COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION

RECEIVED 2012 APR 17 AM 11:22 PA PUC SECRETARY'S BUREAU

Act 129 Energy Efficiency and Conservation Program Phase Two	Docket No. M-2012-2289411

Initial Comments of Comverge in Response to the PA Act 129 Energy Efficiency and Conservation Program Phase Two Secretarial Letter Dated March 1, 2012

Introduction

On October 15, 2008, House Bill 2200 was signed into law as Act 129 with an effective date of November 14, 2008. Relevant to this docket, Act 129 required Energy Efficiency & Conservation ("EE&C") programs for the Commonwealth's largest electric distribution companies ("EDC"), including Demand Response ("DR") programs, and required that the Pennsylvania Public Utility Commission ("PUC" or "Commission") evaluate the costs and benefits of the EE&C programs by November 31, 2013. Act 129 further directed the Commission to set new incremental consumption and peak demand reductions, if the benefits of the Program and plans exceed the costs.[1]

On March 1, 2012, the Commission issued a Secretarial Letter ("Letter") stating that it "believes advanced planning will enable a smooth and coordinated transition from the Programs' initial phase to a possible second phase and will also minimize any harmful or disruptive breaks between programs"[2]. With the Letter, the Commission has opened a formal regulatory process and is now seeking comments on eight topics germane to

1 See 66 Pa.C.S. §§ 2806.1(c) and (d).

2 See PA PUC Secretarial Letter Dated March 1, 2012 re: Act 129 Energy Efficiency and Conservation Program Phase Two, opening stakeholder discussion in Docket No. M-2012-2289411 (emphasis added).

designing and implementing the next phase of the EE&C Programs created by Act 129. Comverge's comments to each of the Commission's eight topics are outlined below.

Comverge wholeheartedly believes it is imperative that the Act 129 programs continue without any "harmful or disruptive breaks". More importantly, Comverge believes that the statutory intent of Act 129 is that the programs continue in an uninterrupted manner and that reductions beyond those explicitly detailed in the act should be achieved. The statute mandates an EDC obligation that "A new plan shall be filed with the Commission every five years or as otherwise required by the Commission. The plan shall set forth the manner in which the company will meet the required reduction in consumption under subsections (C) and (D)."[3] Subsections (C) and (D) refer to the base reductions in what is now referred to as Phase One <u>and</u> reductions to be achieved in what is now referred to as Phase Two. Clearly, from this section, continued EE&C programs that drive more reductions in consumption and demand were envisioned.

Comverge has a major concern that the consumer-focused residential DR programs will suffer harmful and disruptive breaks in service that were not envisioned by the legislature and that will end up costing Pennsylvania customers significant dollars and that outcome is simply not necessary. We outline below an approach to ensuring that all of the benefits that Pennsylvania customers have secured through Act 129 will be available to them on an ongoing basis. We urge the Commission to consider the Comverge proposal on DR continuation and the other positions it outlines below.

Comverge is one of the nation's leading providers of DR products and services and is the nation's largest provider of DR products and services to residential customers. Comverge has deployed over five million residential DR devices and actively manages DR products with installations at approximately one million residential locations. Comverge has been an active CSP in Pennsylvania and has served several EDCs in the Phase One Act 129 programs and has secured both residential and C&I DR resources in Pennsylvania to ensure the success of the Act 129 legislative goals. Comverge has two offices in Pennsylvania and employs approximately 100 people in the Commonwealth.

---

[3] See 66 Pa. C.S. §§ 2806.1 (B) (II).

Correspondence and pleadings filed in this docket should be directed to the attention of:

Frank Lacey
Vice President
Comverge, Inc
511 Schoolhouse Road
Suite 200
Kennett Square, PA 19348
484-734-2206
flacey@comverge.com
reg-affairs@comverge.com

1. Planning Timeline

In its Letter, the PUC outlined a schedule for this docket which includes a final order in February 2013 and seeks comments on that timeline. Comverge fully supports careful consideration of all of the issues involved with extending Act 129. However, in order to ensure maximum efficiencies and continued program success without interrupting programs' momentum, Comverge asserts that timing is of the essence. As such, Comverge observes that the program schedule set forth in the Letter is consistent with a decision process for EE programs but not for DR programs, particularly residential DR programs.

