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November 10, 2011

Via Overnight Delivery and Electronic Mail

Honorable Kristi Izzo, Secretary
New Jersey Board of Public Utilities
44 South Clinton Avenue, 9th Floor
P.O. Box 350
Trenton, New Jersey 08625-0350

Re: In the Matter of the Comprehensive Energy Efficiency and
Renewable Energy Resource Analysis for 2009-2012: 2012
Programs and Budgets Compliance Filings
BPU Docket No. EO11100631V

Dear Secretary Izzo:

Pursuant to the Board Order dated October 7, 2011, enclosed please find an original and ten copies of the Comments submitted on behalf of the New Jersey Division of Rate Counsel ("Rate Counsel") in connection with the above-captioned matters. Copies of the comments are being provided to all parties by electronic mail and hard copies will be provided upon request to our office. Rate Counsel reserves its right to supplement these comments based upon additional information received from the Office of Clean Energy or other parties in this proceeding, as well as the final Energy Master Plan Report.

We are enclosing one additional copy of the comments. Please stamp and date the extra copy as "filed" and return it in our self-addressed stamped envelope.

Thank you for your consideration and assistance.

Respectfully submitted,

STEFANIE A. BRAND
Director, Division of Rate Counsel

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**I/M/O the Comprehensive Energy Efficiency and Renewable Energy
Resource Analysis for 2009-2012: 2012 Programs and Budgets
Compliance Filings
BPU Docket No. EO07030203**

**New Jersey Rate Counsel Final Comments on Renewable Energy and
Energy Efficiency Programs and Budgets for 2012**

OCE's Proposed 2012 RE Budget

OCE is proposing a total RE budget of \$28.282 million of which \$18.383 million includes carry-overs from prior year Customer On-Site Renewable Energy ("CORE") rebate dollars (\$4.15 million) and Renewable Energy Incentive Program ("REIP") funds (\$14.233 million). The REIP appears to include \$9.5 million in Grid Connected projects. OCE proposes \$6.6 million in project incentive dollars, and \$3.4 million in market manager administrative fees. The total proposed 2012 REIP budget \$24.233 million (carry over, administrative fees, and project incentive dollars).

Rate Counsel has a number of concerns about the proposed 2012 budget, particularly the proposals to carry-over a large number of funds not expended from prior year budgets and programs. Rate Counsel believes that any carry-over dollars need to be credited to the SBC. Further, no carry-over dollars should be allocated to new or existing programs without a thorough evaluation and analysis of current programs and policies in order to identify shortcomings that may prevent additional carryovers from arising in the future.

Proposed 2012 CORE Funding

The 2012 RE budget includes \$4.15 million in carry-overs for the CORE program, which prior to the implementation of the REIP, was the one of the primary means by which renewable energy projects received direct financial support. The CORE program offered relatively generous funding

support that likely over-incentivized projects. The CORE program was closed in 2008 to reflect the Board's new policy goal of moving larger renewable energy projects towards greater reliance on the market-based support provided through revenues available to project owners through the sale of Renewable Energy Credits ("RECs") and Solar Renewable Energy Credits ("SRECs"). Nevertheless, application processing carryovers for the CORE program have continued to date. This program has consistently seen application processing backlogs, arising from long application processing times and a long funding/application queue.

At the time CORE was closed, there were a number of applications in various stages of the accumulated processing backlog: this was not just a one year backlog event. However, after the program was closed, prior funding levels were carried over, in each subsequent budget year, to phase out those prior CORE applications in the project backlog. The eventual processing of backlogged applications has been going on for several years although this year carry over is significantly lower than the amount from the 2011 proposed budget. However, there is still an additional \$4.15 million that has not been put to direct use.

Rate Counsel recommends that the Board discontinue funding for the CORE program in the 2012 budget and return those dollars to ratepayers for the following reasons:

- The CORE transition process has been ongoing for several years with no end. While program carry-overs are admittedly lower, there is still a significant \$4.15 million that is unneeded for continued solar energy development, but clearly needed for ratepayers in these challenging economic times.
- Cancelling the funding for the CORE program in 2011 will have no impact on future solar development since the program has been closed.

