

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

ENERGY EFFICIENCY AND CONSERVATION :
PROGRAM AND ELECTRIC DISTRIBUTION : Docket No. M-2008-2069887
COMPANY PLANS :

**COMMENTS AND RECOMMENDATIONS OF
THE REINVESTMENT FUND
PURSUANT TO THE SECRETARIAL LETTER
OF OCTOBER 21, 2008**

INTRODUCTION TO THE REINVESTMENT FUND

The Reinvestment Fund (“TRF”) is a nonprofit community development organization with headquarters in Philadelphia that has provided over \$813 million in financing to over 2,300 local and regional projects.¹ TRF was the entity selected by the parties in the PECO Energy restructuring proceeding (Docket No. R-00973953) in 1998 to create and manage the Sustainable Development Fund (“SDF”).²

Through its work with SDF, TRF has accumulated considerable experience and expertise in deploying capital through loans, investments and grants in support of energy efficiency and conservation projects, renewable energy projects and other clean energy endeavors. Since its formal beginning of operations in December, 1999, TRF, through the SDF, has:

- Approved 40 loans and investments in companies for renewable energy and energy conservation projects for a total of \$20,951,495.
- Approved \$11,768,441 in wind energy production incentives for seven new utility-scale wind projects, one community wind project and five small wind installations.
- Approved 86 core grants for green building design work, business planning, demonstration of clean energy technologies and other related purposes for a total of \$1,762,550.
- Approved 42 grants for renewable energy public education, including television and radio spots, workshops, conferences, written materials, etc. for a total of \$2,427,659.
- Approved 253 solar photovoltaic grants for a total of \$4,276,129.

¹ The TRF website is www.trfund.com.

² The SDF website is www.trfund.com/sdf.

TRF has experience with energy efficiency and conservation, renewable energy and related energy policies and issues, and is committed to working with the Commission and the electric utilities to make Act 129 a success.

INTRODUCTION TO THE TASK AT HAND

Before diving into the issues and details of implementing Act 129, TRF would like to put this moment in context. As Chairman Cawley noted in a statement released on October 9, 2008, the passage of Act 129 was a “momentous day for Pennsylvania.”³ For the first time, the Commonwealth is firmly headed in a new energy direction by including energy efficiency, energy conservation and demand response in our energy future. These demand resources, if implemented effectively and at the appropriate scale, will have a major, direct and immediate impact on energy prices and will help make consumers’ energy bills more affordable and less subject to the risk of fossil fuel price escalation. These resources also have substantial local economic development impacts as well as environmental benefits that can reduce consumers’ exposure to utility environmental compliance costs now and in the future.

In late 2005, the U.S. Department of Energy, the U.S. Environmental Protection Agency and more than 50 leading electric and gas utilities, state utility commissioners, state air and energy agencies, energy service providers, energy consumers, and energy efficiency and consumer advocates joined together to develop the *National Action Plan for Energy Efficiency*.⁴ The goal of the group was “to create a sustainable, aggressive national commitment to energy efficiency through the collaborative efforts of gas and electric utilities, utility regulators, and other partner organizations.”

In July 2006, the *National Action Plan for Energy Efficiency* report was released⁵ and it contained five over-arching recommendations that are work noting as Pennsylvania begin its implementation of Act 129:

- Recognize energy efficiency as a high-priority energy resource.
- Make a strong, long-term commitment to implement cost-effective energy efficiency as a resource.
- Broadly communicate the benefits of and opportunities for energy efficiency.
- Promote sufficient, timely, and stable program funding to deliver energy efficiency where cost effective.

³ Chairman Cawley’s statement is available at www.puc.state.pa.us/general/pdf/Statement_Chairman_HB2200_100908.pdf.

⁴ The website for this ongoing effort is <http://www.epa.gov/cleanenergy/energy-programs/napee/index.html>.

⁵ The July 2006 *National Action Plan for Energy Efficiency* report is available at www.epa.gov/cleanenergy/documents/napee/napee_report.pdf.

- Modify policies to align utility incentives with the delivery of cost-effective energy efficiency and modify ratemaking practices to promote energy efficiency investments.

TRF urges the Commission to unequivocally proclaim, not only in its Act 129 Guidelines but also in all its other actions and initiatives, that Pennsylvania recognizes energy efficiency as a high-priority resource and is making a strong and long-term commitment to implement cost-effective efficiency as a core resource in Pennsylvania's energy future. The Commission is working together with its regulated utilities and its sister Commonwealth agencies to communicate the benefits of and opportunities for energy efficiency. For the first time, Pennsylvania is committing sufficient, timely and stable program funding to deliver energy efficiency where cost effective and it will further work to give utilities the incentive and ratemaking support to actively pursue energy efficiency investments. This is the clarion call that needs to be made in the Commission's Guidelines if Act 129 is to succeed.

That said, TRF will now address the various issues it sees in the implementation of Act 129 and in the Guidelines that the Commission is directed to issue by January 15, 2009.

ACT 129's GOALS FOR REDUCING CONSUMPTION

TRF believes that the proper implementation of Act 129 begins with a proper understanding of the reduction in consumption goals in §2806.1(c) and the peak demand reduction goal in §2806.1(d). The scale of the EDC programs that are required by the Act and the cost of those programs are shaped entirely by our understanding of the goals. TRF believes that the most important task of the Commission's Guidelines is to clearly and unequivocally define these goals. The subsections that follow will address the reduction in consumption goal, followed by the reduction in peak demand goal in a following section.

