

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Energy Efficiency and Conservation Program:

Docket No. M-2012-2289411
M-2008-2069887

**Comments of The Reinvestment Fund to the
May 11, 2012 Tentative Implementation Order for Phase II of the
Act 129 Energy Efficiency and Conservation Program**

INTRODUCTION

On May 11, 2012, the Pennsylvania Public Utility Commission (“Commission”) entered its Tentative Implementation Order in the docket noted above and requested comments from the Act 129 stakeholders and the public.

The Reinvestment Fund has been actively financing building energy improvements since 1993. In 1998, TRF was chosen by the Commission in the PECO electric utility restructuring proceeding case to manage the Sustainable Development Fund. More recently, TRF was selected to manage two revolving loan funds – the Pennsylvania Green Energy Loan Fund and the EnergyWorks Loan Fund – and is deploying \$20.5 million of building energy financing across the PECO service territory and throughout Pennsylvania. TRF has been active in the implementation of Act 129 and TRF and its borrowers have a direct interest in Phase II of Act 129.

COMMENTS

TRF’s comments focus on a single issue in the Tentative Implementation Order: the calculation of the energy reduction targets. TRF believes the proposed Phase II targets (see Table 1 on p. 13) are a major step backwards because they are so low. Rather than building on the success to date, the Commission appears to be sounding retreat on Act 129. TRF believes these targets are based on unsupported assumptions and an erroneous methodology of the

Electric Energy Efficiency Potential for Pennsylvania Final Report (the “Market Potential Report”) issued May 10, 2012 by GDS Associates, Inc and the statewide evaluator (“SWE”).

While the Market Potential Report went through a detailed explanation and quantification of technical potential, economic potential, achievable potential and program potential, the energy targets adopted in the report are the result of a simple formula:

$$\frac{\text{EDC baseline revenue} \times 2\% \times 3 \text{ years}}{\text{Cost per saved MWh}}$$

We know the EDC baseline revenues and simple arithmetic gives us the 3 year program budget for each of the EDC energy efficiency and conservation plans. It is the denominator of the formula – the cost per saved MWh – that is the critical element of the formula and also the most subjective figure. The larger the denominator, the smaller the energy savings goal. Likewise, the smaller the denominator, the larger the energy savings goal.

The Market Potential Report began to estimate the cost per saved MWh for Phase II by analyzing the data in Phase I through May 31, 2011. The report found that the weighted acquisition cost for the seven EDCs during the first two years of Phase I was \$139.38 per MWh saved. This number deserves a bit deeper analysis. TRF requested and received the Excel spreadsheet used by the SWE in the market potential study that showed the various types of program costs during Program Year 2 (“PY2”) and for the Cumulative Program Inception to Date (“CPITD”). This data is shown in Table 1 on the following page of these Comments. TRF subtracted PY2 data from the CPITD data to show the energy savings and the program costs for the first program year (“PY1”).

There are two categories of EDC program costs that are subject to the 2% revenue cap in Act 129: (1) the program implementation costs that the EDCs incur in the design, development, administration, management and marketing of their Act 129 programs, and (2) the incentive costs that the EDCs pay to their customers and to trade allies. As shown in Table 4-11 of the Market Potential Report (p.31), the SWE determined that the weighted average of the program implementation costs incurred by the seven EDCs from program inception to date – the CPITD

TABLE 1: Act 129 Program Data for PY1, PY2 and CPITD

Program Year 1

EDC	Energy Savings (MWh)	EDC Program Costs			EDC Programs Costs per Saved MWH		
		Incentive Costs	Implementation Costs	Total Utility Costs	Incentive Cost per MWH	Implementation Cost per MWH	Incentive + Implementation Cost per MWH
Duquesne	2,538	\$55,667	\$3,837,825	\$3,893,492	\$21.94	\$1,512.39	\$1,534.32
Met-Ed	17,274	\$1,526,690	\$1,757,731	\$3,284,421	\$88.38	\$101.75	\$190.13
PECO	159,819	\$5,889,122	\$7,178,231	\$13,067,353	\$36.85	\$44.91	\$81.76
Penelec	13,495	\$1,466,889	\$1,837,254	\$3,304,143	\$108.70	\$136.14	\$244.84
Penn Power	6,122	\$335,090	\$474,009	\$809,099	\$54.74	\$77.43	\$132.17
PPL	82,302	\$3,877,426	\$27,424,505	\$31,301,931	\$47.11	\$333.22	\$380.33
West Penn	5,279	\$135,393	\$5,504,297	\$5,639,690	\$25.65	\$1,042.61	\$1,068.26
	286,829	\$13,286,277	\$48,013,852	\$61,300,129	\$46.32	\$167.40	\$213.72

