



**Solar PV Industry Survey:
CORE Program Impacts
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Executive Summary: When the NJ Clean Energy Program began to accelerate in 2003, the program was nationally recognized as an excellent incubation environment that resulted in New Jersey's growing to become the second largest solar market in the country. But beginning in 2005, and worsening in 2006, problems began to emerge in the Customer On-Site Renewable Energy (CORE) component of the program which threaten the health of the NJ solar market and industry overall and New Jersey's place as a national alternative energy leader. Also at risk is the ability to meet the ambitious Renewable Portfolio Standard (RPS) goals. This deterioration can be reversed, but depends heavily on immediate implementation of the planned SREC-only environment so that new system sales can be restarted and market development can regain momentum.

Background: MSEIA is a not for profit trade association of solar industry businesses in the Mid-Atlantic Region and is affiliated with the national Solar Energy Industries Association. MSEIA conducted a survey in late November 2006 to assess the state of the industry, with a specific focus on industry impacts from numerous program changes throughout the year. A total of 21 companies (out of approximately 74 members) responded to a short "free form" survey either by Email or phone, representing a significant cross-section of the industry focused on system deployment. This assessment confirms that the overall impact has been significant, and that over a 6-9 month period, the NJ market has declined from being one of the best in the country to a place where it is extremely difficult to do business.

As it became apparent in 2005 that demand for solar rebates, particularly for private projects, exceeded the funds available, the OCE put in place a series of controls intended to slow the pace of applications and assure that rebate monies would be available into 2008. These controls included implementation of a queue system to manage backlogged applications, a general slowing and sometimes halting of application processing, and changes in policies and a lowering of rebate levels. The inevitable result was a significant slow-down of market growth for the industry and uncertainty as to the direction of the market in the future. In addition to these budget-driven constraints, numerous administrative issues compounded the market impact, including poor communication, the absence of clear and transparent processes and program rules, and implementation of retroactive rule changes.

Although parts of the program (such as the net metering rule) remain national standards, the economic components of the program have deteriorated significantly. While construction activity continues based on a large backlog of committed funding, MARKET DEVELOPMENT has slowed dramatically due to the inability to sell new projects under the existing program. While these problems primarily affect NJ PV integrators/installers and their supporting manufacturers, they create a mounting overall customer dissatisfaction that could hurt the credibility and future success of the Clean Energy Program.

The MSEIA survey focused on assessing, and where possible quantifying, the impact of these numerous program changes.

Survey Results: The survey confirms that the health of the PV system supply chain – and therefore its ability to meet Clean Energy Program goals – has declined significantly over 2006. Specifically:

1. **Force Reductions:** 62% of responding companies have laid off people as a result of program reductions, and most project additional reductions almost TRIPLE the amount of force reduction already taken if program conditions do not improve quickly. It is important to note that these reductions are not just in marketing and sales (due to a halt in new sales activity), but in engineering and installation staff as well.

2. **Business Activity:** 81% of responding companies have reduced, and in many cases, eliminated marketing and sales efforts. In the private sector, new sales of rebate-based projects has virtually halted. 81% of respondents report that they have not met their business plan for the year, with the installation targets of some companies being as much as 75% short of plan. 76% of respondents report a significant reduction in market interest, including reduced customer inquiries and proposal closure rates.
3. **Investment and Growth:** For the fraction of responding companies that solicit growth investment, 77% report a loss of investors over the last year, both in equity and debt programs. 57% of respondents report a deterioration of their relationship with key suppliers, including redirection of PV-panels out of the state; these losses will require significant efforts to reverse.

Actual results may be even worse than represented in these statistics, since many businesses that have exited the business or reduced the solar component of their business did not respond to the survey. The sample is somewhat positively biased, in that responding companies are the ones that have managed to survive so far.

The current deterioration of the industry and the market goes far beyond what some may feel is a prudent market correction, and represents a serious loss of commercial infrastructure. The losses to date will take significant *re-investment* to replace, and the rate of deterioration appears to be accelerating given current uncertainties about the direction of the NJ incentive program.

This trend is reversible, with the most important requirement being an ability to begin selling new projects again. Given the oversubscription of the current CORE rebate program, the only way new projects can be sold is on a non-rebated basis. Preventing further industry decline, and the associated loss of significant ratepayer investment, therefore depends heavily on an immediate launch of a REC-only trial, with simultaneous introduction of a properly priced Solar Alternative Compliance Payment (SACP) for non-rebated projects.