Act 129's goals for reducing electricity consumption by 2011 and by 2013 are contained in §2806.1(c)(1) and (c)(2) which read:

(c) Reductions in consumption.--The plans adopted under subsection (b) shall reduce electric consumption as follows:

(1) By May 31, 2011, total annual weather-normalized consumption of the retail customers of each electric distribution company shall be reduced by a minimum of 1%. The 1% load reduction in consumption shall be measured against the electric distribution company's expected load as forecasted by the commission for June 1, 2009, through May 31, 2010, with provisions made for weather adjustments and extraordinary loads that the electric distribution company must serve.

(2) By May 31, 2013, the total annual weather-normalized consumption of the retail customers of each electric distribution company shall be reduced by a minimum of 3%. The 3% load reduction in consumption shall be measured against the electric distribution company's expected load as forecasted by the

commission for June 1, 2009, through May 31, 2010, with provision made for weather adjustments and extraordinary loads that the electric distribution company must serve.

The Base Year Forecast - June 1, 2009 through May 31, 2010

Any analysis of Act 129's goals to reduce electric consumption begins with the Commission's forecast of future retail consumption. §2806.1(c) states that the:

“... reduction in consumption shall be measured against the electric distribution company's expected load as forecasted by the commission for June 1, 2009, through May 31, 2010, with provisions made for weather adjustments and extraordinary loads that the electric distribution company must serve. [emphasis added].

The Commission currently prepares an annual report containing a forecast of electric sales. The current report, *Electric Power Outlook for Pennsylvania 2007-2012*, was issued in August 2008, and states the following about the forecast of future electricity consumption for Pennsylvania's retail customers:

“[t]he current aggregate five-year projection of growth in energy demand is 1.4 percent. This includes a residential growth rate of 1.5 percent, a commercial rate of 1.6 percent and an industrial rate of 1.1 percent.⁶

TRF believes that given the importance of the base year forecast to Act 129, a new forecasting effort is appropriate. The Guidelines should set forth the methodology the Commission will use to forecast retail sales by the EDCs, including data collection and analysis. Given the current economic situation, one of the important issues must be what assumptions the Commission should make regarding an economic downturn lasting through the base year period. A forecast that is too high or too low will distort the energy consumption goals of Act 129.

The Guidelines should provide for a process that provides for a draft Commission forecast to be issued by the Commission and for the EDCs and the public to have the opportunity to file written comments and reply comments before the Commission issues the final forecast.

Provisions Made for Weather Adjustments

The Guidelines should address the methodology the Commission will use to make weather adjustments as provided for in §2806.1(c)(1) and (c)(2). What weather data from what cities will be used as the source of the Cooling Degree Day and the Heating Degree Day data for each EDC? How much does a colder-than-normal winter increase electric usage for each EDC, given that the EDCs have different penetration rates for electric heating? How much does a hotter-than-normal summer increase electric usage for each EDC, given the different penetration rates

⁶ *Electric Power Outlook for Pennsylvania 2007-2012*, page 14. This report is available at www.puc.state.pa.us/General/publications_reports/pdf/EPO_2008.pdf.

for air conditioning? The Guidelines need to provide unambiguous guidance about how the Commission will weather normalize the consumption data.

Extraordinary Loads That The Electric Distribution Companies Must Serve

§§2806.1(c)(1) and (c)(2) direct the Commission to adjust for “extraordinary loads that the electric distribution companies must serve.” TRF doubts the term means the EDC’s obligation to serve default service customers, but just what is included in this ambiguous term besides a declared state emergency? The Guidelines need to define an extraordinary load, make clear how it is to be measured and how the forecast and the future consumption data are to be adjusted to account for any extraordinary loads.

TRF’s Placeholder Base Year Forecast

Using data from the *Electric Power Outlook for Pennsylvania 2007-2012* report, TRF came up with its crude placeholder forecast for the base year of June 1, 2009 through May 31, 2010. TRF is not suggesting that this forecast has any validity other than to serve a very rough guidance for answering some of the implementation questions raised by Act 129. TRF began with the 2007 retail sales data contained in Table 2.1 of *Electric Power Outlook for Pennsylvania 2007-2012*. TRF did not weather-normalize the 2007 data. The raw 2007 data was projected forward by inflating the residential sales by 1.5% per year, the commercial sales by 1.6% per year, the industrial sales by 1.1% per year and the other sales by 1.4% per year. Because Act 129 addresses only retail sales, the sales for resale were excluded from the table. To convert from the calendar year, TRF took 7/12’s of the 2009 forecast and 5/12’s of the 2010 forecast.⁷

These calculations resulted in the following:

Base Year Sales Forecast - 06/01/09 - 05/31/10

EDC	Residential (MWH)	Commercial (MWH)	Industrial (MWH)	Other (MWH)	Total (MWH)
Duquesne	4,364,906	6,978,205	3,229,490	69,589	14,642,189
Met-Ed	5,800,425	4,899,512	4,099,299	35,831	14,835,067
Penelec	4,661,702	5,339,982	4,733,125	42,628	14,777,438
Penn Power	1,751,546	1,468,924	1,670,734	6,715	4,897,919
PECO	13,981,779	9,239,610	17,026,679	962,267	41,210,336
PPL	14,938,976	14,293,946	9,735,798	233,611	39,202,331
West Penn	7,531,895	5,193,535	8,378,320	53,764	21,157,514
Totals:	53,031,229	47,413,715	48,873,445	1,404,404	150,722,793

TRF hopes that the Guidelines provide a far better methodology and process for developing the very important forecast for EDC sales from June 1, 2009 through May 31, 2010.