Program Year 2

EDC	Energy Savings (MWh)	EDC Program Costs			EDC Programs Costs per Saved MWH		
		Incentive Costs	Implementation Costs	Total Utility Costs	Incentive Cost per MWH	Implementation Cost per MWH	Incentive + Implementation Cost per MWH
Duquesne	164,859	\$7,924,189	\$7,353,283	\$15,277,472	\$48.07	\$44.60	\$92.67
Met-Ed	166,738	\$18,873,592	\$6,489,027	\$25,362,619	\$113.19	\$38.92	\$152.11
PECO	393,001	\$29,376,000	\$22,789,000	\$52,165,000	\$74.75	\$57.99	\$132.73
Penelec	171,364	\$16,868,997	\$5,328,793	\$22,197,790	\$98.44	\$31.10	\$129.54
Penn Power	61,043	\$5,199,964	\$1,598,595	\$6,798,559	\$85.18	\$26.19	\$111.37
PPL	412,482	\$30,979,114	\$16,368,387	\$47,347,501	\$75.10	\$39.68	\$114.79
West Penn	87,566	\$7,173,029	\$5,442,649	\$12,615,678	\$81.92	\$62.16	\$144.07
	1,457,053	\$116,394,885	\$65,369,734	\$181,764,619	\$79.88	\$44.86	\$124.75

Cumulative Program Inception to Date (CPITD)

EDC	Energy Savings (MWh)	EDC Program Costs			EDC Programs Costs per Saved MWH		
		Incentive Costs	Implementation Costs	Total Utility Costs	Incentive Cost per MWH	Implementation Cost per MWH	Incentive + Implementation Cost per MWH
Duquesne	167,397	\$7,979,856	\$11,191,108	\$19,170,964	\$47.67	\$66.85	\$114.52
Met-Ed	184,012	\$20,400,282	\$8,246,758	\$28,647,040	\$110.86	\$44.82	\$155.68
PECO	552,820	\$35,265,122	\$29,967,231	\$65,232,353	\$63.79	\$54.21	\$118.00
Penelec	184,859	\$18,335,886	\$7,166,047	\$25,501,933	\$99.19	\$38.76	\$137.95
Penn Power	67,165	\$5,535,054	\$2,072,604	\$7,607,658	\$82.41	\$30.86	\$113.27
PPL	494,784	\$34,856,540	\$43,792,892	\$78,649,432	\$70.45	\$88.51	\$158.96
West Penn	92,845	\$7,308,422	\$10,946,946	\$18,255,368	\$78.72	\$117.91	\$196.62
	1,743,882	\$129,681,162	\$113,383,586	\$243,064,748	\$74.36	\$65.02	\$139.38

Source: Market Potential Report, Tables 4-9 and 4-10 (p. 30) and the Excel file "EDC CPITD vs PYTD Costs_Final.xlsx"

costs – was \$65.02 and the incentive costs were \$74.36, for a total EDC program cost of \$139.38 per saved MWh. However, TRF believe these figures require deeper analysis.

Beginning first with the EDC implementation costs, Table 1 on the preceding page of these Comments shows that the EDC implementation costs were \$167.40 per saved MWh in PY1 and then dropped to \$44.86 in PY2. This makes sense as the EDCs incurred significant costs developing their programs and marketing them to the public when they were first starting, but once the programs got up to speed, the implementation costs dropped almost to one-fourth of what they had been in the first year. However, by using the the CPITD implementation cost of \$65.02, the Market Potential Report overstates the likely future implementation costs by almost 50% since the costs of PY2 are much more representative of future annual implementation costs than the CPITD values, which include the massive start-up expenses.