The industry is hopeful that the recent action taken by the BPU to authorize the launch of an initial REC-only trail, combined with the start of a formal process to reassess the SACP for non-rebated projects, will lead to a new program that can allow new market development to continue. These two critical steps have the potential to re-establish the success of the program and New Jersey's position as a national alternative energy leader.

However, for these two actions to prevent further industry decline, they must be implemented quickly. It is critical that a decision on the proper level of the SACP and other SREC-only program details be made public by the second quarter of 2007, coupled with concrete implementation actions that confirm the BPU's intention that a viable program will soon be available.

Although the above trends reflect overall conditions in the supply-chain and installation/integration component of the market, there are two exceptions to note. First, some companies have been able to build a backlog of rebated projects enabling them to maintain cash flow for at least the next several months. Second, there are some companies that do a lot of business out of NJ, or are diversified beyond PV system supply and integration/installation offerings. These companies have been less affected by CORE program problems. Companies that are focused on PV supply or integration/installation, and which are focused on the NJ market primarily, have been the most heavily impacted.

It should also be noted that although some people have characterized the solar market as “over heated”, it has almost exactly met the RPS goal over the last two years, and appears to be on track to meeting the target for the 06/07 energy year. The rapid growth of the industry has therefore NOT been overheated, but is in fact well aligned with RPS requirements for the first three years of trading. It is important to note that business health and prospects for future growth (particularly regarding attracting investment) depend heavily on NEW SALES activity, not just construction rates. Hard and fast commitments to new sales in the private sector have virtually halted, and the sales activity that is underway is, of necessity, highly speculative given that SREC program details are so uncertain. The industry is currently “busy” working off a backlog of already committed rebates, but without simultaneous activity in new sales, planning for future growth (which affects supply agreements, labor management, investment, etc) is severely constrained.

The growth deterioration quantified by this survey is therefore particularly alarming given that the program had planned on significant growth continuing after 2006, with the RPS requirements doubling annually for the next few years. These goals were, and still are, entirely achievable, but not if the current erosion of commercial assets is allowed to continue.

Summary statistics associated with the survey are included in Appendix A, with “verbatim text” from the respondents included in Appendix B. Beyond the numerical data summarized in the statistics, the “verbatim text” from respondents is a particularly compelling survey of qualitative industry sentiment.



Appendix A: Summary Of Survey Statistics

Results of MSEIA Membership Survey Nov 2006

	Yes	No	NA
1 Have you laid off staff as a result of CORE program restraints? If yes how many people did you lay off?	62%	38%	
	36 layoffs - survey 91 layoffs-extrapolated		
2 Have you reduced marketing programs or curtailed deployment efforts as a result of CORE program restraints	81%	19%	
3 Have you lost investors as a result of the CORE program restraints?	48%	14%	38%
4 Have you cancelled or altered investment plans for other renewables such as wind biogas or ocean?	38%	28%	33%
5 Where any plans to expand to energy auditing curtailed?	35%	23%	42%
6 Have your actual results fall short of your business plan for 2006?	81%	19%	
7 Has your relationship with key suppliers been affected by current business conditions?	57%	43%	
8 Have you noticed any changes in customers' level of going solar?	76%	24%	

Total of 21 respondents, mostly represent installers, integrators, and their supporting distributors and manufacturers focused on business in NJ.

Appendix B: The Voice of MSEIA Members

Regarding Layoffs . . .

We laid off 5 people, roughly two full installation teams.

-- Mid-size PV Integrator

We laid off 7 full-time employees over the past 6 months. The remaining staff are on half-time hours until next Spring when we hope new construction will start. Overall Staffing levels are 30% of what they were a year ago.

--Mid-size PV Integrator

Much of our work is sub-contracted than prime contracted and we are also schedule for out-of-state work. I would have never dreamed of doing sub-contract work two years ago and all of my literature used to proudly proclaim that we “are a local company that only worked in NJ”. We have not laid anyone off, but we have not replaced any staff that has left.

--Mid-size Integrator

To stay afloat, we partnered with other firms that had letters and subcontracted our crews. That works if you are a temp firm and have no other contractor overhead. For one quarter, you can stand losing 70% of crew billables, but for a 7 month period with no end in near, it is not sustainable. It just wasn't worth it, we laid everyone off.