The published schedule leads to programs that can be fully implemented by June 1, 2013. Comverge does not believe that given the current constraints identified in the Letter that the Commission can effectively gather, review and analyze the data and comments, then mandate an effective DR program by that date. Even if the June 1, 2013 day was met, this timeline implicitly suggests that all recruiting efforts to expand programs between the beginning of this summer and June 1, 2013 would be put on hold.[4] This would effectively mitigate the very important customer momentum for

[4] It is true that most, if not all of the DR contracts signed run through May 31, 2013. To be clear, however, they generally move to maintenance mode after May 2012. Program growth will effectively stop in just a few short weeks. As described more fully internally, Comverge does not believe that the Commission can run a regulatory process that is dependent on submission of the cost effectiveness study and have that process completed in time for a June 2013 program start.

support of the programs that the EDCs have carefully built during the previous two years. That timing gap will lead to harmful and disruptive breaks in the DR programs. As a result of this conflict, Comverge proposes a separate Order issued on May 10 that effectively coordinates a Phase Two transition for DR programs. This proposal and the reasoning for it are discussed in more detail below.

Most significantly, data from DR programs necessary for the State Wide Evaluator ("SWE") to conduct its cost-effectiveness analysis on DR will not be available until October 2012, at the earliest. Analysis of the data and the multi-step process needed to translate the analysis into final Commission determination on DR programs will take additional months, almost certainly into 2013. Commission staff indicated at the March 16th stakeholder meeting that DR continuation will require another formal round of comments. Given that the regulatory review timeline outlined in the Letter is five months, Comverge does not believe that a review process for DR that includes the incremental steps of gathering and analyzing the data required to perform the cost-effectiveness study, then preparing and submitting that study for Commission review, and then conducting all of the due processes associated with the DR review, can be accomplished such that the programs can be implemented in time for summer of 2013. In other words, given the current set of circumstances, if the schedule is followed as currently envisioned, further DR activity will not be re-launched until the summer of 2014.

As a result of necessary timeline in the review of DR programs, Comverge respectfully requests that the Commission issue along with its Tentative Order scheduled for release on May 10, a definitive Temporary DR Continuation Order ("TDRC Order") temporarily extending all of the programs and program elements, allowing for continued momentum of the programs, consistent with the legislative intent. The specific details of this extension are discussed below. In this scenario, if DR programs are modified, rather than simply continued beyond 2013, a base will be preserved from which changes can be made. At best, if the SWE determines that DR is cost-effective, harmful and disruptive breaks in programs will be avoided and state-wide benefits will be maintained.

Effectively, that creates a two-year gap in DR programs that will be harmful and disruptive to customers.

At worst, if the SWE determines that DR is not cost-effective, customers can be fully informed about the end of programs and the programs can be more smoothly transitioned to completion.

Comverge has developed a national and international business in utility DR programs and approaches Act 129 with that experience and perspective. As such, Comverge is confident that the SWE will reach the conclusion that the benefit of DR programs to Pennsylvanians is quite significant and presents some qualitative analysis to support this premise below. However, without additional action from the Commission on May 10, the ongoing performance of DR programs will be significantly weakened. An extension of DR programs along with the May 10, 2012 Tentative Order will establish continuity until the Commission's determination of its policy on the future of Act 129 DR programs. Comverge estimates that the formal Commission review of DR programs could be completed before December 31, 2013, and as such, Comverge also suggests that the Commission establish a separate schedule, distinct from the schedule in the Letter, for full resolution of all issues related to DR.

Short-term DR Extension

The need for short-term extension of DR is inherent in program design. Other than implementing curtailments in the summer of 2012 and maintaining the program infrastructures, the significant workload (customer education, customer recruitment and device installations) for the DR programs will end May 31, 2012. If this interruption occurs, Comverge sees several risks. First, in direct contrast to the stated desire to "minimize any harmful or disruptive breaks between programs"[5], if the PUC does not extend the DR programs and program elements, it will create a very disruptive environment for customers who have opted in to the DR programs. For example, in the residential programs, customers are recruited based on a promise to compensate them for their participation. Unless the Commission temporarily extends the existing DR programs, customers will not know what the future compensation and program parameters will be and may drop from the program due to the uncertainty. If DR programs are later restarted, many of the program costs incurred to date will have to be

[5] Secretarial Letter, p.1.

re-spent to secure the departed customers or replacement customers to achieve the same level of load reductions going forward. Without the temporary extension, the DR programs will suffer harmful and disruptive breaks.

Second, residential DR programs can capitalize on momentum in growth. For example, in the Act 129 residential DR programs, incentives are paid to customers who participate in the programs. Word of mouth about these programs, as well as momentum from marketing efforts helps expand these programs. That momentum is poised to stop completely at the end of May, 2012 as the marketing, recruitment and growth components of these programs are scheduled to cease. The remaining contract term will be limited to executing the DR curtailments, program oversight and limited amounts of maintenance on the existing DR units installed.

Third, continuation of DR programs will provide stability in reliability planning. PJM, the regional grid operator, uses peak demand figures in the top five demand hours in the current year to project and allocate costs for capacity needs for the following year. Because the Act 129 load drop requirements are fairly significant, a "stop and go" approach will have a hiccup effect on reliability planning. Stated another way, the grid operator's practice is to calculate peak load requirements for the instant year based, in part, on DR performance in the immediately previous year If these resources are not available, there could be a potential capacity mis-calculation in the event that the programs stop. The result will be that increased amounts of high priced capacity will have to be purchased from generating units.