Another reason the CPITD value for implementation costs should not be used is that the CPITD costs include huge differences between the individual EDCs in their PY1 implementation costs per saved MWh. While the weighted average for PY1 implementation costs is \$167.40, Table 1 shows that the EDC implementation costs per MWh saved ranged from a low of \$44.91 per saved MWh for PECO to a high of \$1,512.39 per MWh saved for Duquesne, or almost ten times the statewide weighted average cost per MWh saved. TRF believe the purpose of goals is to encourage EDCs to improve their programs by reducing the cost per saved MWh, but using CPITD costs means the savings goal is based not only on the more cost-effective programs (those with lower implementation costs per MWh saved) but on the high-cost programs as well. Interestingly, the difference between EDC implementation costs narrowed significantly in PY2, with the lowest implementation cost of \$26.19 for Penn Power to the highest implementation cost of \$62.16 for West Penn Power, a much tighter range.

To calculate the cost of acquired savings, TRF believes the SWE erred in using the CPITD figure of \$65.02 and should have begun its analysis with the PY2 figure of \$44.86 per MWh saved. As will be seen in the following section, TRF does not propose to freeze this number through May 31, 2016, but realizes that these costs will escalate over time due to inflation and due to modest increases in program activity as new programs are brought on line.

TRF's next objects to the Market Potential Report methodology is that it compounds the mistake of using CPITD values by making the unsupported assumption that the implementation costs should be inflated by 25%.

In the Market Potential Study, the SWE team states that "the existing EDC program savings have large shares of "low hanging fruit" and very cost-effective measures, Phase I non-incentive program cost [the implementation costs] estimates have been increased by an additional 25%." Market Potential Report, p. 100. The Market Potential Study also states that "program incentive funding estimates have been increased by an additional 25% to address uncertainties in future adoption rates, market pricing, and EDCs adoption more comprehensive and less cost-effective measures." Market Potential Report, p. 100. In the Introduction to the Market Potential Report, the SWE also notes the savings in Phase II are less than in Phase I "largely due to the impacts of federal legislation, changing baseline conditions and increasing saturation of energy efficient equipment." Market Potential Report, p. 7.

TRF first notes that the Market Potential Report provides no quantitative analysis of any of these points. The report implies that the EDC programs have already swept up all of the low hanging fruit, but no evidence is presented to support that opinion. In fact, at least for residential program, Figure 6-3 shows the residential electric efficient supply curve for Pennsylvania shows the levelized cost per kWh is essentially \$0 until the savings exceed 15% and the EDC programs to date have saved a small fraction of that. Other state energy efficiency programs did not run out of the low hanging fruit after the first four years of operation and there is no reason to believe that Pennsylvania's programs will. Likewise, the Market Potential Report implies by "market pricing" that lower electricity prices will dampen customer interest in efficiency, but again, no support is provided for the 25% cost increase. At the June 5 question and answer session on the Market Potential Report, the SWE explained the federal legislation comment referred to the coming ban in the sale of the 100 watt incandescent light bulb, but the report fails to substantiate that the absence of this one product will cause the cost per saved MWh to increase by 25%.

The Market Potential Report is quite honest about the philosophy behind its cost assumptions. The report states it is addressing the uncertainty "... through the adoption of safety margins to the program costs. Market Potential Report, p. 104 [emphasis added]. Those safety

margins means reduced goals so no utility will have difficulty achieving the Phase II goals. At the June 4 meeting of stakeholders and the SWE, a Commission staffer was even more blunt, stating (paraphrased) that Act 129 provides for large penalties and the Commission does not want to have to access these penalties on any EDC. The methodology is therefore a “No Utility Left Behind” strategy, setting very modest goals that can easily be achieved by every EDC.

The total absence of any quantification of the impacts of the various reasons mentioned in the Market Potential Report is disturbing. After all of the number massaging, the Market Potential Report ends up using an assumed cost of saved energy of \$221.39 per MWh (Table 8-7, p. 103). This cost per saved MWh is 58.84% higher than the CPITD cost of \$139.38 actually achieved by the EDCs during the first two years of their program and 77.5% higher than the PY2 cost of \$124.75 actually achieved by the EDCs in PY2.