⁷ TRF will share its Excel file used to generate this table with any interested party.

The 1% and 3% Goals – Reduction or Savings?

Act 129's goals for reducing electricity consumption by 2011 and by 2013 are contained in §2806.1(c) which reads:

(c) Reductions in consumption.--The plans adopted under subsection (b) shall reduce electric consumption as follows:

(1) By May 31, 2011, total annual weather-normalized consumption of the retail customers of each electric distribution company shall be reduced by a minimum of 1%. The 1% load reduction in consumption shall be measured against the electric distribution company's expected load as forecasted by the commission for June 1, 2009, through May 31, 2010, with provisions made for weather adjustments and extraordinary loads that the electric distribution company must serve.

(2) By May 31, 2013, the total annual weather-normalized consumption of the retail customers of each electric distribution company shall be reduced by a minimum of 3%. The 3% load reduction in consumption shall be measured against the electric distribution company's expected load as forecasted by the commission for June 1, 2009, through May 31, 2010, with provision made for weather adjustments and extraordinary loads that the electric distribution company must serve.

A fundamental issue that needs to be addressed in the Guidelines is what is the meaning of the §2806.1(c) phrase “measured against the electric distribution company's expected load as forecasted by the commission for June 1, 2009, through May 31, 2010...” Are the 1% and 3% goals are a reduction in sales from the base year (the reduction approach) or a quantification of the savings that must be achieved (the savings approach).

The Reduction Approach

Under the reduction approach to the §2806.1(c) goals, Act 129 would require retail sales in the year ending May 31, 2011 are to be at a level 1% lower than the forecasted sales of the base year of June 1, 2009 through May 31, 2010. In the year ending May 31, 2013, the retail sales are to be 3% lower than the base year's forecasted sales. With the reduction approach, the EDCs would be responsible for deploying energy efficiency and conservation programs at the level needed to reduce retail sales to hit the 2011 sales target of 99% of the base year sales and the 2013 sales target that is 97% of the base year sales.

Using TRF's placeholder forecast described earlier, the reduction approach would require retail sales to be reduced as follows:

Annual Sales Forecasts

EDC	Base Year Forecast (MWHs)	2011's 1% Reduction Goal (MWHs)	2013's 3% Reduction Goal (MWHs)
Duquesne	14,642,189	14,495,767	14,202,923
Met-Ed	14,835,067	14,686,716	14,390,015
Penelec	14,777,438	14,629,663	14,334,114
Penn Power	4,897,919	4,848,940	4,750,982
PECO	41,210,336	40,798,232	39,974,026
PPL	39,202,331	38,810,308	38,026,261
West Penn	21,157,514	20,945,939	20,522,789
Totals:	150,722,793	149,215,566	146,201,110

TRF expanded its forecast spreadsheet to calculate how many megawatt-hours (MWHs) need to be saved to hit these targets. TRF calculated a business-as-usual forecast for June 1, 2010 through May 31, 2011 by growing the base year numbers for one year at the same growth rates used to calculate the base year. The difference between the 2011 reduction goals and the 2011 business-as-usual forecast is the quantity of MWHs that the EDC efficiency and conservation programs must save in order to meet the 1% reduction goal. The table below shows the MWH savings that need to be realized in the 19 months⁸ prior to May 31, 2011 to meet the 1% reduction goal:

Savings Required to Meet the 1% Reduction Goal

EDC	Residential (MWH)	Commercial (MWH)	Industrial (MWH)	Other (MWH)	Total (MWH)
Duquesne	109,123	181,433	67,819	1,670	360,045
Met-Ed	145,011	127,387	86,085	860	359,343
Penelec	116,543	138,840	99,396	1,023	355,801
Penn Power	43,789	38,192	35,085	161	117,227
PECO	349,544	240,230	357,560	23,094	970,429
PPL	373,474	371,643	204,452	5,607	955,175
West Penn	188,297	135,032	175,945	1,290	500,564
Totals:	1,325,781	1,232,757	1,026,342	33,706	3,618,585

⁸ The 19 months is based on the assumption that the statutory deadlines of EDC plan submission by July 1, 2009 (per §2806.1(b)(1)(i)) and Commission approval by 120 days (per §2806.1(e)) are met. That would mean that EDC plan implementation could start November 1, 2009.

Assuming the EDCs have met the 1% reduction goal on May 31, 2011, the table below shows the additional MWH savings that need to be realized to meet the 3% reduction goal on May 31, 2013:

Additional Savings Required to Meet the 3% Reduction Goal

EDC Served	Residential (MWH)	Commercial (MWH)	Industrial (MWH)	Other (MWH)	Total (MWH)
Duquesne	217,908	362,402	135,315	3,334	718,959
Met-Ed	289,573	254,449	171,760	1,717	717,498
Penelec	232,725	277,324	198,317	2,043	710,408
Penn Power	87,442	76,286	70,003	322	234,053
PECO	698,009	479,845	713,414	46,106	1,937,374
PPL	745,795	742,334	407,928	11,193	1,907,250
West Penn	376,013	269,718	351,050	2,576	999,357
Totals:	2,647,465	2,462,357	2,047,787	67,291	7,224,900

It should be noted that TRF's spreadsheet methodology for the reduction approach somewhat overstates the number of MWHs that must be saved in the preceding two tables because it does not assume any savings until the year immediately preceding the compliance date. Because the growth rate is compounded, reductions earlier in the time period would have a greater impact and reduce the total number of MWHs that must be saved to attain the sales targets.

