BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Comments of Comverge, Inc.

In Response to the Special *En Banc* Hearing on Alternative Energy, Energy Conservation and Efficiency, and Demand Side Response

In Docket M-00061984

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I. INTRODUCTION

These comments to the Pennsylvania Public Utility Commission (the Commission) regarding Act 129 of Comverge, Inc. (Comverge)[1] are to directly respond to the En Banc Hearing of November 19, 2008. Comverge fully supports the Commission's direction to implement the intent of Act 129, especially to transfer substantial risks from consumers to third-party DR providers under extended period pay-for-performance contracts.

Comverge takes this opportunity to introduce the use of five conditions for effective legislative policy implementation, both to provide a perspective that steps back from the En Banc Hearing and to then offer comments on specific pitfalls or failure modes which Comverge recommends that the Commission seek to avoid. The often used phrase, *the devil is in the details* applies in the implementation of Act 129. Accordingly, Comverge provides a perspective on the Act derived from extensive experience (including trial and error) of numerous "third party" programs, a brief discussion of possible pitfalls with Act 129 implementation, and recommendations to assist the Commission with its role to best implement Act 129.

II. CONDITIONS FOR EFFECTIVE IMPLEMENTATION OF ACT 129

A. A Framework for Effective Regulatory Policy

1. Five Conditions to Ensure Act 129 Effectiveness

[1] Comverge, Inc. (Comverge) is a DR and EE company with a major corporate office and its national Command Center for operations in Kennett Square, Pennsylvania, as well as main offices in East Hanover, New Jersey, and Atlanta, Georgia. Comverge trades on NASDAQ (COMV), has over 2,200 MW of long-term contracts for DR and EE in place, and has over 6,000 MWs of DR equipment in operation. It employs approximately 350 employees with 15% of those residing in Pennsylvania.

To be viable and usable such a framework must rest on sound, transparent logic and be intuitively compelling. A framework has been offered by Paul Sabatier and Daniel Mazmanian[2] that seems particularly apt. It explains that a statute will achieve its objectives under these conditions:

- The program is based on sound theory relating changes in target group behavior to the achievement of the desired end-state (objectives).
- The statute (and related policy decisions) contains unambiguous policy directives and structures the implementation process so as to maximize the likelihood that target groups will perform as desired.
- The leaders of the implementing agencies possess substantial managerial and political skill and are committed to the statutory goals.
- The program is actively supported by organized constituency groups and by a few key legislators (or the chief executive) throughout the implementation process, with the courts being neutral or supportive.
- The relative priority of statutory objectives is not significantly undermined over time by the emergence of conflicting public policy objectives or changes in relevant socioeconomic conditions that undermine the statute's "technical" theory or political support.

This framework has been tested and scrutinized in a number and regulatory settings, and can at least serve as a guidepost to highlight possible issues that may arise.[3]

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[2] P. Sabatier, D. Mazmanian, *The Conditions of Effective Implementation: A Policy Guide to Accomplishing Policy Objectives*, Policy Analysis, 1979.
[3] See, e.g., P. Sabatier and D. Mazmanian, *The Implementation of Regulatory Policy: A Framework of Analysis* (Davis, CA: Institute of Governmental Affairs, 1979).

Thus, Comverge will first briefly apply this framework to comment on Act 129 and its implementation by the Commission. Each of the five conditions is addressed in order.

a. Sound Theory to Change Target Group Behavior

First, Comverge is convinced that Act 129's focus on the use of EDCs to administer competitive procurement to obtain DR/EE is a fundamentally sound approach. It requires EDCs to use a proven method, competitive procurement of third party DR/EE, and will impose penalties, if required, in order to ensure that the objectives related to specific EE and DR targets are met. Thus, Act 129 appears to be based on sound theory to connect the desired changes in the behavior of EDCs to the achievement of relatively ambitious EE and DR objectives. An obvious conclusion on this is that pay-for-performance contracts provide the maximum incentives for third parties to deliver and allocate the risks to third parties.

b. Unambiguous Policy Directives to Structure the Implementation Process

Second, Act 129 also provides relatively clear directives and places the Commission in a position to maximize the likelihood that EDCs and DR/EE providers will perform. Three major questions arise from this, however, (1) how will the EDCs structure the procurement of DR/EE so as to address all major customer segments, and (2) how will the EDCs ensure that clarity is provided as to the approaches to be used to

obtain the desired DR/EE? (3) and how will the EDCs arrive at a least cost/least risk solution for consumers?

Regarding the latter, the major problem that Comverge is concerned about centers on *unintended consequences*, such as when multiple, overlapping competitive Requests for Proposals (RFP) are allowed, which make marketing and customer acquisition difficult. This may suggest that RFPs clearly define customer segments and end-use targets, and be staggered over time in order to avoid major customer confusion about the choices and options offered in the DR/EE space. This suggests those third parties that are allocated contracts for DR/EE should be granted exclusivity for the specific customer segments, particularly for residential and small commercial programs.

c. Managerial Skill and Political Commitment

Third, Act 129 appears to contain unambiguous policy directives to structure the implementation process to maximize the likelihood that EDCs and DR/EE providers will perform as desired, but what will be critical is the set of related policy decisions by the Commission. This may suggest that the Commission direct the EDCs work directly with DR/EE providers in a structured way to ensure that the proposed EDC plans for DR/EE are more likely to be successful.