- OCE noted in its program evaluation that rebates are no longer needed in today's market for projects of any size.¹ Thus, continued CORE funding is unneeded given the current solar energy market structure. Continued funding simply offers a "free ride" to solar projects that attain money under this closed program.
- There are other funding and financial mechanisms that exist to support solar development, including tax incentives, revenues that individual projects secure from the sale of their SRECs (i.e., SREC revenues), and long-term contracting under the programs implemented by Atlantic City Electric Company ("ACE"), Jersey Central Power & Light Company ("JCP&L"), and Rockland Electric Company ("RECO"). Further, high participation in the current "spot" SREC market would suggest that the market-based mechanisms established by the Board are relatively attractive in encouraging solar energy development without rebates.

Proposed 2012 REIP Funding

OCE proposes \$24.233 million in incentives (rebates) for onshore wind and biomass projects. This proposed spending, in turn, is distributed between (a) continued rebates for onshore wind and biomass projects and (b) financial support to conduct project feasibility studies. OCE suggests that onshore wind and biomass rebates are necessary since they "remain in the earlier stages of market evolution." Rate Counsel disagrees with this position and notes there is no support for OCE's assertion that biomass or onshore wind is in its infancy relative to other types of renewables. Both biomass and onshore wind are relatively competitive renewable energy resources, have been around for decades, and are certainly orders of magnitude more cost-effective than solar. Yet, in-state solar installations, in terms of the number of

¹ Honeywell's Residential Energy Efficiency and Renewable Energy Program Filing for 2012, p. 43 (October 7, 2011).

installations and capacity, far exceed wind and biomass despite their significant relative cost disadvantage.

Limited in-state onshore wind and biomass development likely has less to do with “market evolution” than it does resource availability, effective policies, and general renewable energy market conditions. OCE’s renewable energy policy initiatives over the past four years have been almost exclusively focused on promoting solar energy, with limited policy attention (outside of continued rebate spending) paid to other renewable energy resources, with the recent exception of offshore wind. Rate Counsel has noted in prior RE budget comments and filings that onshore wind, as well as biomass, face many of the same issues with longer-term contracting that were faced by solar energy. While state policy has developed a number of programs to securitize solar projects, the costs and benefits of developing programs wind, biomass, and other possible Class 1 resources has not been explored.

Thus, Rate Counsel recommends that the Board eliminate rebate funding for onshore wind and biomass, and direct OCE to investigate the causes associated with the lack of in-state, non-solar renewable resources. This investigation may show that rebates are simply an ineffective means of stimulating other renewable resources and that some other policy alternative should be considered.

OCE’s Proposed 2012 EE Budget

Rate Counsel is pleased to offer the following comments on the 2012 EE Budget proposals set forth by Honeywell (the CEP residential EE Market Manager), TRC (the CEP C&I EE Market Manager), the utilities, OCE, and the EDA. A number of general comments are presented first, followed by comments on specific EE program segments, namely, the Comfort Partners

low-income program, the Residential EE program, and Commercial and Industrial (“C&I”) EE programs.

I. GENERAL COMMENTS

A. Overall Proposed 2012 EE Budget and Funding

Residential and Commercial & Industrial Budgets. As set forth in the Proposed 2012 Budgets provided in the presentation slides from Applied Energy Group dated November 3, 2011, the residential Clean Energy Program (“CEP”) EE program budget would remain relatively flat relative to the 2011 residential EE budget. Commercial and Industrial (“C&I”) EE programs would see a 53% increase relative to their 2011 sector-wide budget. Subtracting committed expenses from the 2012 proposed budgets, the residential EE budget decreases 12% overall, while the C&I budget increases by 10%. A larger overall budget for C&I EE programs than for residential EE programs is consistent with the funding priorities established in the CRA 2009-2012 order,² although the magnitude of the increases relative to each sector’s 2011 budget does not align well: the CRA order sets forth a 30% increase in 2012 funding for both residential and C&I programs above the CRA-proposed sectoral funding levels for 2011. Nevertheless, if the programs are well designed and properly budgeted, the increase in C&I funding makes sense in light of the general, overall higher cost effectiveness of C&I EE. However, Rate Counsel has specific concerns about some of the C&I program budgets, discussed in Section IV below.

² September 30, 2008 Order in Docket No. EO07030203

The Need for Realistic Budgeting. Portfolio design must take into account what can realistically be spent in the coming year and reflect both last year's budget and the current performance of the programs. Failure of the programs to meet targets in years past has left excess budget that was carried over into the following year. Yet, some proposed funding allocations for 2012 are neither consistent with the realized performance and expenditures of the 2011 programs, nor do they clearly relate to demonstrated cost effectiveness.