This hiccup, while not likely to cause a supply interruption in PJM, will have an impact on Pennsylvania's customer's electricity prices. Because of peak load reductions in 2012, PJM will see lower peak consumption in the hours it calculates PLC. The reductions will result in lower allocations of capacity costs (thus lower energy bills) in 2013. If the load reductions don't happen in 2013, the PJM allocations and resulting energy costs will boomerang back up in 2014.

Finally, the benefits originally calculated for demand response will have to be recalculated. The upfront costs of direct load control were weighted against benefits over the life of the installed equipment (the assumptions for equipment life varied across the EDCs). Without a continuation of direct load control, the realized (as opposed to projected) cost to benefit ratio may reverse.

As a result of these risks and consequences of a gap in DR programs, Comverge encourages the Commission to issue a TDRC Order continuing these programs in an uninterrupted manner through December 31, 2013. The recommended extension would permit capture of significant benefits (and avoidance of significant waste) at little added cost. There is no disadvantage to this approach.

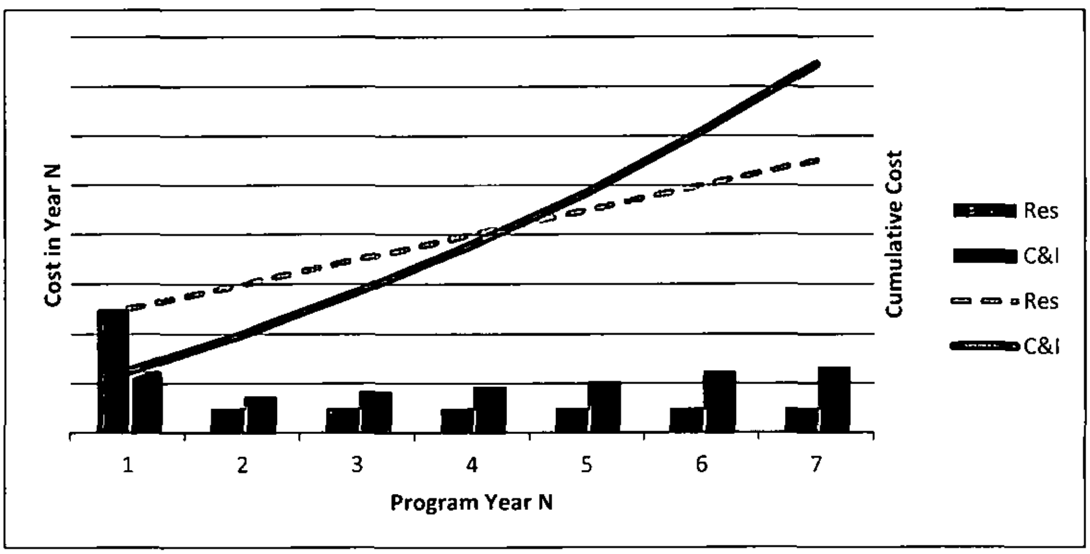
2. Length of Second EE&C Program

Based on extensive experience managing residential DR programs around the country, Comverge believes that an extended term of Act 129 of five years is appropriate. This term ties with the legislative mandate for the Commission to evaluate the costs and benefits of the EE&C programs at least every five years. This term also fairly balances the issues of technology changes, legal changes, and administrative efficiency. A five-year term permits stability of programs but ensures that the impacts of major technology changes, such as the possible impacts of "smart grid" implementation, will be taken into consideration. A five-year term also provides certainty that major legal and regulatory changes, such as national mandates for efficiency or changes in PJM markets, are fully understood and integrated. Finally, administrative costs for program implementation are not only borne by rate payers, but they are also borne by the service providers participating in the proceedings. A five-year term allows those costs to be reasonably spread so that effectiveness is not undermined by excessive administrative costs of shorter-term programs.

However, the five-year term does not imply that contracts for all services should be limited to five years. Specifically for DR, it is difficult to put all resources into a one size fits all time horizon. A five-year term seems to be very appropriate for CSPs to secure and execute C&I DR programs. In that market, customers are more fluid, operations change and businesses are frequently bought and sold. In addition, relative to a *residential customer, the initial capital investment per kW is low and the C&I customer* base is less likely to sign an extended term contracts. In contrast, a residential DR resource has a higher start-up cost, due to the relative $/kW cost of customer recruitment, initial equipment cost (direct control unit, controllable thermostat, or other) and installation thereof on a permanent basis at a property. The residential resource has a higher initial $/kW cost but a lower long-term unit cost.

