
Pilot Performance-Based Incentive Program Proposal

December 3, 2004

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PowerLight is pleased to submit these comments, and to participate in the December 1, 2004 Staff Workshop on the Pilot Performance-Based Incentive (PBI) Program Proposal. We note that participating solar companies and the California Solar Energy Industry Association (CalSEIA) made many constructive comments on how to best structure a PBI Program. In short, PowerLight agrees with the majority of those commenting that incentive level of \$0.35/kWh for 3-year period is too low to attract any customers. The proposed program must be more attractive than the status quo to be successful and when calculating the “attractiveness” of a proposed program, Staff should ensure the assumptions are realistic. PowerLight recommends the following modifications to Staff methodology:

1. **Define Success** - PowerLight strongly urges the Commission to establish the specific objectives of the PBI Pilot and spell out all success metrics that will be used to evaluate the success or failure of the Pilot before launching the Program. The PBI evaluation criteria, the expected timeframe of the Pilot, and process for evaluation should be presented to the public prior to implementation, and certainly prior to taking additional steps toward wider application of the PBI approach.
2. **Realistic Electricity Value** - Staff has identified “for-profit company that can benefit from all tax credits” as the target customer for the Pilot PBI program. However, the Staff analysis assumes \$0.20/kWh electricity value, equal to residential rates. This electricity value is too high for the targeted commercial customers that take service on rate schedules such as SCE TOU-8, SDG&E AL-TOU, and PG&E A10, E-19 or E-20. This class of PV customers generally have electricity value *\$0.10/kWh* in SCE or SDG&E and slightly more in PG&E territory.
3. **Limited Appeal of Financing to Target Customers** – Staff assumes that commercial customers are able and willing to take on unlimited financing to fund PV projects. In our experience, such customers are reticent to take on additional debt for projects not pertaining to their core business. Additional debt negatively affects financial statements, debt-to-equity ratios, credit ratings, and ability to finance core business activities. For this reason, typical commercial customers evaluate whether or not to proceed with a prospective project by first stripping out financing and then measuring the project as a cash-purchase against a required rate of return - generally requiring anything from a 10%-20% return on a cash/equity investment. This required return should also be used as the discount rate for NPV analysis.
4. **Realistic Financing Term** – Staff assumes target customers have access to 15-year financing but in today’s marketplace, commercial customers are able to obtain a maximum 7-year term. If Staff chooses not to strip-out all financing in their analysis as PowerLight recommends in item #3 above, it should at least use a maximum 7-year financing term in its analysis.
5. **Proper Use of NPV Analysis** – Staff utilizes a Net Present Value (NPV) calculation to derive its \$0.35/kWh three-year PBI program simply by creating parity between the \$2.80/W up-front ERP rebate available in 2005 and the proposed PBI program. The PBI rebate level and payout term are set so that a PV project will produce equal customer NPV regardless of the funding program selected. However, this method misses the critical purpose of NPV analysis. Commercial customers typically calculate an NPV for a project to evaluate whether or not to invest – projects with positive NPV are worthy of investment while those with negative NPV are not. Staff should ensure that any PBI Pilot it proposes will create positive NPV values for the target customers or the program will not succeed.

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PowerLight strongly recommends that staff re-evaluate the proposed PBI program using the same methodology as target customers will use to evaluate a project using the PBI program. PowerLight recommends that the commission adopt items #2 - #5 listed above when evaluating the program *[\$0.10/kWh electricity value, up front cash payments, 10% discount rate, required positive NPV].*

When the PBI design is approached in the manner, PowerLight found that a much higher rebate level is required to reach positive NPV in a 3-year payout term. Specifically, without financing customers would require \$1.24/kWh and with a 7-year financing they would need \$0.92/kWh. Please see attached analysis.

