comverge
energy made better

415 McFarlan Road, Suite 201
Kennett Square, PA 19348

888.565.5525
www.comverge.com

July 25, 2014

BY EMAIL AND REGULAR MAIL
Mr. Anthony Star
Director
Illinois Power Agency
160 North LaSalle Street
Chicago, IL 60602

Re: Illinois Power Agency Energy Efficiency as a Supply Resource Request for Comments

Dear Mr. Star:

Comverge, Inc. ("Comverge") appreciates this opportunity to present comments in connection with the Illinois Power Agency's (the "Agency") development of its 2015 Procurement Plan and other future Procurement Plans.

Comverge is a leading provider of intelligent energy management solutions to residential and commercial & industrial (C&I) customers. With 30 years of experience helping customers implement innovative demand-side management programs, Comverge has deployed more than five and a half million energy management devices, recruited over one million residential customers into mass market demand response programs, and served thousands of commercial & industrial customers.

With regard to the Agency's request issued on July 11, 2014, Comverge respectfully submits the following comments:

1. The IPA has traditionally looked at procurement blocks using regular definitions of those products as on-peak (16 hours on the 5 weekdays) or off-peak (8 hours on 5 weekdays, weekends and holidays). Should the IPA consider procurement of a new resource of demand reducing resources during the summer months for a narrower peak period? If so, how should that "super-peak" period be defined?

Comverge recommends that the IPA procure a new resource of demand reducing resources during the summer months for a narrower peak period than the traditional on-peak period of 16 hours on non-holiday weekdays. Additionally, Comverge recommends that IPA should broaden its resource procurement to look at both winter super-peaks and summer super-peaks. The summer super-peak period would fall generally between the hours of 3:00 and 7:00 PM on non-holiday weekdays between the days of June 1 and August 30. The winter super-peaks occur twice a day – once in the morning and once in the evening between the hours of 6:00 and 9:00 AM in the morning and 4:00 and 8:00 PM in the evening between December 1 and March 31. Demand response resources to support grid reliability during those periods are available, but are substantially different from those that would support reliability during the summer super-peaks. The primary driver of peak summer loads is air conditioning and cooling, which is easily and safely curtailable and dispatchable. The primary driver of the winter morning and evening peaks is heating, which is neither easily or safely curtailable. However, other demand resources could be deployed in an effort to manage winter super-peaks.

2. What types of products should qualify for delivery as a super-peak product? What measures can the IPA take to ensure that super-peak demand-side resources feature an actual lower delivered cost than supply side alternatives? Please provide evidence (either empirical, or modeled) for demand-side resources with delivered costs that could be lower cost than supply side resources.

Demand Response is a logical alternative. Specifically, Comverge recommends that direct load control of air conditioning by an on/off control switch or programmable communicating thermostat ("PCT") at the residential level should qualify as a super-peak product. Other traditional commercial and industrial demand resources should qualify as well.

It is well documented that demand response resources are always less expensive to procure than a power plant. The question for the IPA is what is the other alternative to demand response measures like air-conditioning load control? Is it to subsidize a generation asset? If so, demand response will always come out less expensive. However, if the comparison is just taking power from an existing idle peaking plant, the peaking plant may appear less expensive at first from a pure dollars/kW perspective. However, that simplified analysis doesn't consider any other externalities that come from the greater use of aggregated demand response. Deploying demand response results in lower system wide energy costs, lower system wide capacity costs, delaying infrastructure needs such as T&D upgrades and incremental capacity additions. It also provides environmental benefits. The most recent research on the effects of the use of demand response on grid operations and electricity prices confirm that the deployment of demand response measures applies competitive forces to the energy market which results in lower overall market-clearing prices.

The most recent research study by the National Renewable Energy Laboratory, Lawrence Berkeley National Laboratory and U.S. Department of Energy, in collaboration, on aggregated demand response used production cost modeling to simulate grid operations and savings from the use of aggregated demand response. A grid simulation approach is designed to capture the full value of adding demand response to a grid, including capturing externalities like lower overall energy prices. This study highlights that demand response resources are cheaper than supply side alternatives during the super peak periods, but also highlights the other externalities that benefit all ratepayers from the greater use of demand response generally. A copy of this study has been attached with these comments as Attachment A.

The greater use of aggregated demand response will result in lower clearing prices for the traditional procurement of energy done by the IPA. Thus the costs for creating a demand response resource that can be aggregated and bid in to a possible IPA procurement event should not be viewed in isolation from the costs of IPA's traditional electricity procurement. Ultimately, any "negawatt" procurement will have an effect on the traditional procurement of electricity in Illinois by applying competitive pressures to traditional wholesale electricity prices generally.

3. Should a resource for this procurement also be eligible to participate in other energy efficiency (and/or demand response) programs? If so, how should the value of each be accounted for? For example, could a product have its kWh reductions separated between multiple programs? What timing challenges may result from including resources in both supply resource procurement and existing energy efficiency (and/or demand response) programs, and how can those be resolved?