The figure below shows Comverge's experience of relative program costs as a function of time. As the graph shows, cost-effectiveness tips to residential programs over time. The *inflection point where residential programs are more economic per MW is usually* between years four and five.

Figure 1: The Inflection Point – Relationship of Residential to C&I Total Cost



Comverge views (and the Commission should view) aggregated residential DR in much the same way as a peaking generator for cost comparison purposes[6]. There's a high up front cost but once the asset is installed, it has a long useful life and requires little maintenance. Through the Act 129 programs, Comverge has effectively built a 150 MW peaking plant in the Commonwealth. To build the peaking plant or, in this case to build 150 MW of peak residential load reduction, and to then not use it effectively for at least 10 years is not be the optimum use of rate payer money. So for a residential DR program, a five year program is the right minimum length to build the asset, but a longer term contract to run it is most efficient.

Comverge is not suggesting that the DR programs be granted a five-year extension beyond the period identified in the TDRC Order described above, nor is it suggesting a 10-year contract granted on May 10. It is raising these issues so that they can be considered by the Commission for its Tentative Order. Comverge suggests that a separate TDRC Order be issued and it should mandate the short term continuation of DR programs so that program value is maximized. The formal Commission review of DR that will begin with the SWE's cost-effectiveness study will ultimately align the programs appropriate to the goals determined at that time. If the programs are not continued on a short-term basis, under the standard economic principle of time value of money, failing to earn a return in 2013 (year two of the life of the asset), which is not possible without the TDRC Order, would impose unnecessary financial harm to the ratepayers who have funded the asset.

Finally, in order to avoid all of the "stop and go" effects described above, Comverge also urges the Commission to review the efficacy of Phase Two well before the end of phase two. For example, the cost benefit test could be performed at the end of the third summer season and the discussion about a Phase Three should begin at that point. If this approach were taken, a Phase Two analysis would include data from Phase One, data from years one, two and three from Phase Two and projections for years four and

[6] Demand management provides multiple benefits compared to a traditional peaking plant. In addition to lower capital costs, DR shifts the market equilibrium with a demand solution. The resulting "shift" of the demand curve results in lower capacity prices, lower energy prices, and reduced emissions during the peak energy periods.

five of Phase Two. This amount of data would be sufficient to make decisions regarding the efficacy of mandating and implementing Phase Three programs.

3. **Inclusion of a Demand Response Curtailment Program**

Comverge strongly endorses the inclusion of demand response programs in Phase Two. DR programs, more so than the other programs created by Act 129, offer *all* ratepayers in the Commonwealth a return on investment, as long as they continue to be executed[7]. The record from PJM's markets and from FERC studies and Orders[8] underline that participants in DR programs see reductions in energy consumption, reductions in energy costs in peak hours and reductions in capacity costs in future years. Non-participants in the DR programs also benefit because of lower capacity costs in future years and lower energy costs in peak hours when curtailments are called.

Pennsylvanians Realize Material Customer Benefits from Act 129 DR Programs

The benefits of DR accrue to all Pennsylvania electricity customers in a matrix of effects with some (particularly those who are active load response participants) benefiting more than others. The customers each see varying impacts of short- and long-term capacity prices and long- and short-term energy prices. The benefits of a five-year extension are laid out in the matrix below. Those benefits that are shaded (the majority of them) are the benefits that go away if the DR program is not renewed and may be significantly reduced if the DR programs are allowed to lapse for even one year.

7 Energy efficiency ("EE") investments will lead to long-term reductions in electricity consumption for customers who directly benefit from the efficiency investments. However, EE investments are only credited in the PJM capacity market for four years. So, while EE investments offer ongoing energy benefits to to participants, the capacity value is relatively short-lived. DR investments on the other hand, continue to provide reduced capacity and peak energy costs for all customers in the Commonwealth and energy consumption reduction benefits to the program participants.

8 See Generally, A National Assessment of Demand Response Potential, FERC Staff Report, June 2009 and see also, *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, III FERC Stats. & Regs., Regs. Preambles ¶ 31,322 (2011) ("Order 745").

Summary of Market Benefits[9] Achieved by Customers Across Pennsylvania from Act 129 Demand Response Programs		
	Act 129 DR Participant	**Non-participant**
	Capacity Benefits[10]	
2012	No impact	No impact
2013	Reduced Capacity Tag Reduced Capacity Price	Reduced Capacity Tag Reduced Capacity Price
2014	Reduced Capacity Tag Reduced Capacity Price	Reduced Capacity Tag Reduced Capacity Price
2015	Reduced Capacity Tag Reduced Capacity Price	Reduced Capacity Tag Reduced Capacity Price
2016	Increased DR in RPM auction Reduced Capacity Tag Reduced Capacity Price	Increased DR in RPM auction Reduced Capacity Tag Reduced Capacity Price
2017	Increased DR in RPM auction Reduced Capacity Tag Reduced Capacity Price	Increased DR in RPM auction Reduced Capacity Tag Reduced Capacity Price
	Energy Benefits	
2012	Reduced Energy Consumption Reduced Energy Price during Peak	Reduced Energy Price during Peak
2013	Reduced Energy Consumption Reduced Energy Price during Peak	Reduced Energy Price during Peak
2014	Reduced Energy Consumption Reduced Energy Price during Peak	Reduced Energy Price during Peak
2015	Reduced Energy Consumption Reduced Energy Price during Peak	Reduced Energy Price during Peak
2016	Reduced Energy Consumption Reduced Energy Price during Peak	Reduced Energy Price during Peak
2017	Reduced Energy Consumption Reduced Energy Price during Peak	Reduced Energy Price during Peak