Return Unused SBC-CEP Funds to Ratepayers. If the Board accepts the proposed 2012 EE budget and those dollars are not spent, Rate Counsel recommends that Board adjust the amount of the Societal Benefit Charge ("SBC") downward so that the additional money collected from SBC will satisfy the amount of budget needed to support the ongoing programs.

B. Transparency and data availability

The Need for Cost Effectiveness Data. Rate Counsel appreciates that the Market Managers have provided energy savings estimates associated with the proposed 2012 programs. Beyond energy savings, however, some demonstration of the cost effectiveness of the proposed EE programs should have been provided up front in the program proposals. Without this information, one cannot assess whether the proposed changes to the

programs would benefit ratepayers in the long run. Evaluation of past program performance, which could inform an assessment of prospective cost-benefit analysis of the proposed programs, is pending; however, there are previous analyses of cost effectiveness, as well as data on recent program performance, that the Market Managers can draw on (Appendix A also provides an example of cost-effectiveness presentation in Massachusetts).

Summary Periodic Reporting is Needed. Going forward, the OCE should ensure that monthly or quarterly electronic reports on the performance and cost of CEP and utility EE programs, as well as spending by service territory, are provided on a regular and timely basis. This information is important, because the utilities continue to propose and request rate recovery for their own EE programs that either build on or complement the design of the CEP. In addition, data breaking down administration costs by the different administrative functions (e.g., administration, planning, marketing, technical support, data quality control, measurement and verification) are needed as a benchmark.

C. Measurement and Verification

Rate Counsel notes that program evaluation efforts in general have not proceeded according to schedule.³ Such evaluations are important given the substantial amount of SBC funds dedicated to energy efficiency and the need

³ See Table 4 of the 2010-2011 Evaluation and Research Plan Final Report, January 27, 2010, available at <http://www.njcleanenergy.com/files/file/Library/2010%20evaluation%20plan%20final%201-26-10.pdf>.

to track progress toward New Jersey's energy and greenhouse gas emission reduction goals. Accordingly, the OCE should ensure that evaluation becomes a priority in 2012. Also, the measurement and verification ("M&V") plans associated with the EE program expenditures should be fleshed out in greater detail in the information supplied with the Market Managers' compliance filings. Other jurisdictions provide detailed information on the type of evaluation approaches being considered and implemented.⁴

D. Demand Response Incentives

While Electric Distribution Companies ("EDCs") are the logical administrators for demand response ("DR") programs targeting smaller customers, greater coordination between CEP contractors and the EDCs could lead to increased participation in EDC DR programs. Given the presence of CEP contractors on many small premises (residential and small C&I), it is reasonable to envision a CEP role in helping to ensure these customers' participation in EDC DR programs. Rate Counsel recommends that CEP's programs encourage contractors to play a greater role in identifying prospective EDC DR candidate facilities and providing that information to EDCs, to reduce lost opportunities for DR participation. Rate Counsel does not recommend that CEP offer additional financial incentives for DR, as has been suggested at a previous EE Committee meeting, but we do support closer coordination between CEP and the EDCs to enable the capture of otherwise "lost opportunities" at CEP program sites.

⁴ See for example the recent filing in Rhode Island for National Grid's Energy Efficiency Procurement Plan (EE PP), Docket 4209 at <http://www.ripuc.org/eventsactions/docket.html>.

E. Capacity Market Revenues

PJM's Reliability Pricing Model ("RPM") construct allows the peak demand savings from energy efficiency programs to be used as a capacity resource and pays RPM clearing prices to those resources. All CEP programs (in addition to RGGI-funded programs) should be required to submit program savings to PJM to both allow a source of funding for the programs, and to ensure that New Jersey's energy efficiency efforts are reflected in PJM's planning processes. The timing of submissions to PJM for peak demand savings based on EE programs can be complicated, as Base Residual RPM auctions are held annually but for resource commitment three years in advance. PJM's "Incremental" auctions for RPM occur closer in time to the period for which EE savings are being claimed. Rate Counsel recommends that CEP, with all due speed, continue work in 2012 towards establishing and implementing a structure and mechanism to "offer" CEP peak demand savings into the PJM RPM capacity market construct.

II. COMFORT PARTNERS

Rate Counsel supports the increase in the budget for Comfort Partners in 2012, because the program may experience an increase in demand for services as the Weatherization Assistance Program is scaled back when its ARRA funds expire in 2012.