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Analysis of Pilot PBI for Commercial Customers

System Rated Output (Watts, CEC)	10000
System Price (w Sales Tax)	\$80,000
kWh/kW(CEC)	1500
PBI Payment (\$/kWh)	\$1.24
PBI Payment (years)	3
Electricity Price Offset (\$/kwh)	\$0.10

Federal Tax Rate	34%
State Tax Rate	6.5%
Loan Interest Rate	0%
Loan Period	1
Discount Rate	10%

Commercial Comparison	PBI
Loan Amount	\$80,000
Net Present Value	\$0
Total Incentive Payments	\$55,762

<=== set NPV to zero or positive

Commercial (Performance Based Incentives)	Present Value of Payments	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Loan Principle Payment		-\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Loan Interest Payment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fed and State Tax Savings on Interest		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Tax Credit (10%)		\$8,000							
State Tax Credit (7.5% after fed credit)		\$5,400							
Fed Accelerated Depreciation (MACRS)		\$5,168	\$8,269	\$4,961	\$2,977	\$2,977	\$1,488		
State Depreciation (12 yr SL on net of all taxes)		\$361	\$361	\$361	\$361	\$361	\$361	\$361	\$361
Electricity Savings		\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Income Tax on Electricity Savings		-\$608	-\$608	-\$608	-\$608	-\$608	-\$608	-\$608	-\$608
PBI Payments		\$18,587	\$18,587	\$18,587	\$0	\$0	\$0	\$0	\$0
Tax on PBI Payments (Federal Only)		-\$6,320	-\$6,320	-\$6,320	\$0	\$0	\$0	\$0	\$0
PBI Scenario Cash Flow	\$18,222	-\$47,911	\$21,790	\$18,482	\$4,230	\$4,230	\$2,742	\$1,253	\$1,253

Depreciation Schedule (MACRS) 20.00% 32.00% 19.20% 11.52% 11.52% 5.76%

Analysis of Pilot PBI for Commercial Customers

System Rated Output (Watts, CEC)	10000
System Price (w Sales Tax)	\$80,000
kWh/kW(CEC)	1500
PBI Payment (\$/kWh)	\$0.92
PBI Payment (years)	3
Electricity Price Offset (\$/kwh)	\$0.10

Federal Tax Rate	34%
State Tax Rate	6.5%
Loan Interest Rate	7%
Loan Period	7
Discount Rate	10%

Commercial Comparison	PBI
Loan Amount	\$80,000
Net Present Value	\$0
Total Incentive Payments	\$41,568

<=== set NPV to zero or positive

Commercial (Performance Based Incentives)	Present Value of Payments	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Loan Principle Payment		-\$9,244	-\$9,891	-\$10,584	-\$11,325	-\$12,117	-\$12,966	-\$13,873	\$0
Loan Interest Payment		-\$5,600	-\$4,953	-\$4,261	-\$3,520	-\$2,727	-\$1,879	-\$971	\$0
Fed and State Tax Savings on Interest		\$2,268	\$2,006	\$1,726	\$1,425	\$1,104	\$781	\$393	\$0
Federal Tax Credit (10%)		\$8,000							
State Tax Credit (7.5% after fed credit)		\$5,400							
Fed Accelerated Depreciation (MACRS)		\$5,168	\$8,269	\$4,961	\$2,977	\$2,977	\$1,488		
State Depreciation (12 yr SL on net of all taxes)		\$361	\$361	\$361	\$361	\$361	\$361	\$361	\$361
Electricity Savings		\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
Income Tax on Electricity Savings		-\$608	-\$608	-\$608	-\$608	-\$608	-\$608	-\$608	-\$608
PBI Payments		\$13,856	\$13,856	\$13,856	\$0	\$0	\$0	\$0	\$0
Tax on PBI Payments (Federal Only)		-\$4,711	-\$4,711	-\$4,711	\$0	\$0	\$0	\$0	\$0
PBI Scenario Cash Flow	-\$5,373	\$16,390	\$5,829	\$2,241	-\$9,189	-\$9,510	-\$11,342	-\$13,198	\$1,253

Depreciation Schedule (MACRS) 20.00% 32.00% 19.20% 11.52% 11.52% 5.76%

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Subject: Docket No. 02-REN-1038 PowerLight Comments on Proposed PBI Pilot Program
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Sir or Madam,

Please find attached PowerLight's comments on the proposed CEC Pilot Performance Based Incentive Program.

Sincerely,

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