Act 129 capacity benefits derive from multiple sources. First, if peak demand is reduced in 2012, PJM can sell back some of the capacity it has already procured for 2013 since it allocates capacity costs based on the previous year's peak consumption. This will translate directly into a cost savings for the Pennsylvania customers next year. In addition, the lowered peak demand will lower the requirement in the next forward auction planning parameters, ultimately reducing the cost to the customers in four years. Because less capacity is procured, the cost per unit is lower that it would be if

[9] These comments generally address only market benefits from DR. However, DR also provides benefits of avoided T&D costs as well and provides reliability benefits as well. These are not captured here, but provide meaningful incremental benefits to program participants and non-participants.

[10] The capacity benefits detailed for non-participants may not be applicable to all large commercial non-participants.

the non-DR amount was to be procured. So the first two benefits compound and have impact next year, and the third benefit will impact the next forward auction for 4 years from today, but each benefit will only last for one year, if the program is not extended. A fourth area of benefit is that a sustained DR program will allow more capacity to be offered in future PJM capacity auctions in the form of DR resources, effectively increasing the capacity supply (e.g., the 150 MW peaking plant discussed above) in the auction, thus, further reducing the price of capacity. If the Act 129 DR programs are not continued, this fourth area of benefit will never be realized.

The energy benefits are much more real-time. DR participants will benefit by consuming less energy during peak times and, because of their participation, will see lower clearing prices during those peak hours. Non-participants will see lower clearing prices during peak hours. Additionally, the demand reductions are targeted at the top 100 hours of demand, which are in theory, the 100 highest priced hours.[11]

In order to estimate the magnitude of benefits from DR, it is helpful to refer to FERC guidance on DR compensation in energy markets.[12] In Order 745, the FERC set a benchmark where DR could be compensated at full location marginal price ("LMP"). This benchmark is the point on the energy supply curve where consumer net benefit is greater than consumer cost to pay the DR providers. This point (the "Net Benefit Threshold" or "NBT") is to be calculated monthly by the ISOs. In PJM, the April 2012 NBT is less than $26 per MWh. Another way to view the NBT is the point where the elasticity of demand switches from less than 1 to greater than 1. If the elasticity of demand is greater than 1, customers will see a price increase greater than 1% for each percent increase in demand. Similarly, above that point, for each 1% reduction in consumption, prices will decrease by more than 1%. As PJM's NBT calculation of $26

[11] All electricity customers pay for "peak energy", either through an annually-priced contract, a risk premium in a contract price that covers summer peaking risks, or through a pass through of real-time energy costs. Specifically, the PA EDCs procure a portion of their default service obligation from the spot market. Act 129 mandates that "Electric power procured pursuant to [default service obligations] shall include a prudent mix of [ ]: Spot Market Purchases, Short term contracts and long term contracts..." See 66 Pa. C.S § 2807(E)(3.2)(I), (II) and (III). Each of those options carries with it peak energy risks and costs.

[12] See FERC Order 745.

per MWh shows, DR can economically reduce energy prices not just during peak demand but also during periods of normal, daytime demand.

If the EDCs are successful in reducing demand by 4.5% in the top 100 hours this summer, they will be lowering clearing prices in each of those hours by some amount greater than 4.5%. When demand peaks and with an offer cap in PJM of $1000 per MWh, these reductions will be upwards of $50 per MWh, benefiting every customer clearing in the market at that time. Further, if generation from the top of the bid stack is clearing in the real time market, it is highly likely that the price reduction from DR will be much greater than the 4.5% in the example. More importantly, if the DR programs are continued, there is downward pressure on long-term prices in the capacity and energy markets, so all of the contracts (default service or retail) will incorporate the lower prices and lower peak risks, bringing untold benefits to Pennsylvanians. In fact, it is possible that if DR programs are effectively deployed on a long-term basis, <u>all Pennsylvania electricity consumers could see a material reduction in their bills going forward</u>.[13]

As a result of the combination of capacity and energy benefits, regardless of participation in the DR program[14], all residential customers and most commercial and industrial customers[15] across the Commonwealth will see lower electric bills in the summer of 2012 and beyond than they would experience absent the presence of DR programs. Acknowledging that different customers might benefit differently, the Commission should also take note that in all meaningful scenarios, the benefit is positive, and <u>no customers are harmed in any way by the existence or extension of the</u>

---

13 John Hanger, a former PA PUC Commissioner, and former Secretary of the PA Department of Environmental Protection, stated in his testimony to the Senate Consumer Protection and Professional Licensure Committee that "[a]s much as 20% of the entire annual [electricity] cost of serving a residential customer is incurred to keep its lights on just for the 100 hottest hours of the year or 1% of the year."