The Savings Approach

The other approach to interpret the §2806.1(c) goals is the savings approach, which interprets the 1% and 3% goals as describing the quantity of MWHs the EDC programs must save. The savings goals are easy to calculate, being simply 1% and 3% of the base year sales figures. The table below shows the number of MWHs each EDC must save to meet in 1% savings goal by May 31, 2011.

Savings Required to Meet the 1% Savings Goal

EDC	Residential (MWH)	Commercial (MWH)	Industrial (MWH)	Other (MWH)	Total (MWH)
Duquesne	43,649	69,782	32,295	696	146,422
Met-Ed	58,004	48,995	40,993	358	148,351
Penelec	46,617	53,400	47,331	426	147,774
Penn Power	17,515	14,689	16,707	67	48,979
PECO	139,818	92,396	170,267	9,623	412,103
PPL	149,390	142,939	97,358	2,336	392,023
West Penn	75,319	51,935	83,783	538	211,575
Totals:	530,312	474,137	488,734	14,044	1,507,228

The table below shows the additional number of MWHs each EDC must save to meet in 3% savings goal by May 31, 2013.

Additional Savings Required to Meet the 3% Savings Goal

EDC	Residential (MWH)	Commercial (MWH)	Industrial (MWH)	Other (MWH)	Total (MWH)
Duquesne	87,298	139,564	64,590	1,392	292,844
Met-Ed	116,008	97,990	81,986	717	296,701
Penelec	93,234	106,800	94,662	853	295,549
Penn Power	35,031	29,378	33,415	134	97,958
PECO	279,636	184,792	340,534	19,245	824,207
PPL	298,780	285,879	194,716	4,672	784,047
West Penn	150,638	103,871	167,566	1,075	423,150
Totals:	1,060,625	948,274	977,469	28,088	3,014,456

One question that arises under the savings approach is whether the quantity of savings identified for the 2011 and the 2013 goals must be achieved in the 12 months prior to May 31, 2011 and May 31, 2013, or whether the savings can be spread out over the prior years. For example, do the energy savings realized prior to June 1, 2010 count towards the 2011 goal of 1,507,228 MWH saved? Or does the entire savings goal of 1,507,228 MWHs saved need to be saved during the 12 months prior to May 31, 2011? The distinction is clearer on the following tables.

Under the first savings scenario, the assumption is that the savings goal is met only when the savings realized in the 12 months preceding the date of the goal (May 31, 2011 and May 31, 2013). Since energy efficiency and conservation measures result in savings for the useful life of the measures, the measures installed prior to May 31, 2010 are still producing savings in 2011, but only the savings from these prior year measures that are realized in the 12 months before May 31, 2011 are counted as part of the current year savings. As shown on the table below, the EDCs can meet the 1% goal in 2011 by saving 0.25% in 2010 and 0.75% in 2011.

Savings Needed Assuming Savings Must Occur in Year of Goal

12 Months Ending	Savings (%)	Savings from Measures Installed in Current Year (MWH)	Current Year Savings from Measures Installed in Current and Prior Years (MWH)	Cumulative Savings to Date (MWH)
May 31, 2010	0.25%	376,807	376,807	376,807
May 31, 2011	0.75%	1,130,421	1,507,228	1,884,035
May 31, 2012	0.85%	1,281,144	2,788,372	4,672,407
May 31, 2013	1.15%	1,733,312	4,521,684	9,194,090

As of May 31, 2011, the total measures installed are generating savings at an annual rate of 1,507,228, which is the 1% savings target.

In the second savings scenario shown on the table below, the goal is the cumulative savings realized, not an annual rate of savings. By May 31, 2011, the annual rate of savings is only 1,130,421 MWHs a year, but since the savings realized are counted towards the total, the 1% goal is deemed met. Because the savings accumulate, the EDCs can satisfy the savings goal with even fewer installed measures, particularly in the latter years. The total savings realized in the table below over the four program years is less than half the savings in the previous table.

Savings Needed Assuming Savings Can Be Cumulative

12 Months Ending	Savings (%)	Savings from Measures Installed in Current Year (MWH)	Current Year Savings from Measures Installed in Current and Prior Years (MWH)	Cumulative Savings to Date (MWH)
May 31, 2010	0.25%	376,807	376,807	376,807
May 31, 2011	0.50%	753,614	1,130,421	1,507,228
May 31, 2012	0.15%	226,084	1,356,505	2,863,733
May 31, 2013	0.20%	301,446	1,657,951	4,521,684

While these two scenarios of the savings approach do save energy, total consumption increases steadily since the savings never exceed the growth in consumption. Retail sales grow from the Base Year levels throughout the years and is never reduced below the Base Year level:⁹

Total Sales Under the Two Savings Scenarios

12 Months Ending	Forecast Assuming Goal Requires Savings to Occur in Year of Goal (MWH)	Forecast Assuming Goal Recognizes Cumulative Savings (MWH)
May 31, 2010	150,345,986	150,345,986
May 31, 2011	151,320,409	151,697,216
May 31, 2012	152,157,751	153,594,893
May 31, 2013	152,554,648	155,443,776

⁹ TRF acknowledges the work of Kevin Warren of Warren Energy Engineering LLC in creating the spreadsheets that appear on the bottom of the previous page and the top of this page and for his critique of the TRF forecasting spreadsheets that appear elsewhere in this document.