III. RESIDENTIAL EE PROGRAMS

A. Residential EE Budget Overview

2012 Marketing Budget. The residential EE budget proposal calls for \$2.7 million to go toward sales and marketing, comprising about 3.0% of the total residential EE budget of \$93.8 million. The proposed 2012 Residential EE marketing budget is more consistent with program objectives than the 2011 marketing budget, which was only 1.5% of the total residential program budget. However, compared to other states' spending on sales and marketing, the 2012 marketing budget is still low; for example, Massachusetts EE program administrators are planning to spend about 7% of its residential EE program budget on marketing. Other utilities are also spending more. See Table 1, below.

Table 1. EE Spending by Budget Category for Various States.

	Program, Planning & Administration	Marketing	Direct Implementation				Evaluation and Market Research
			Customer Incentive	Technical Assistance, Training & Sales		Subtotal	
				Technical Assistance & Training	Rebate Processing, Inspection and Quality control		
New Jersey							
NJ RES 2012 with OCE	6.7%	3.0%	83.4%	0.6%	5.3%	89.4%	0.9%
NJ Combined Partners with OCE	8.3%	1.7%	78.0%	0.9%	6.2%	85.1%	5.0%
NJ G&I 2012 with OCE	1.9%	0.7%	93.5%	0.8%	2.4%	97.2%	0.3%
Vermont							
Efficiency Vermont 2009	4.3%	14.6%	35.7%	24.0%	18.7%	78.4%	2.7%
Maryland							
PEPCO RES 2009-2011	6.9%	8.6%	69.1%		20.7%	89.8%	1.7%
PEPCO C&I 2009-2012	6.6%	12.7%	70.2%		20.1%	90.2%	1.6%
BGE RES 2009-2011	3.9%	8.7%	62.7%		21.7%	84.4%	3.0%
BGE C&I 2009-2011	4.8%	4.0%	66.9%		21.7%	88.6%	2.9%
Massachusetts							
MA RES 2010-2012	7.2%	7.6%	61.9%		18.7%	80.7%	4.5%
MA LI 2010-2012	7.9%	2.0%	70.8%		15.9%	86.8%	3.3%
MA C&I 2010-2012	8.1%	2.5%	72.8%		12.6%	85.4%	4.0%
Rhode Island							
RI RES 2011	17.4%	12.0%	63.4%		6.2%	89.7%	0.9%
RI LI 2011	2.0%	0.0%	98.0%		0.0%	98.0%	0.0%
RI C&I 2011	13.6%	8.0%	51.7%		19.1%	70.8%	7.6%
California							
SCE 2009	13.5%	9.4%				75.8%	1.3%
PG&E 2009	17.7%	7.3%				74.4%	0.6%

Sources:

- MA DPU 2010. Order for Approving the State's Three-Year Energy Efficiency Plan for 2010 through 2012.*
- National Grid 2010. Energy Efficiency Program Plan For 2011. Settlement of the Parties (November 1, 2010)*
- SCE Efficiency Program Annual Report for 2009*
- PG&E Efficiency Program Annual Report for 2009*
- PEPCO 2008. PEPCO DSM Filing Update regarding Case 9111 and 9155, Filed on September 9, 2008*
- BGE 2008. Revised DSM Budget for Empower Maryland regarding Case 9111 and 9155, filed on October 21, 2008*
- TRC 2011. Commercial & Industrial Energy Efficiency Programs Managed by TRC as C&I Market Manager October 7, 2011*
- Honeywell 2011. Honeywell's Residential Energy Efficiency and Renewable Energy Program Plan Filing for 2012 Draft. October 7, 2011*
- Office of Clean Energy 2011. New Jersey's Clean Energy Program Draft 2012 Program Descriptions and Budgets.*

2012 Training Budget. The proposed budget for training is also very small - only \$0.6 million, or 0.6%, of the total 2012 residential EE budget. Utilities in other states are putting more focus on training and technical support. For example, EE programs in Massachusetts and Maryland spend about 19% to

21% of their total residential EE budget on “Sales, Technical Assistance & Training”, while the NJ CEP proposed to spend only about 6% of its budget on the same cost category. See Table 1, above. Rate Counsel believes that more aggressive and innovative marketing of energy efficiency programs and products and more extensive training of contractors and building owners would be needed to support the energy savings goals in the Energy Master Plan.