14 Participants in most, if not all, of the DR Programs across the Commonwealth receive some type of incentive payment for participating in the programs. These payments are ignored in this analysis.

15 Any customer whose usage is profiled for the purposes of estimating a capacity charge will see decreased electricity bills as a result of the DR programs in Act 129. This includes all residential customers and most of the commercial customers. Any industrial customer who is a participant in the Act 129 DR program will also benefit from a lower capacity charge next year and any year subsequent to their participation.

DR provisions in Act 129. This tremendous benefit to the Commonwealth energy customers should be continued into Phase Two and the Commission should issue, corresponding with its May 10 tentative order, the TDRC Order discussed above.

Comverge understands that the Commission is bound by Act 129 to perform a cost effectiveness study of the current DR program. However, based on the fact that demand response will be called in at least the top 100 hours of consumption this year, and that the benefit will accrue to nearly all of the customers within the Commonwealth, and there are material benefits in both the short- and long-term, and no customers are worse off as a result of the programs, Comverge argues that the total benefit can safely be assumed to easily exceed the cost of the DR programs. Additionally, if the DR Programs go away, the energy savings described above will be limited to just this summer and customers will see only a partial capacity benefit next year. The fact that material benefits over the next five years will be lost, is alone, enough of a reason to continue the DR programs into Phase Two and to issue the TDRC discussed above.

Stranded (Wasted) Assets are a Risk with Excluding DR

In order to achieve the value that was projected for DR assets, the Commission should continue the DR programs without interruption. In the absence of a DR program, all of the load reduction achieved in the 2012/2013 plan year will be reversed in the following year, despite the fact that capital equipment has been deployed to manage load on a long-term basis. The potential benefits created by significant, equipment and infrastructure investments under the current programs will be lost. As discussed above, in terms of the economic analysis of these programs, these losses will be in year two of the program, a year that is critical to calculating the economic value of the program. However, in the absence of a Commission Order, there will be no incentive for the EDCs, especially the EDCs affiliated with generation assets, to continue to operate DR or other demand and usage reduction programs without explicit direction from the Commission.

In the absence of continuing the Act 129 DR programs, many Pennsylvanians will see increased electricity consumption and all will see higher capacity prices, higher PJM market clearing energy prices, higher monthly utility bills, and increased air emissions from power plants that will be forced to run. Pennsylvania consumers should be protected, through continued DR programs, against these unnecessary financial and social costs.

DR Options in the Secretarial Letter

The Commission outlined three options for continuing DR on a contingency basis before the SWE cost/benefit analysis is completed. Comverge currently believes that from the list of options presented in the Secretarial Letter, the third option outlined is the closest option to a good market solution. However, Comverge presents another option that more closely aligns with the legislative intent of Act 129. The third option presented in the Letter is described as "to require EDCs to set aside a portion of their next round of EE&C Plan budgets to fund demand response programs in the event the Commission determines that there can be a cost-effective demand response program for the next round of plans."[16] Comverge's interpretation of this option is that the programs would be put on hold until the Commission directed the continuation of the DR programs, presumably after the SWE cost-benefit analysis. The EDCs would be directed to reserve a portion of the 2% amount potentially allocated to EE&C programs until that Commission's directive on DR programs.

In contrast to that interpretation, Comverge suggests the statute requires, at a minimm, a more definitive and assertive action to continue the current programs with no lapse in service through the end of 2013, by which time the SWE's report will have been fully vetted by the Commission and the market participants. In other words, the portion of the budgets allocated to DR should not be "set aside" as is suggested in the Letter, but rather the DR budget should be spent over the TDRC period in order to continue the progress made to date and to more effectively transition into Phase Two.

Funding for Temporary DR Programs

As shown above, the clear language of Act 129 demonstrates the legislative intent for ongoing demand management programs with reductions beyond those explicitly outlined

16 Secretarial Letter at p. 4. (Emphasis added.)

in the statute. The statute also set boundaries for funding the reductions. To date, the DR programs have been implemented effectively under those funding levels. As the funding will not go away during the transition, nor does it disappear in Phase Two, Comverge urges the Commission to order the EDCs to invest in this interim period, the same percentage of their Phase Two EE&C budgets on DR programs as they spent on the Phase One programs.