Why TRF Supports the Reduction Approach

TRF believes the §2806.1(c) language “[t]he 1% [or 3%] load reduction in consumption shall be measured against the electric distribution company's expected load as forecasted by the commission for June 1, 2009, through May 31, 2010...”, means an absolute reduction in consumption from the Base Year levels. The goal of Act 129 is not to slow down the increases in retail sales but to reduce those sales.

Act 129 uses the words “reduction” or “reduce” a total of 34 times throughout the energy efficiency and conservation program section of the legislation. Typical of these is §2806.1(b)(1)(i)(a), which requires the EDC plans “to implement energy efficiency and conservation measures to achieve or exceed the required reductions in consumption under subsections (c) and (d)” [emphasis added].¹⁰

In contrast, the term “savings” appears only twice in the legislation and one of those references (§2806.1(d)(2)) is to financial savings. The only reference to “savings” of energy is §2806.1(i)(1)(ii), which requires the annual reports from the EDCs to the Commission to include “[m]easurement and verification of energy savings under the plan” [emphasis added].

It is obvious that the General Assembly intended Act 129 to reduce consumption and peak demand. Only the reduction approach guarantees a reduction in total consumption. The savings approach reduces consumption less than it might otherwise be under business-as-usual, but as was shown in the previous section, an EDC could satisfy the 1% and 3% goals under the savings approach and still see consumption grow during the years of its plan. That is inconsistent with a plain reading of Act 129.

TRF also believes that the reduction approach to Act 129's goals would be easier to verify by simply examining EDC retail sales data. Under the sales approach, a decision as to whether an EDC satisfied the savings goal requires extensive quantification of program savings. This quantification is important under either approach, but under the savings approach, the threat of civil fines and the mandatory loss of program responsibility will surely turn evaluation into a drawn-out consultant duel involving competing evaluations and models. The decision on such a critical question as satisfaction of the goals should be as straight-forward as possible, and that happens only with the reduction approach.

One criticism of the reduction approach goals is that they could be satisfied by a drop in retail sales due to rate shock, economic recession or factors having nothing to do with the EDC's efficiency and conservation programs. The savings approach, this thinking suggests, would better guarantee predictable program sizes and program budgets since the savings targets would

¹⁰ The other 33 uses of the word “reduction” or “reduce” are in §2806.1(a); §2806.1(a)(4); §2806.1(a)(6); §2806.1(a)(8); §2806.1(a)(9); §2806.1(b)(1)(i)(a); §2806.1(b)(1)(i)(b); §2806.1(b)(1)(i)(d); §2806.1(b)(1)(ii); §2806.1(b)(1)(i)(a); §2806.1(b)(2); §2806.1(b)(3); §2806.1(c); §2806.1(c)(1); §2806.1(c)(2); §2806.1(c)(3); §2806.1(d); §2806.1(d)(1); §2806.1(e)(1); §2806.1(f)(2); §2806.1(f)(2)(i); §2806.1(f)(2)(ii); §2806.1(f)(2)(ii)(a); §2806.1(k)(2); §2806.1(k)(3); §2806.1(m)'s definition of “Conservation service provider”; and §2806.1(m)'s definition of “Energy efficiency and conservation measures.”

need to be met regardless of what was happening to overall EDC sales. TRF doubts that this fear will materialize. It is not clear that retail electricity sales are hit as hard as other market sectors by a recession. In a 2002 paper entitled *Recession Lessons*, the authors Tip Kim and John Barrett of L.E.K. Consulting analyzed the impact of ten post-WWII recessions on numerous industry sectors and found that residential electricity sales experienced accelerated growth during recessionary periods and that commercial and other electricity sales maintained their growth rates.¹¹

Another criticism of the reduction approach is that it makes the goals significantly larger than the savings approach. The goals under the reduction approach are indeed stretch goals, but they are what are needed in order to bring electricity prices down, to stimulate a new wave of economic development around clean energy and to make a serious improvement to Pennsylvania's public health and environment. Exelon is showing the way by its commitment to reduce its corporate energy consumption by 25% over the next five years.¹² No one who studies energy issues doubts that a 3% reduction in electricity consumption is feasible and cost effective, but we all agree it will take some concentrated effort. TRF urges the Commission to join the General Assembly and the Governor and to issue Guidelines that clearly state the 1% and 3% goals in Act 129 are true reductions and not simply minor adjustments to relentless growth.

Should the Goals Apply to the EDC as a Whole or to Each Individual Customer Class?

Act 129 is ambiguous about whether the goals must come proportionally from all customer classes. §2806.1(a)(5) requires that the Commission's guidelines include standards "to ensure that each plan includes a variety of energy efficiency and conservation measures and will provide the measures equitably to all classes of customers." §2806.1(a)(11) prohibits cross-class subsidization of program costs by requiring that measures "are financed by the same customer class that will receive the direct energy and conservation benefits." §2806.1(b)(1)(i)(i) requires that the EDC plans provide "a diverse cross section of alternatives for customers of all rate classes."