Comverge is concerned that Act 129 has opened the door to competitive procurement of DR/EE and in doing so has unwittingly promoted a contest among all possible providers of DR/EE, though a subset of these providers are not fully proven in terms of cost-effectiveness, customer acceptance, and overall track-record. How will EDCs ensure that high levels of performance are forthcoming from such a wide range of

DR/EE providers? Part of this question stems directly from the business model(s) chosen. Comverge recommends that EDCs present strictly defined roles for pay-for-performance of DR/EE providers. Otherwise the desired performance seems unlikely to occur and the objectives of Act 129 and of the Commission will not be realized.

d. Active Support by Constituencies and Key Actors

Fourth, Act 129 places the Commission and the EDCs in central roles to lead this ambitious effort. Comverge suggests that the Commission and the Commonwealth will benefit from the process it has used for the En Banc hearings to enable all stakeholders to participate. Comverge also assumes that all stakeholders can weigh-in on the EDC proposals and the Commission's direction with respect to these proposals, all of which will increase the active support of key constituencies and key actors. Timeliness is essential to avoid getting the process bogged down and to ensure that EDCs can develop and place competitive RFPs on the street quickly. This, the Commission's process, should continue to all for dialog and transparency to ensure that the competitive RFP process is more fully supported, workable, and consistent with the objectives of Act 129.

e. Statutory Basis and Objectives Remain Viable

Fifth, the relative priority of Act 129 objectives does need to be preserved, particularly in the context of other major legislative and regulatory actions that are occurring in the Commonwealth. Relevant to this is the need for ACT 129 implementation to be consistent with actions by FERC and PJM. Comverge has specific

comments in the section below about how DR implementation through EDC involvement can be most effective, consistent with PJM (i.e. to avoid conflict), and remain consistent with the Act.

B. Possible Pitfalls or Failure Modes

Possible Act 129 Failure Modes and Unintended Consequences

Though these five aspects of Act 129 suggest effective implementation is possible, there are potential pitfalls or failure modes. Comverge feels positive and favorable about the Commission's apparent direction with respect to implementation of the Act, but a set of possible downsides should be explained.

First, the Commission should avoid an inordinate focus on EE and focus more on dispatchable DR, as the latter will more directly and immediately reduce overall electricity costs. EE is clearly important, but in the short-term it will primarily reduce electricity generation fuel costs and the fuels costs for heating (fuel oil, natural gas, or electricity). Fuel costs in the short-term are expected to be relatively low given the down-turn in the economy, which suggests EE is less cost-effective. In contrast, dispatchable DR directly reduces overall grid requirements and capital costs, as well as distribution costs. The Commission should be particularly concerned about failure to focus on reducing short- and long-term peak electricity needs, which directly lower the overall costs of electricity for the Commonwealth. Dispatchable DR is the fastest and most direct way to lower overall PJM grid charges, costs for capacity (RPM), operating reserves, ramping capacity, and energy costs. Dispatchable DR also directly reduces overall PJM transmission costs, super-peak electricity costs, and distribution system requirements. Thus, the most immediate way to lower costs to the Commonwealth is to

provide substantial dispatchable DR for use both on peak and at super-peak. This will dramatically reduce capital and operating costs, increase the grid load-factor, and reduce the footprint for PJM, transmission, and distribution systems serving the Commonwealth.

Second, the Commission could choose to focus on procurement of DR/EE options that cannot be implemented quickly and focus on customer segments that are difficult to harvest benefits from. Based on substantial experience across the U.S., Comverge recommends that the Commission direct EDC's to initially focus on delivery of DR and EE in the following segments:

(1) Residential/small commercial DR,

(2) Commercial EE, and

(3) Large commercial and industrial DR and EE

Related, Comverge recommends that the commission authorize EDCs to provide customer information and meter data access to third party DR/EE providers who provide large commercial industrial customers with DR/EE, and allow this same capacity to qualify for PJM use if it is used during peak periods. This will reduce existing barriers to large C&I customers and ensure that the DR/EE provided directly benefits the Commonwealth by lowering overall costs and the size of the PJM footprint.

Third, the EDCs may offer contracts to DR/EE providers that fail to properly allocate the full set of tasks and risks that should be allocated under pay-for-performance contracts. The premise Comverge operates under is that properly structured pay-for-performance contracts provide the most direct performance incentives on third parties, and that this is the preferred business model for EDCs, customers, and the Commission.

Accordingly, the roles of third party DR/EE providers should be properly specified in RFPs and contracts to ensure they are at risk to fulfill the following tasks:

- Customer marketing and acquisition, though coordination with EDC marketing and use of EDC branding (with the EDC's full review and approval) are needed to minimize costs to customers
- Equipment procurement and installation
- System operation in conjunction with the EDC Operations group
- Operate the DR/EE system reliably to provide guaranteed, time-sensitive dispatchability
- Ongoing inspection and maintenance of equipment
- Customer call-center operation
- Measurement & verification
- Full capital commitment by the third party provider

Thus, RFPs should be structured to require bids to perform all the above tasks from one "pay for performance" provider and to take the contractual risk for these tasks in exchange for pay-for-performance.