2012 Program Evaluation Budget. Program evaluation results are needed to verify savings from past efficiency programs, but they are also important for projecting energy savings. The proposed budget for evaluation appears insufficient, with only 0.9% for residential (excluding Comfort Partners) and 0.3% for C&I programs if OCE’s budget on Evaluation and Related Research is allocated equally among NJCEP residential and C&I programs. It may be appropriate to evaluate other CEP programs too, including the Economic Development Authority programs, which would put the residential and C&I shares of the evaluation budget even lower. Other states are spending about 1% to 5% of the annual sector budget on program evaluation. Rate Counsel is concerned that there is insufficient budget to measure and verify energy and demand savings for residential and C&I customers that are due to the programs and not due to exogenous behavioral and market developments. For low income customers, the utilities propose to allocate about 5% of the Comfort Partners budget to measurement and verification activities.

B. Residential New Construction

Responding to negative market feedback about the onerous requirements of ENERGY STAR v. 3, the market manager has proposed restructuring the Residential New Construction program into three tiers, with increasing efficiency requirements and correspondingly higher incentives: ENERGY ADVANTAGE, ENERGY STAR Homes v 3, and Climate Choice Homes.

As proposed, ENERGY ADVANTAGE would require meeting all federal ENERGY STAR v 2.0 requirements and additional New Jersey requirements, including that houses larger than 4000 sq. ft. must achieve a HERS score at or less than 65. (See p. 10.) Under the requirements for ENERGY STAR Homes v. 3/Tier 2, there is no cap on house size, nor is there a requirement that houses over a certain size be held to a more stringent HERS standard. Climate Choice Homes do not have a size cap, but incentives are only offered once a HERS score of 50 is achieved. In keeping with previous comments that total energy savings rather than energy savings per square foot is more consistent with state goals, Rate Counsel recommends that Tier 2 should include the same requirement as Tier 1, i.e. that the house size must be less than or equal to 4,000 sq. ft. or the HERS has to be at or below 65.

C. Home Performance with Energy Star

Incentive levels. Participation in the Home Performance with Energy Star (“HPwES”) program has stagnated since mid-2010, despite an increase in incentives from 2010 to 2011 and a “summer promotion” in the summer and

fall of 2011. The incentives associated with 2011 base incentives, the 2011 summer promotion, and 2012 proposed incentives are presented in Table 2 below.

TABLE 2: Recent, Current and Proposed HPwES Incentive Levels for Single Family Homes

	2011 Incentive (January to June 2011)	Base 2011 + Summer Promotion Incentive	2012 Proposed Incentive
Tier 2	1000	1500	2000
Tier 3	3000 - 4000	3750 - 5000	4000 - 5000

Rate Counsel has a number of concerns with the incentive levels proposed for 2012, consistent with concerns Rate Counsel expressed when the Summer Promotion was initially proposed and later proposed for extension:

- Customer incentives for energy efficiency are generally designed to reduce the cost differential between energy efficient measures and standard measures, referred to as the incremental cost, while maximizing participant contribution to avoid free-ridership (i.e., program participation by customers who would have installed the program measure or equipment even without the financial incentive provided by the program). In the beginning of 2011, it appears that the level of incentive was close to or over 100% of the total incremental cost of

various measures qualified for the HPwES program, based on the data obtained through a number of utility specific program benefit cost analyses provided by the CEEEP. The summer promotion may have resulted in funding more than 100% of the incremental costs of energy efficient measures. The 2012 incentive levels are even higher than the summer promotion levels, and probably that much higher than incremental cost.

- The Market Manager has not presented any basis for the incentive amounts. While the proposed summer promotion has not generated as much participation as hoped, more information should be provided by the Market Manager or OCE to explain why the proposed rebate levels are needed to boost participation, and also why lower incentive levels are not sufficient to do so. The proposed increases in 2012 incentives—between 33% and 100% above based on 2011 incentive levels and as much as 33% over summer promotion total incentive levels—seem quite excessive and require justification.
- Given the subdued response to the summer promotion, it appears that customer incentive levels are not the primary reason that participation is lacking. Contractors have been reluctant to participate in the HPwES program, in part due to long payment processing and inspection periods. A recent

paper that evaluated Wisconsin's EE programs, namely HPwES and the Heating equipment bonus program, noted the importance of education and outreach to their contractors, including providing tools and techniques for encouraging participants to meet program requirements.⁵ Rate Counsel notes that the increases in contractor incentives, including higher incentives per HPwES completion and support for BPI and sales training, in conjunction with continued efforts to address other obstacles to contractor participation, may boost the program overall, even without an increase in consumer incentives above the summer promotion levels.