TRF recommends that the Commission consider requiring that the EDCs achieve the consumption reduction goals for each customer class rather than for the retail sales as a whole. This is the most direct way to ensure that a "variety" of energy efficiency and conservation opportunities are provided "equitably" to each customer class.

If the Commission does not support the concept of customer class goals, then the Guidelines will need to address some other standard to assessing whether the utility plan provides a "variety" of energy efficiency and conservation opportunities are provided "equitably" to each customer class. TRF believes it is not enough to offer a comparable number of programs, but the test also needs to include whether the programs are being used by the customers in some proportional

¹¹ *Recession Lessons* is available at www.lek.com/UserFiles/File/recessionlessons.pdf.

¹² See http://findarticles.com/p/articles/mi_m0EIN/is_2008_Oct_15/ai_n30894617.

way and whether consumption and peak demand reductions are being realized by customer classes in some proportional fashion.

ACT 129's GOALS FOR REDUCING PEAK DEMAND

§2806.1(d)(1) contains the Act's goal for reductions in peak demand:

(d) Peak demand.--the plans adopted under subsection (b) shall reduce electric demand as follows:

(1) By May 31, 2013, the weather-normalized demand of the retail customers of each electric distribution company shall be reduced by a minimum of 4.5% of annual system peak demand in the 100 hours of highest demand. The reduction shall be measured against the electric distribution company's peak demand for June 1, 2007, through May 31, 2008.

The peak demand goal avoids the forecasting issues presented in §2801(c) since the peak demand reductions are to be measured against historic demand levels for the period June 1, 2007 through May 31, 2008, but there are several issues involving the demand reduction goal that the Commission's Guidelines should address to avoid confusion.

The Top 100 Hours for Each Separate EDC or for the System as a Whole?

§2806.1(d)(1) requires a reduction of 4.5% of "annual system peak demand in the 100 highest hours of highest demand." Since Pennsylvania's EDCs experience their 100 hours of highest demand at different dates and times, the question arises whether the 100 hours of highest demand are to be calculated separately for each EDC or whether the 100 hours of highest demand on the "system" are used to calculate the necessary demand reductions.

TRF suggest that the phrase "annual system peak demand" indicates the 100 hours should be the 100 hours when system peak was at its highest levels. For Duquesne, Met-Ed, Penelec, PECO, PPL and West Penn, the system is PJM. For Penn Power, the system is MISO. This makes sense as the hours when the peak is highest for the system are the hours when prices are at their highest. An individual EDC peak for an hour when the system was not experiencing a peak would not likely result in power costs as expensive as during times of system peak.

The Commission's Guidelines should identify the 100 hours of highest system peak demand for both PJM and MISO during the base year period of June 1, 2007 through May 31, 2008. The Guideline should also identify the peak demand levels for each of the EDCs during those hours.

The 4.5% Demand Reduction Goal – Reduction or Savings?

Many of the same issues discussed earlier about consumption reduction apply to the demand reduction goals. TRF believes the 4.5% reduction goal should be an absolute reduction as opposed to a demand savings equal in MW to 4.5% of the demand during the 100 hours of

highest system demand. The purpose of Act 129 is to reduce peak demands, not just to nibble away at them a bit.

Should the Goal Apply to the EDC as a Whole or to Each Individual Customer Class?

Because of the ease of obtaining demand reductions for large power consumers - and the lower cost of those reductions - TRF does not recommend that the demand reduction goal should be applied to each individual customer class. That said, the Guidelines will need to develop a standard for assessing whether the EDC's plans satisfy the §2806.1(a)(5) requirement that the plans provides a "variety" of energy efficiency and conservation opportunities are provided "equitably" to each customer class.

MID COURSE CORRECTIONS

Act 129 calls for a five-year plan cycle, but it recognizes that mid-course corrections may be required as the EDC plans are implemented and experience is gained. The EDC plans need the ability to adjust to changes and new opportunities. §2806.1(a)(6) requires the Commission to establish "[p]rocedures to make recommendations as to additional measures that will enable an electric distribution company to improve its plan and exceed the required reductions in consumption under subsections (c) and (d)."

§2806.1(b)(2) gives the Commission authority to "direct an electric distribution company to modify or terminate any part of a plan approved under this section if, after an adequate period for implementation, the commission determines that an energy efficiency or conservation measure included in the plan will not achieve the required reductions in consumption in a cost-effective manner under subsections (c) and (d)."

TRF urges the Commission to provide a process in the Guidelines for reviewing the annual independent evaluation reports prepared under §2806.1(b)(1)(i)(j) and for determining the proper response. This process should include the Commission, the EDC, the Office of Consumer Advocate, the Office of Small Business Advocate and the public. How plans are to be revised is a very important element of the Guidelines.

EDC PLANS AND PROCESS

Act 129 rightly establishes a multi-year planning cycle for energy efficiency and conservation programs. If the funding commitment is too short, there can be significant disruption in the energy efficiency marketplace that will undermine long-term transformation in the market. This is particularly true if programs are initially under-funded, so that funding runs out after only a short time. A five year planning cycle may provide a good balance of program responsiveness and flexibility on one hand, and market stability on the other.