Fourth, EDCs and the Commission must choose DR/EE priorities wisely, with sufficient knowledge of the benefits and costs. This suggests that EDCs be required to differentiate peak-period benefits from energy benefits, particularly so that the best and most rapidly available DR/EE can be procured and harvested. In general, EDCs and regulators do not fully understand the benefits of dispatchable DR. A sampling of the

direct benefits of dispatchable DR, which highlight why it should be a top priority, are as follows:

- It provides a cleaner alternative to generation without siting or transmission issues
- It ensures that competition delivers huge benefits by shrinking the PJM footprint – reducing the number of MWs that are purchased in the region
- DR is the flexible market price buster during peak periods by providing a dispatchable demand resource to mitigate market price spikes
- DR provides locational dispatchability to reduce congestion costs
- Integration benefits; lower costs to integrate wind and other must-take renewables
- Major green benefits and means to reduce the overall environmental footprint

Fifth, a set of contract conditions are essential to enable third parties to rapidly and effectively develop DR/EE benefits, particularly to avoid *lost opportunities*. EDC RFPs should state these conditions up-front in order to best structure the competitive procurement process and enable apples-to-apples comparisons as much as possible. Importantly, properly specified DR can be installed in a phased approach to integrate with Advanced Metering Infrastructures (AMI) when it becomes available. This means highly successful DR/EE can be deployed either without, or with, an AMI system. DR deployment can best be configured utilizing technologies to enable future integration with AMI to avoid stranding DR assets in the future. Thus, EDC contracts should be

structured to allow third party DR/EE providers to directly recruit customers immediately, to enable DR/EE that is installed to operate and provide benefits immediately, and to enable a technology migration path to optimize the cost of AMI when it becomes available.

Sixth, the Commission needs to avoid the use to too many delivery channels at the initial phases of this process. Those delivery channels that can be satisfied under fully-outsourced, third party pay-for-performance contracts should be top priority for EDCs and the Commission. That said, Comverge recommends direct use of a mix of delivery channels over time, where third parties utilize PA building contractors, local installers and whole-house energy system builders to make sure the DR (and EE) that is provided will fully leverage PA infrastructure and afford comprehensive, long-term solutions.

And seventh, the Commission needs to ensure that EDCs enable competitive procurement of pay-for-performance contracts for DR/EE that are cost-effective under the Total Resource Cost test (TRC) , in order to guarantee viable solutions result at least cost. This suggests that the full spectrum of DR benefits need to be integrated into the TRC test results in order to gauge the level of cost-effectiveness properly.[4] Historically, the TRC test does not properly represent the optionality of dispatchable DR, particularly because it does not capture the optional uses of dispatchable DR that are available to take maximum advantage of market and reliability-based circumstances as they arise. Dispatchable DR is partially represented in the following options:

- DR that prevents very high wholesale electricity spot prices when the electricity supply curve is largely inelastic; though prices increase dramatically

[4] **See, e.g.,** See, Woychik, E., *Optimizing Demand Response*, Public Utilities Fortnightly May 2008; Direct Testimony Of Dr. Eric C. Woychik On Third Party Demand Response Cost-Effectiveness, In California Public Utilities Commission, Application Nos. 08-06-001, 08-06-002, 08-06-003, November 24, 2008, On Behalf of the Comverge, Inc.

when there is little additional supply. This is a strategic option to use DR to reverse increasing prices that otherwise proceed further up the vertical section of the supply curve.

- DR that is dispatched to reduce congestion prices, which during super-peak periods can exhibit the same behavior as electrical energy prices that are driven by a vertical supply curve.
- DR used as operating reserves (e.g., Tier-2 Synchronous Reserves).
- DR as resource adequacy or local resource adequacy, which in PJM is ILR or RPM capacity.
- DR to displace expensive Reliability-Must-Run (RMR) resources in specific circumstances as long as the DR resource is available during the hours when the RMR resource would otherwise be needed.
- DR in situations when *Out-of-Market* (OOM) resources are needed.
- DR Stage 1, 2, or 3 emergencies to reduce demand.
- DR for distribution constraints, particularly to increase voltage levels, reduce stress on transformers and capacitors that may be overloaded, and to reduce distribution-based congestion.
- DR to integrate *must-take* renewable resources such as intermittent wind and photovoltaic generation.

EDC's seem unprepared to apply TRC cost-effectiveness in a way that will fully integrate this full set of values and its optionality.

III. CONCLUSION

Comverge again appreciates the Commission's guidance request for further comments on implementation of Act 129 and respectfully requests that the Commission provide rules to structure the Act 129 process to avoid the potential pitfalls Comverge has explained in order to ensure the major benefits of DR/EE are harvested in pay-for-performance contracts for the Commonwealth.

Respectfully submitted,

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