Overlap with Utility RGGI financing. It appears that HPwES does not flow a proportionate amount of funding to customers who are eligible to obtain RGGI-funded programs. All electric and gas utility ratepayers can receive HPwES rebates. However, only RECO customers and PSE&G customers who aren't in Urban Enterprise Zones ("UEZ") can get loans through CEP for HPwES projects because there is no RGGI program that covers them. PSE&G UEZ customers and customers of the other EDCs and GDCs are referred to their utility's RGGI program. It is not clear whether overall CEP funding is aligned with SBC contributions by service territory. The OCE should make a demonstration that each service territory's overall CEP spending and its contributions are roughly proportionate and, if not, take

⁵ Laura Schauer, Carrie Koenig, and Tom Mauldin 2011. *Motivating Residential Customers: Is More Money Really the Answer?* from the International Energy Program Evaluation Conference 2011 proceedings, Boston, August 15 – 18.

steps to bring these in line. Furthermore, reporting on EE programs, including but not limited to HPwES, should provide CEP spending by service territory to allow mid-year corrections in budgeting.

IV. C&I EE PROGRAMS

A. C&I EE Budget Overview

2012 Program Evaluation Budget. Program evaluation results are needed to verify savings from past efficiency programs, but they are also important for projecting energy savings. The proposed budget for evaluation appears insufficient, with only 0.9% for residential and 0.3% for C&I programs if OCE's budget on Evaluation and Related Research is allocated equally among NJCEP residential and C&I programs. It may be appropriate to evaluate other CEP programs too, including the Economic Development Authority programs, which would put the residential and C&I shares of the evaluation budget even lower. Other states are spending about 1% to 5% of the annual sector budget on program evaluation. Rate Counsel is concerned that there is insufficient budget to measure and verify energy and demand savings that are due to the programs and not due to exogenous behavioral and market developments.

2012 Marketing Budget. The proposed 2011 marketing budget for C&I EE programs is only 0.7% of TRC's total C&I budget. The training and technical support budget for C&I is 0.8% of the TRC's total C&I budget. In comparison, other states, including two efficiency leaders--Massachusetts and California—and a fellow mid-Atlantic state, Maryland, are spending more

on marketing, technical support and training in general. The budget on marketing by these states ranges from 2% to 13% for the C&I sector. These states are also spending about 13% to 22% for “Sales, Technical Assistance & Training” while NJCEP is allocating only 3.2% of its budget to this same budget category. In general, NJ has a long term goal to transform the market so that EE measures will be implemented without subsidies. To meet this goal, as well as to promote EE deployment with smaller incentives, the EE programs should focus more on marketing and develop innovative marketing strategies.

B. Overlap with Utility RGGI Programs

Rate Counsel has concerns with the overlap between the proposed CEP Combined Heat and Power “CHP”/fuel cell program and RGGI-funded CHP programs. The total incentive for the CEP CHP/fuel cell program is capped at \$2 million. As proposed, the portion of the incentive to be paid by CEP depends on the utility incentive offered. Because not all EDCs or gas distribution companies (“GDCs”) offer incentives for CHP⁶, the amount of incentives paid by CEP will vary considerably based on the location of the participant. Rate Counsel suggests that CEP funding should, to the extent possible, be aligned with SBC contributions by service territory.

C. Large Energy Users Pilot Program

⁶ For example, PSE&G only offers CHP incentives through its Hospitals program.

The proposed budget for the Large Energy Users (“LEU”) pilot—\$39 million in funding in 2012—is too high given that this pilot has only committed half of its \$20 million budget in 2011. The pilot is currently undersubscribed. As recommended in the October 2011 Report of the Clean Energy Funding Work Group, the market manager should seek immediate feedback from eligible customers that did not apply for the pilot for the purposes of program evaluation.

D. Combined Heat and Power (“CHP”) and Fuel Cell Incentives

Cost-benefit analysis of Combined Heat and Power (“CHP”) and fuel cell programs should be conducted before launching a solicitation of the scope contemplated in the 2012 budget. With a proposed budget of \$20 million for the standalone CHP/fuel cell program and another \$55 million for a Large CHP/fuel cell solicitation, these technologies could receive \$75 million in CEP incentives in 2012. The only information that Rate Counsel has seen on the large CHP/fuel cell solicitation, a September 29 2011 large CHP program proposal, lacks important details on solicitation design and criteria for making awards (other than that awards will be based partly on the level of incentive needed to construct a project). As stated in its October 14, 2011 comments, Rate Counsel proposes that the solicitation adopt a maximum incentive level per kW, which should be set at a lower level than currently set for CHP units less than 1 MW funded under the current P4P program, because larger systems often cost less per kWh due to economies of scale. In addition, a

June 2009 evaluation suggests that free ridership⁷ might have been an issue with NJ's previous CHP program. KEMA found as much as 50% free ridership based on a very small sample (only four cases). While the KEMA findings are based on a scale that is too small to be generalized, the possibility of high free ridership and the impact of high free ridership on cost effectiveness should be examined. Finally, these programs should not be funded through the Pay for Performance program.