This level of investment will allow customer recruitment efforts across the Commonwealth to continue. It is Comverge's belief that customer marketing and recruitment efforts across all of the DR contracts will cease on May 31, 2012 if the TDRC Order is not issued. This lapse will stall the customer inertia in place today, where current marketing efforts, word of mouth and other channels are proving effective in securing customer participation. It will also handicap progress toward future goals that the Commission will mandate after it reviews the SWE's analysis. The TDRC Order would also ensure that customers will be compensated for their participation in the DR programs in 2013. This will help avoid all of the "stop and go" impacts discussed above. It will keep consumers engaged in energy cost management and will keep DR as a cornerstone of utility operations. Most importantly, it will ensure that the decreased capacity obligations and resulting lower costs across the Commonwealth remain in place for the following year, helping to avoid the yo-yo effect on electric bills.

Specific TDRC Order Language

Comverge offers for the Commission's consideration, that following ordering paragraphs:

Be it ordered:

1) That all existing DR contracts be extended through the earlier of December 31, 2013, or the time after review of the SWE's cost-effectiveness study, that the Commission deems that DR programs are uneconomic;

2) That the EDCs use the same percentage of Act 129 budgets to support these contract extensions as the EDCs used for the Phase One DR programs;

3) That all demand reductions achieved as a result of this extension be credited against any incremental reduction mandates the Commission issues in accordance with Act 129.

4) That the actions taken consistent with this order will be incorporated into DR plans submitted after the Commission renders a decision on the SWE cost-effectiveness study.

4. Aligning EDC Targets and Funding using Dollars per MWH of Expected Reductions

The Letter identifies two options for funding Phase Two EE&C plans. The issue of funding has arisen because based on statutory limits on funding the programs the EDCs have different levels of funding to achieve different levels of EE&C goals. The options identified include varying reduction targets based on the amount of funding available and to vary funding based on fixed reduction amounts.

The EE&C programs are not integrated across EDC *boundaries. By contrast, the net* benefits of each program impact customers across the Commonwealth. For example, as discussed above, there are significant benefits to the DR programs for customers not participating in DR because the DR participation lowers capacity costs and energy clearing prices in the peak hours for all customers. This holds true for customers across EDC boundaries, as the Pennsylvania energy market is not constrained by the EDC boundaries, but rather is a PJM market. As another cross-EDC example, demand and consumption reductions in the eastern part of the state can result in lower prices in the western part of the state (less power is flowing from west to east). The lower prices imply that less electricity is being generated in the western part of the state. In this example, all customers are seeing lower prices and lower levels of emissions crossing the State.

Because the benefit of each of the EDC programs can potentially extend to all Pennsylvanians, the Commission should seek to maximize reductions in energy consumption and peak load behind each EDC consistent with the maximum budget limits allowed by the legislature. Specifically, Comverge believes that this approach refers to the first option – varying reduction targets based on available funding under the 2% of revenue cap.

5. Reduction Target for Government, Educational and Non-Profit Sector.

Comverge believes that reduction targets for both consumption and demand should be applied to the government, educational and non-profit sectors. Reductions in these sectors are achievable and the direct, cost-savings benefits are needed in these economically stressed sectors. As this sector is tax-funded, all Pennsylvania tax payers benefit from the savings from this sector. In addition to the tax payer benefits, it is a great message that the government sector can lead by example. The Letter indicates the success of efforts in this area to date. Comverge believes that continued efforts will be beneficial.

6. Inclusion of a Low-Income Sector Carve-out

According to statements made at the March 16 stakeholder meeting opening this docket, there are 1.2 million residential customers who qualify for low-income assistance. Comverge believes that well-structured EE&C programs, including DR programs, can yield significant benefit to low-income customers.

Stereotypes are often used when discussing DR targeted to low-income properties. These largely revolve around what controllable devices a low-income customer may or may not have. These are irrelevant. DR programs can be much more sophisticated than shutting off an appliance or air conditioner. A DR program could, for example, be tailored to send price signals in real-time to market participants by text, email, auto dialer or other means, encouraging customers to reduce consumption right then. Alternatively, a more advanced program could directly control other devices in the home, like a refrigerator, electric hot water heater, washer, dryer or window air conditioner.

While all of the tools to implement these programs might not be in place today, they will soon be available as the EDCs roll out advanced meters and the mandated time of use rates. The demand response tools available in the market can yield significant value in the form of home energy management and result in meaningful energy cost savings for the low-income participants. DR should be viewed as another tool in the home energy management toolbox and such a program could be implemented as part of a suite of benefits for the low-income community. Comverge is willing to work with the EDCs and stakeholders to design and implement such a program if the Commission desires.