--Mid-size Integrator

The year 2006 was a very trying year for us in the solar industry since the NJCEP began in 2001, and we've been around for more than 20 years in solar in NJ. Since the inception of the program, we have been able to keep our single installation crew of three men fully employed, with good salaries and great benefits. All 3 installers are heads -of- households, and we worked steadily throughout 2006, but thanks only to a backlog we had going into the second half of the year. I had to lay the entire crew off January 2, 2007, with hopes that will come back to work part time in the spring if and when more projects are released from the queue. However, they might look for other full time jobs in another industry (who could blame them?), which represents a major loss of a well-trained, experienced workforce. The only way I can see them being re-hired full time in 2007 is if the NJCEP quickly institutes a REC- only program with a decent SACP. If this could be accomplished, we could begin again making sales, re-hiring our workforce, installing systems, and help meet the overall goals of the RPS and the NJCEP.

--Mid-size Integrator

Regarding Marketing And Sales . . .

We have curtailed all lead generation for our NJ installer partners. Also, we are in the process of pulling modules out of our NJ warehouse previously allocated for NJ and sending them to California and will reduce 2007 allocation. We will also focus the majority of our east coast sales and marketing efforts in NY and CT in 2007.

---Manufacturer/Distributor

The lack of program predictability has caused us to dramatically contract our marketing and sales efforts. We formally withdrew our customer financing program from the market mid-year since investors lost faith in the NJ market and would not support new project investments. We temporarily suspended two major marketing partnerships, which we had spent two years developing. We have halted all advertising. We have essentially stopped surveying prospects, and submit proposals only to the most attractive and committed of customers - but in those cases we are being honest about the rebate delays, and that has really hurt sales. Our in-bound lead stream (i.e., interest from the market place) has dropped by about 70%, due we believe to the fact that the word is out that "rebates are no longer available for new projects". The only place we see any activity is in the public sector, but procurement requirements in that segment can take years to develop a project, so it isn't helping short term construction demand much.

--Mid-Size PV Integrator

Well, we have just about stopped all our business development efforts in NJ. We thought our business development was synergistic with the goals of the NJ Program. We thought we shared with the OCE the goal of getting KW in the ground AND building a sustainable place to run a PV business. Regardless of what anyone says publicly, it is clear to us that NJ is not a healthy place for the average PV entrepreneur to conduct business.

--National PV Distributor

Not only have we cut back in marketing advertising in NJ, but we have difficulties deciding exactly what it is we are marketing based on the Office of Clean Energy's inconsistencies.

--Mid-Size PV Integrator

I see no point of marketing at this point. Our small firm prides ourselves on delivering on everything stated during the solar survey. With the OCE as a partner, the inconsistencies have turned me into liar. So I honestly explain the delays and past policy changes and it is not great for sales. NJ and PV, perfect together for a big waste of time! (I am sorry but that is honestly how we feel at this point).

--Sole Proprietor PV Installer

Regarding Business Plans and Investors . . .

My company is reconsidering its investment in the New Jersey market and has put all expansion and manufacturing plans on hold pending a workable incentive program for new projects.

--Large Multi-National Integrator

We missed our 2006 business plan projections by 75%.

--Mid-Size Integrator

Our firm encountered business plan shortfall of 50%. A very disappointing year to say the least.

--Mid-Size Integrator

Based on public knowledge of the CORE Program restraints, we missed many investment opportunities, mainly because we could not grow fast enough in other states to diversify. We had invested our marketing dollars in NJ.

--Mid-Size Integrator

We had formally launched a major equity round at the beginning of the year, and retained professional financial advisors to conduct the round. Given the MANY problems with the program, especially the uncertainties about future rebate flows and the fact that changes to the program were being made retroactively, our board formally cancelled the round mid-year. We have since restructured financially, but even our current debt programs are now being terminated given the dramatic slow down in construction activity. Finally, we had a MAJOR investor that had planned to make a multi-million dollar project finance investment with our NJ projects next year, and that relationship is currently in jeopardy. There are no more rebates for new private sector projects, and the RPS based environment does not exist yet, so all of our investors are putting their money elsewhere (like California). All investment in the company has stopped since mid-year.

--Mid-Size Integrator

We were doing early business development for other renewables such as wind, biogas and ocean but based on cutbacks those plans have been halted.

--Mid-Size Integrator

It has taken an extraordinary effort to retain relationships and supply agreements with suppliers, especially for PV panels. They have simply lost faith in the NJ market, and are redirecting product elsewhere. This problem has continued even as supply conditions have improved.... so even though more panels are now available, confidence in the NJ market has been severely damaged.

--Mid-Size Integrator