⁷ "Free ridership" is program participation by customers who would have installed the program measure or equipment even without the financial incentive provided by the program.

Appendix A. Table 1. Example of Information Provided in Other EE Program Proposals: Summary of Costs and Benefits for Massachusetts Programs.

Year	Sector	Electric Program Administrator's (PA) EE Activities										TRC B/C Ratio	Net Benefits
		Benefits (\$)					TRC Costs (\$)						
		Capacity	Energy	DRIVE (Capacity & Energy)	Non-Elec. Resource	Non-Resource	Total Benefits	PA	Customer	TOTAL			
	Residential	\$30,975,189	\$110,833,733	\$33,194,119	\$149,553,310	\$5,866,725	\$310,234,242	\$96,796,701	\$16,403,561	\$113,225,748	2.74	\$196,882,402	
	Low Income	\$3,209,518	\$28,134,224	\$6,105,040	\$19,441,607	\$39,438,650	\$92,364,708	\$36,435,843	\$64,865	\$36,514,705	2.53	\$55,839,041	
	C&I	\$110,111,426	\$565,628,965	\$145,266,581	-\$9,472,442	\$15,401,679	\$753,908,729	\$160,480,034	\$65,043,315	\$225,600,282	3.34	\$527,389,080	
2010	Total	\$144,296,132	\$704,596,923	\$184,565,740	\$159,522,476	\$60,707,055	\$1,156,507,679	\$283,712,578	\$81,511,741	\$375,340,735	3.08	\$780,110,523	
	Residential	\$49,426,107	\$146,216,090	\$44,512,409	\$256,120,030	\$6,562,844	\$473,343,673	\$122,084,284	\$22,746,749	\$144,870,628	3.27	\$328,370,560	
	Low Income	\$4,397,012	\$37,659,550	\$7,978,354	\$26,499,198	\$48,242,764	\$119,648,264	\$48,317,730	\$72,634	\$48,406,934	2.47	\$71,262,750	
	C&I	\$166,387,752	\$840,618,388	\$209,979,584	-\$15,617,488	\$23,486,366	\$1,111,885,443	\$260,691,526	\$126,958,274	\$387,751,316	2.87	\$723,108,894	
2011	Total	\$220,210,871	\$1,024,494,028	\$262,470,348	\$267,001,740	\$78,311,974	\$1,704,877,380	\$431,093,539	\$149,777,657	\$581,028,978	2.93	\$1,122,742,204	
	Residential	\$61,995,273	\$180,258,068	\$47,633,533	\$320,209,969	\$8,016,281	\$584,964,565	\$147,203,003	\$26,285,607	\$173,547,322	3.37	\$411,370,869	
	Low Income	\$5,763,108	\$47,062,705	\$9,334,928	\$34,977,214	\$63,660,888	\$154,386,310	\$61,164,782	\$144,094	\$61,329,998	2.52	\$93,137,989	
	C&I	\$202,591,745	\$1,027,069,432	\$215,678,272	-\$19,799,874	\$30,602,715	\$1,339,316,251	\$338,231,802	\$165,105,309	\$503,479,271	2.66	\$834,843,581	
2012	Total	\$270,350,126	\$1,254,380,205	\$271,646,733	\$335,387,309	\$102,279,884	\$2,078,667,126	\$546,599,587	\$191,535,010	\$738,356,491	2.82	\$1,339,352,440	
	Residential	\$142,396,569	\$437,307,891	\$125,340,062	\$725,883,309	\$20,465,849	\$1,368,542,480	\$366,083,968	\$65,435,917	\$431,643,698	3.17	\$936,623,831	
	Low Income	\$13,369,637	\$112,846,479	\$22,418,322	\$80,918,019	\$151,342,302	\$366,399,283	\$145,918,355	\$281,593	\$146,251,537	2.51	\$220,239,780	
	C&I	\$479,090,924	\$2,433,316,786	\$570,924,437	-\$44,889,803	\$69,490,761	\$3,205,110,423	\$759,403,362	\$357,106,998	\$1,116,830,969	2.87	\$2,085,341,555	
GRAND TOTAL		\$634,857,130	\$2,983,471,156	\$718,982,820	\$761,911,525	\$241,298,912	\$4,940,052,185	\$1,271,405,705	\$422,824,408	\$1,694,726,104	2.91	\$3,282,205,166	
Notes:													
(1) GHG for information purposes only; it is not included in TRC test													
(2) Data are available on the program and utility level.													