Effective programs will rely upon a network of energy efficiency allies and service providers. These include manufacturer representatives, lighting contractors, design engineers and traditional Energy Service Companies (ESCOs). These entities can only promote the program effectively if they know that the funding will be available at the end of their sales cycle. Many projects, particularly ESCO performance contracts, have very long sales cycles. Also, some programs might require several years to achieve cost-effectiveness and it is important to allow a reasonable “development” period for programs to take hold.

The Commission should focus on the program portfolio rather than individual programs.

Pre-Submission Collaboration

TRF urges the Commission to require the EDCs to use a collaborative process with stakeholders to design the program plans because this will result in better plans and will simplify the approval process. There are many entities in Pennsylvania with energy efficiency and conservation expertise and the EDCs should be directed to work collaboratively with these entities in the design of their programs.

Multi-EDC Programs

TRF also urges the Commission to direct the EDCs to collaborate with each other in proposing programs that span the service territories of multiple EDCs. For example, a respected program such as *Home Performance with ENERGY STAR* can be expected in every EDC plan, but it makes no sense for all seven EDCs to be individually administering the program and creating multiple brands that confuse the public. In such a case, the Commission Guidelines should propose some process for the EDCs to jointly propose programs that are administered state-wide by a single conservation service provider.

EDC Plan Contents

§§2806.1(a) and (b) contain multiple requirements for the EDC plans. The Guidelines should develop a clear outline or template for the EDC plans that address all of the content requirements of §§2806.1(a) and (b). The Guidelines should specify what information the Commission requires about each program.

Commission Procedures

Act 129 direct the Commission to develop procedures and methodologies for addressing many different issues:

- §2806.1(a)(1) calls for “procedures for the approval of plans submitted under subsection (b).”
- §2806.1(a)(2) requires the Commission to have “[a]n evaluation process, including a process to monitor and verify data collection, quality assurance and results of each plan and the program.”

- §2806.1(a)(3) suggests a methodology for the “analysis of the cost and benefit of each plan submitted under subsection (b) in accordance with a total resource cost test approved by the commission.”
- §2806.1(a)(4) requires “[a]n analysis of how the program and individual plans will enable each electric distribution company to achieve or exceed the requirements for reduction in consumption under subsections (c) and (d).”
- §2806.1(a)(5) calls for “[s]tandards to ensure that each plan includes a variety of energy efficiency and conservation measures and will provide the measures equitably to all classes of customers.”
- §2806.1(a)(6) requires the development of “[p]rocedures to make recommendations as to additional measures that will enable an electric distribution company to improve its plan and exceed the required reductions in consumption under subsections (c) and (d).”
- §2806.1(a)(7) mandates “[p]rocedures to require that electric distribution companies competitively bid all contracts with conservation service providers.”
- §2806.1(a)(8) directs the Commission to develop “[p]rocedures to review all proposed contracts prior to the execution of the contract with conservation service providers to implement the plan.”
- §2806.1(a)(9) calls for “[p]rocedures to ensure compliance with requirements for reduction in consumption under subsections (c) and (d).”

The Guidelines should address each of these issues and describe the procedure or the methodology the Commission will employ in each. The Guidelines should clearly state the criteria and methodology should the Commission use to determine whether a utility’s plan will enable it to meet the consumption reductions goals and the peak demand reduction goals.

EVALUATING COST EFFECTIVENESS

Evaluation is critical in determining the effectiveness of the programs and their impact on energy usage and demand. Evaluation is also the primary vehicle for uncovering opportunities for improving the programs from year to year. Evaluation must be a critical component of the program from the start and should be addressed in the initial program designs.

§2806.1(b)(1)(i)(j) requires the EDC to obtain an annual evaluation by an independent evaluator of the cost-effectiveness of the plan. The Commission is required by §2806.1(a)(2) to develop an “evaluation process, including a process to monitor and verify data collection, quality assurance and results of each plan and the program.”

Good evaluation is not inexpensive. The EDC plans and budgets must reserve adequate funding to support a strong evaluation effort.

Total Resource Cost Test

§2806.1(m) provides a definition of "Total resource cost test" and states:

“[a] standard test that is met if, over the effective life of each plan not to exceed 15 years, the net present value of the avoided monetary cost of supplying electricity is greater than the net present value of the monetary cost of energy efficiency conservation measures.”

TRF recommends that the Commission take advantage of the experience other states have with evaluating demand resource programs. The widely-recognized model is the California Public Utility Commission’s Energy Efficiency Policy Manual, Version 4.0.¹³ TRF recommends that the Guidelines adopt the California Policy Manual.

There are other costs borne by the EDC that should be included in the total resource cost test. The reduction or avoidance of environmental pollution compliance costs are one example. Another is the reduced risk of terminations of low income customers, with all of the EDC costs associated with those terminations.

An important topic in these times for the total resource cost test is the set of assumptions about fossil fuel prices included in the model.

The Commission needs to provide guidance on all of these issues in the Guidelines.

Other Methods of Evaluating Cost Effectiveness

In evaluating program effectiveness, §2806.1(c)(3) states the Commission’s evaluation “shall be consistent with a total resource cost test or a cost-benefit analysis determined by the Commission.” [emphasis added].

In addition to the standard total resource cost test, TRF urges the Commission to also consider the Societal Benefits Test, which also considers impacts such as economic development and employment, public health and environmental benefits. The EDCs and their independent evaluators should collect data on these topics as well so the Commission can weigh these impacts.