Given the willingness of the Market Potential Report to put its thumb on the scale to inflate the cost of energy savings in Phase II so much above the actual cost of saved energy experienced by the EDCs and approved by the SWE, TRF felt it reasonable to put a slightly different thumb on the scale. Table 2 on the following page shows TRF’s recommended cost of saved energy per MWh and the resulting EDC savings goals for Phase II. TRF used the actual verified PY2 implementation cost of \$44.86 per MWh saved and inflates this by 4% a year compounded through May 31, 2016 (PY7). TRF believe this is a reasonable and defensible inflation rate in program implementation costs through Phase II. TRF also uses the PY2 incentive cost of \$79.88 per MWh saved and inflates this by 8% compounded through May 31, 2016. This inflation rate is higher than the rate used for implementation costs because of the arguments advanced in the Market Potential Report, but TRF just does not think the 77.5% increase assumed in the Market Potential Report is the right number.

These cost escalation rates yield total EDC program costs per saved MWh of \$151.09 for PY5 ending 5/31/2014, \$161.16 for PY6 ending 5/31/2015 and \$171.95 for PY7 ending 5/31/2016. These annual cost of saved energy figures are then divided into the one year program budgets to produce energy savings goals for the three years of Phase II. The total energy reduction goal under these assumptions is 4,557,489 MWhs, which is 37.6% higher than the savings goal of 3,313,247 MWhs in the Tentative Implementation Order.

TABLE 2: TRF’s Proposed Costs for Saved Energy and Phase II Savings Goals

			Program Year:	PY2	PY3	PY4	PY5	PY6	PY7
			End Date:	5/31/11	5/31/12	5/31/13	5/31/14	5/31/15	5/31/16
Inflation Rate:									
Implementation Costs	4.0%		\$44.86	\$46.65	\$48.52	\$50.46	\$52.48	\$54.58	
Incentive Costs	8.0%		79.88	\$86.27	\$93.17	\$100.63	\$108.68	\$117.37	
			Phase II Cost of Saved MWh:			\$151.09	\$161.16	\$171.95	
						PY5 Savings Goal	PY6 Savings Goal	PY7 Savings Goal	Phase II Savings Goal
EDC	3 Yr Budget	1 Yr Budget							
Duquesne	\$58,637,855	\$19,545,952				129,369	121,286	113,673	364,328
Met-Ed	\$74,600,676	\$24,866,892				164,586	154,304	144,618	463,508
PECO	\$256,185,476	\$85,395,159				565,204	529,892	496,631	1,591,728
Penelec	\$68,924,232	\$22,974,744				152,063	142,562	133,614	428,239
Penn Power	\$19,979,352	\$6,659,784				44,079	41,325	38,731	124,135
PPL	\$184,504,128	\$61,501,376				407,059	381,627	357,672	1,146,358
West Penn	\$70,687,404	\$23,562,468				155,953	146,209	137,032	439,194
TOTALS:	\$733,519,123	\$244,506,374				1,618,313	1,517,206	1,421,971	4,557,489

CONCLUSION

TRF urges the Commission to reconsider the energy savings goals for Phase II and proposes alternative goals that more accurately reflect actual experience of the Pennsylvania programs once they were up and under way and make more appropriate assumptions about the future cost of energy savings.

TRF also believes its proposed energy goals send the better message that Pennsylvania is not retreating from energy efficiency and conservation as a resource strategy. Remember that the SWE found the EDC programs are highly cost effective, clearing the Total Resource Cost test by wide margins. There is no doubt that energy efficiency and conservation is our lowest cost resource and that Pennsylvania has only begun to tap this potential. We still have abundant cost-effective opportunities to realize this resource. TRF also believes its proposed energy goals will minimize the problem found in the Tentative Implementation Order that the EDC will

quickly achieve the Phase II goals and Pennsylvania will again be in the position we are now of putting these cost-effective programs on hold while a new set of goals are developed.

The future is uncertain, but that should not prevent us from boldly moving forward when it is the cost-effective thing to do. It is easy – and wrong – to generate assumed numbers to justify a retreat, but Pennsylvania’s experience with Act 129 has taught us all that we are on the right track. While the cost of achieving energy savings is likely to rise at some point in the future, in the near-term of Phase II, the Commission should challenge the EDCs to take their growing experience in managing these energy efficiency and conservation programs and make them better and more cost effective. The customers of Pennsylvania’s electric utilities are relying on the Commission to keep us going forward and not start calling retreat on energy efficiency and conservation.

Respectfully submitted,



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