7. **Transition Issues**

The Commission identified several budget and reductions related issues in the Transition Issues section of the Letter. Generally, the Commission is inquiring about the treatment of over- and/or under-spending and over- and/or under-compliance on reduction goals. Comverge does not have specific recommendations for the Commission, as these are mostly EDC-related issues. However, Comverge urges the Commission to carefully weigh the ramifications and potential consequences of whatever decisions are made. For example, not allowing excess funds to be carried forward might result in decreased benefits going forward. Allowing EDC shareholders to keep excess funds might incentivize under-investment and under-performance going forward, especially if, for example, the excess retained was greater than the maximum penalties allowed by Act 129. Permitting the return of unused funds to rate-payers might incentivize wasteful spending on frivolous programs so that refunding is avoided. The incentives to the EDCs, EDC management, EDC-affiliated companies, CSPs, and customers should be evaluated closely for each reasonable transition scenario.

8. **Other Act 129 Program Design Issues**

Comverge would like the Commission to address two issues not identified above that are in the best interest of the markets and in the long-term success of Act 129.

Harmonization with PJM Market Rules

Comverge respectfully submits that the Commission should convene a stakeholder group in advance of the next round of EDC programs so that the programs can be better aligned with current and ever-changing PJM market (and potentially PA PUC energy market) rules. Market rules are not static. In fact, over the course of the past year, PJM rules regarding DR participation in the markets have changed significantly. Many of the CSP contracts were approved well in advance of these rule changes and are not properly aligned with the PJM market rules. From a practical standpoint, it is not feasible to ask the Commission to approve modifications or amendments to these contracts to keep them aligned with PJM market rules every time those rules change. The purpose of the stakeholder group would be to formulate more current and more dynamic contracts to match the PJM protocols, and potentially to seek commission support for changes to PJM's market rules which may improve the success of Act 129.

The 100 hour calculation

The DR program design parameter that appears to be causing the most strain across the Commonwealth is the Act 129 statutory provision that states that the "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".[17] The most significant problem with this provision is that it forces the EDCs and/or CSPs to project what the 100 hours of highest demand will be. Clearly, the only way to meet that constraint is to call curtailments in excess of 100 hours. The Statute clearly authorizes the Commission to modify this requirement going forward, as it requires the Commission to "set additional incremental requirements for reduction in peak demand for the 100 hours of greatest demand or an alternative reduction approved by the Commission."[18]

In addition to the difficulty in predicting the top 100 demand hours, curtailing customers for 100 hours is strain on all customers. The magnitude of hours hampers customer enrollment across all customer classes. In the four summer months this year, there will be only 84 non-weekend, non-holiday days. That means, on average, customers will be

[17] See 66 Pa C.S. §§ 2806.1 (D) (1).
[18] See 66 Pa C.S. §§ 2806.1 (D) (2). (Emphasis added.)

asked to curtail their consumption for more than one hour every day. In reality, the curtailments will take place over about one-third of those days, and each curtailment will be three to five hours in duration, and they will be totally unpredictable from the customer's perspective.

Comverge suggests that the Commission adopt a methodology that calls for curtailments when consumption in an EDC territory is forecasted to reach a certain percentage of its forecasted peak demand for a day. For example, if PJM had forecasted a system peak for an EDC at 1,000 MW, then the EDC would issue curtailments when the day-ahead forecast reached a certain percentage (90% for example[19]) of that peak (900 MW in this example). Comverge has not undertaken the review of how many curtailment hours would fall under any curtailment threshold. With this example, Comverge is only putting an alternative concept on the table for the Commission to consider. Comverge urges the Commission to consider a threshold that would be expected to yield no more than 60 hours of curtailments every year in order to ease the customer burden. Comverge suggests that the 60 hours be limited to no more than six hours per one day. The 60 hour limit and the daily limit are consistent with the curtailment rules in the PJM emergency load response program.

A definitive program like this offers certainty in compliance and will likely achieve many, if not all, of the energy cost management goals which drove the passage of Act 129 in 2008.

19 Comverge is not advocating for the threshold to be 90%. It is only using this number here as an example.

Conclusion

Comverge appreciates the Commission's willingness to hear its comments, suggestions and proposals for Phase Two Act 129 Programs, and respectfully requests that these comments be included in the record in this docket. These comments are designed to minimize harmful and disruptive breaks between Phase One and Phase Two programs that will harm customers or otherwise diminish the investments made to date. Comverge is confident that its proposals will increase the overall effectiveness and value of the Act 129 Programs already implemented and those going forward. We look forward to participating in this proceeding as it progresses through the year.

Respectfully submitted,
Comverge, Inc.

By Frank Lacey esq.

Frank Lacey
Vice President
Comverge, Inc.
511 Kennett Square, PA 19348
484-734-2206
flacey@comverge.com
reg-affairs@comverge.com