¹³ Version 4.0 of the Manual is available at www.cpuc.ca.gov/NR/rdonlyres/2737D0E6-7163-46ED-B6DA-16A817FF3AF8/0/PolicyManualv4.pdf.

CONSERVATION SERVICE PROVIDER CONTRACTS

Act 129 envisions the EDC's plans being implemented in whole or in part by conservation service providers under contract with the EDC. §2806.1(a)(10) contains a "requirement for the participation of conservation service providers in the implementation of all or part of a plan." §2806.1(b)(1)(i)(e) requires the EDC plan to "include a contract with one or more conservation service providers selected by competitive bid to implement the plan or a portion of the plan as approved by the commission."

The Commission is directed by §2806.1(a)(7) to develop "[p]rocedures to require that electric distribution companies competitively bid all contracts with conservation service providers" and by §2806.1(a)(8) to develop "[p]rocedures to review all proposed contracts prior to the execution of the contract with conservation service providers..."

The Guideline will need to provide procedures to competitive bidding and Commission review. Standards for approving or rejecting proposed contracts will also need to be addressed in the Guidelines.

THE REGISTRY OF CONSERVATION SERVICE PROVIDERS

Act 129 adds a new §2802 that is a registry of conservation service providers. The section reads:

§ 2806.2. Energy efficiency and conservation.

(a) Registry.--The commission shall, by March 1, 2009, establish a registry of approved persons qualified to provide conservation services to all classes of customers. In order to be included in the registry, a conservation service provider must meet experience and other qualifications determined by the commission.

(b) Application.--The commission shall develop an application for registration under subsection (a) and may charge a reasonable registration fee.

This section raises several issues that the Guidelines need to address. The task of populating the Registry will be ongoing, but the Registry's basic features should be presented in the Guidelines.

What Kind of Contractors Should be Included in the Registry?

The definition of "energy efficiency and conservation measures" contained in § 2806.1(m) contains a long list of measures, including:

"... solar or solar photovoltaic panels, energy efficient windows and doors, energy efficient lighting, including exit sign retrofit, high bay fluorescent retrofit and pedestrian and traffic signal conversion, geothermal heating, insulation, air sealing, reflective roof coatings, energy efficient heating and cooling equipment

or systems and energy efficient appliances and other technologies, practices or measures approved by the commission.”

The first question about the registry is whether it should include contractors that install or provide all of these technologies and services. TRF believes the answer needs to be yes and that the list should be expanded to cover products and services that are likely to be included in the EDC programs to reduce consumption and/or reduce peak demand for residential, commercial and industrial customers.

TRF recommends that the Guidelines indicate the list of energy technologies, products and services that are provided by contractors who will be included in the Register of Energy Contractors. EDCs that are considering additional technologies or services would be expected to suggest additions to the Registry list of technologies and services.

Should the Registry Listing be for Individuals or for Companies?

One issue that arises with similar contractor lists is whether the Registry should list individuals or companies. If a company is listed, the customer does not know if the person working on his job is the one who met the listing criteria or was it someone back in the office. TRF supports the listing of both companies and the individuals within the company that satisfy the listing criteria.

What are the Criteria for Listing?

TRF suggests that the Guidelines must establish training and experience criteria that must be satisfied in order for a contractor to be listed on the Registry. § 2806.2(a) states that “[i]n order to be included in the registry, a conservation service provider must meet experience and other qualifications determined by the commission.” These criteria for listing will vary for each different type of contractor that is included in the Registry.

TRF has experience with creating a list of “participating contractors” for the Sustainable Development Fund’s Solar PV Grant Program and it was not a simple matter. To the extent possible, the Commission should rely on national standards and national credentialing organizations, where they exist.

What Should Cause a Contractor to be De-Listed from the Registry?

The Guidelines will need to develop criteria for removing contractors from the Registry who fail to meet basic standards of proficiency or who commit criminal or tortuous acts against their customers or clients. As with the listing criteria, these de-listing criteria will vary to some extent for each type of contractor.

What Format Should the Registry Have?

TRF suggests that the Registry should be web-based, allowing users to search for contractors by name, category and distance. The Registry website should also be where contractors can apply

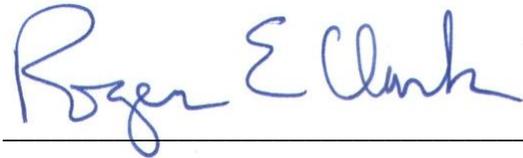
for listing, where EDCs and customers can find contractors and where customers can submit complaints against contractors.

CONCLUSION

The goal of the Guidelines is to provide certainty to the Commission staff, the EDCs and the public about the necessary elements of the EDC plans that must be filed with the Commission by July 1, 2009. To the extent humanly possible, the Commission should work to reduce all uncertainty about the provisions of Act 129. The process of reviewing and approving the EDC plans will benefit from clear and unambiguous Guidelines and save everyone time and effort in the long run.

TRF remains committed to working positively with the Commission, the EDCs and the other stakeholders on the complicated task of implementing Act 129. We appreciate the opportunity to file these comments, we look forward to commenting on the draft Guidelines, and we stand ready to work with all to meet the challenges and realize the opportunities presented by Act 129.

Respectfully submitted,



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