Comverge recommends that demand resources should be able to participate in multiple programs, if they can provide benefits to both programs.

For example, Illinois might be experiencing a super-peak period and want to deploy demand resources to manage electricity costs. A week later, the PJM system could be experiencing reliability issues and want to call on those same Illinois-based demand resources to stabilize the grid. If both events happen in the same day at the same time, the resource would be providing the desired value to both programs.

4. How could delivery of demand-side resources be metered and/or verified? What provisions should apply for non-delivery?

Industry standards exist to validate the delivery of demand resources and Comverge recommends that the IPA adopt the generally used industry standards in use today. These standards include the use of metering and/or statistical analyses. In particular, the provision of a detailed measurement and verification study is commonly used to validate

the delivery of demand resources after the fact. Importantly, the Advanced Metering Infrastructure being deployed by Commonwealth Edison Company and Ameren Illinois Company in their respective service territories make verification and metering of demand-side resources easier and more straight forward.

Additionally, when demand resources are directly controlled by a third-party the reliability of those demand resources are extremely high. Comverge recommends that settlement payments for demand resources be made based on actual data supplied by the utility AMI, or if AMI has not been deployed for certain customers statistical sampling can be utilized for settlement payment calculations. Comverge recommends that the procurement process should set a price for the demand resources that a provider can rely on but would only be paid out based on actual performance and not an estimate provided beforehand so there is no need to make separate provision for non-delivery since payments will not be made until the demand resources are delivered and verified based on actual delivery of demand resources.

5. What limitations, if any, should be placed on customer classes that could provide these resources? Specifically, should it only be potentially eligible retail customers, or all customer classes? Should the resources have to be located within the service territory of the utility to which they are delivered?

Comverge recommends that no limitations should be placed on customer classes eligible to participate. IPA is proposing to procure a supply resource here, and similar to the IPA's procurement of traditional supply resources this proposed "negawatt" resource does not have to come from the same pool of customers where the benefits are delivered (just as the IPA doesn't procure generation from specific customers, locations, or areas). If the IPA is interested in procuring a competitively priced "negawatt" resource for the eligible retail customers, the IPA should be free to procure that "negawatt" resource from sources outside the intended pool of eligible retail customers. If the IPA were to restrict the provision of "negawatts" to eligible retail customers, it would tend to increase costs significantly for such "negawatts". Different programs might be tailored to different customer classes, but none should be excluded. At the same time, it seems logical that the resources should be located within the service territory of the utility to which they are delivered so Comverge recommends the approach to only include resources that are located within the service territory of the utility to which they are delivered.

6. In 2014, the IPA is procuring energy blocks of 25 MW, down from 50 MW in previous procurements. What size block would be appropriate for this potential procurement?

The answers to Questions 6 and 7 are co-dependent on one another, so please refer to the answer to Question 6, for both Questions 6 and 7.

If the desire was to have resources available in the same year as the bid, Comverge recommends that the offer blocks be small. Similarly, if more time is given between the offer and the delivery, then the bid blocks could be larger. However, the more important issue is the duration of the commitment. If the IPA is looking to secure a true summer super-peak resource, then Comverge strongly recommends that it should, at least in part, look to the direct control of residential air conditioning load. The control of residential air conditioning requires an up-front capital investment. If that investment cost needs to be recouped in one auction, the price will be substantially higher than it ought to be. Deploying a DR resource (specifically residential) results in a 10-year (at least) asset. Contract terms should reflect the value of what is being delivered. This does not mean that the contract needs to be a ten-year contract, but Comverge recommends the use of a multiple year contract on order to yield the best portfolio of demand resources.

7. If the IPA were to propose the procurement of super-peak demand-side resources as part of its 2015 procurement plan, could these resources be procured for the upcoming delivery year (starting June, 2015), or should there be more time given to ramp up any new programs that would deliver these resources?

See comments for Question 6, above.

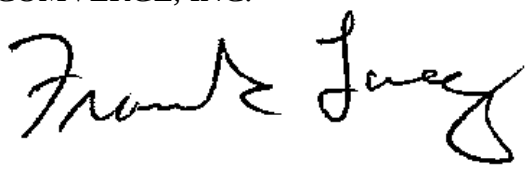
8. Are there other approaches the IPA should consider in its procurement plan for procuring resources other than what is has traditionally procured that could lower the total cost of the portfolio used to serve eligible retail customers?

[no comment.]

Comverge appreciates the opportunity to submit these comments to the Illinois Power Agency. Demand Response is a reliable supply resource that has proven itself to be more cost effective than generation to meet peak system needs. Demand Response can be easily and effectively incorporated into your supply procurement needs.

Sincerely,

COMVERGE, INC.



By:

Frank Lacey
Vice President
Regulatory and Marketing Strategy

cc: Patrick N. Giordano
Blake B. Baron
Giordano & Associates, Ltd.

Attachment A: Hummon, Melissa et al., Grid Integration of Aggregated Demand Response, Part 2: Modeling Demand Response in a Production Cost Model (December 2013)