Source: MA DPU 2010. Order for Approving the State's Three-Year Energy Efficiency Plan for 2010 through 2012.

Note: This table is an example of the form of information provided by Massachusetts energy efficiency providers ("Electric Program Administrators"). Similar tables demonstrating the form of information shown here can be found at pages 96-97 of the three-year energy efficiency plan filing at <http://www.ma-eeac.org/docs/DPU-filing/ElectricPlanFinalOct09.pdf>.

Appendix A. Table 2. Example of Information Provided in Other EE Program Proposals: Summary of Savings by Fuels Metrics for Massachusetts Programs.

Year	Sector	Electric Program Administrator's (PA) EE Activities												TR Summer Demand Cost (\$ per Lifetime kW)	
		Savings						Gas (Therms)			Other Fuels (MMBTU)				
		Capacity (kW)		Energy (mWh)		Annual		Lifetime		Annual	Lifetime	Annual	Lifetime		Avg Measure Life (yrs.)
		Annual (Summer)	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime		
2010	Residential	22,736.77	296,477.19	151,548.39	1,169,386.34	96,410.30	750,382.94	124,593.61	1,009,435.09	7.72	\$382				
	Low Income	2,427.29	33,404.16	23,310.88	308,051.70	1,088.44	14,253.10	28,066.28	362,546.19	13.21	\$1,093				
	C&I	75,177.77	998,598.30	449,567.41	5,936,273.97	(63,905.22)	(855,305.71)	1,132.58	14,551.54	13.20	\$226				
Total	100,341.84	1,328,479.64	624,426.68	7,413,712.01	33,593.52	(90,669.67)	153,792.48	1,386,532.82	11.87	\$283					
2011	Residential	31,793.69	433,087.81	206,062.61	1,491,466.78	190,338.56	1,320,468.38	176,893.90	1,362,122.47	7.24	\$335				
	Low Income	3,111.08	42,996.03	30,641.04	405,531.33	1,335.21	17,261.11	42,417.57	539,517.63	13.23	\$1,126				
	C&I	110,432.36	1,459,108.22	660,506.43	8,574,731.45	(112,595.01)	(1,447,291.97)	1,703.88	21,809.82	12.98	\$266				
Total	145,337.13	1,935,192.06	897,210.08	10,471,729.55	79,078.77	(109,562.48)	221,015.36	1,923,449.93	11.67	\$300					
2012	Residential	39,526.33	538,247.76	255,871.61	1,828,429.36	245,803.13	1,677,926.69	203,311.38	1,556,796.05	7.14	\$322				
	Low Income	3,937.73	55,021.85	38,047.87	506,523.60	1,717.18	22,608.14	56,697.21	734,119.03	13.31	\$1,115				
	C&I	136,064.86	1,787,028.27	810,060.47	10,607,938.20	(131,016.55)	(1,743,084.44)	1,900.84	24,217.71	13.10	\$282				
Total	179,528.92	2,380,297.89	1,103,979.95	12,940,891.16	116,503.76	(42,549.61)	261,909.43	2,315,132.79	11.72	\$310					
GRAND TOTAL	Residential	94,056.80	1,267,812.76	613,482.61	4,487,282.48	532,551.99	3,748,778.02	504,798.89	3,928,353.61	7.31	\$340				
	Low Income	9,476.10	131,422.05	91,999.80	1,220,106.62	4,140.83	54,122.35	127,181.07	1,636,182.86	13.26	\$1,113				
	C&I	321,674.99	4,244,734.79	1,920,134.31	25,118,943.62	(307,516.77)	(4,045,682.12)	4,737.30	60,579.07	13.08	\$263				
GRAND TOTAL	425,207.89	5,643,969.60	2,625,616.71	30,826,332.72	228,176.05	(242,781.75)	636,717.26	5,825,115.54	11.74	\$300					

Notes:
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 (2) Data are available on the program and utility level.

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