Comments of the Citizens Utility Board and Environmental Defense Fund

On the 2015 Illinois Power Agency Draft Procurement Plan

September 15, 2014

The Citizens Utility Board (CUB) and Environmental Defense Fund (EDF) are glad to provide comments on the 2015 Illinois Power Agency (IPA) Draft Procurement Plan (Draft Plan). CUB and EDF commend the IPA on its thorough consideration of previous stakeholder feedback and workshop results in developing its Draft Plan. CUB and EDF concur with many of the IPA's policy recommendations and procurement decisions, and offer these comments in response to areas where the IPA has requested further stakeholder feedback.

Section 6: Managing Supply Risks

6.6 Consideration of a Full Requirements Procurement

The IPA clearly identifies and discusses the various risk factors that complicate the energy procurement process, influencing the difference between energy cost estimates and the final supply costs faced by utilities. Chief among these uncertainties is the volume risk represented by expiring municipal aggregation contracts. With a large number of municipal aggregation contracts ending in the coming delivery year, and with price savings realized by consumers enrolled with Alternative Retail Electric Suppliers (ARES) supply services diminishing, a significant amount of load could potentially come back to the IPA's procurement base. If more customers return to utility-supplied energy than are represented in the utilities' load forecasts, insufficiently hedged energy positions will need to be supplemented through purchases on the spot-market at a potentially higher cost. The cost of this supplemental energy procurement is passed on to consumers through a Purchased Energy Adjustment (PEA) which in turn is added to monthly customer bills, and may increase the cost per kWh on customer bills. As a result of

these uncertainties, the IPA proposes to continue using a laddered-hedge approach, choosing to secure on and off-peak blocks to cover 100% of utilities' monthly load forecasts for the current year (2014/15), 50% of the following year, and 25% of the third year's forecast[1].

The Draft Plan continues previous discussion on whether or not the IPA should use full requirements contacts to serve as insurance against the risk of higher supply costs[2]. CUB and EDF continue to fervently oppose the use of full requirements contracts by the IPA because the evidence clearly shows consumers would pay an unnecessarily expensive risk premium for any supposed "price stability" benefits. Instead, CUB and EDF support the IPA's continuation of the three-year laddered hedge strategy through standard on and off-peak blocks. The reason the IPA exists is to provide eligible retail customers with the "lowest total cost over time" for their electricity supply[3], which entails utilizing the best forecasts available to procure electricity in as cost-effective a manner as possible. A resort to full requirements contracts would be an abnegation of the IPA's statutory role in regulating Illinois utilities. The IPA rightly notes that the decision between hedged and fully-insured supply should depend on customers' willingness to pay for price assurance; as shown in the draft plan, various analyses estimated the cost of such a risk premium reach as high as 15% of expected spot prices[4]. In light of survey results the IPA provides showing that consumers place a low value on price assurance[5], the IPA is right in rejecting full requirements contracts as a hedging strategy.

CUB and EDF believe that any full requirements product—whether it be energy-only or a bundled energy, capacity, and ancillary services product—is not in the best interest of ratepayers. The IPA exists in part precisely because of problems associated with full requirements contracts; managing the risk associated with supply prices and load size is the reason a third-party agency like the IPA was created.

[1] IPA, 2015 Draft Procurement Plan, pg. 2.

[2] *Ibid.,* pg. 50.

[3] 220 ILCS 5/16-111.5(d)(4).

[4] IPA, 2015 Draft Procurement Plan, pg. 58.

[5] *Ibid.,* pg. 60.

Section 7: Resource Choices for the 2015 Procurement Plan

7.1.3.1.1 Energy Efficiency as a Supply Resource (EAASR) Procurement Proposal

Following discussion of energy efficiency as a supply resource (EEAASR) in the 2014 Procurement Plan and a subsequent workshop on the subject, the IPA proposes to hold a separate procurement, in late 2015, for supply blocks of energy efficiency to be delivered in summer, 2016. CUB and EDF support this proposal because it has the potential to be an effective additional hedge against high summer super-peak hour supply risk, represents an opportunity for participating consumers to further realize benefits of their collective advanced metering infrastructure (AMI) investment, and will reduce greenhouse gas pollution. Procuring energy efficiency as a supply resource is a wise investment to make now since incorporating more energy efficiency resources, or "negawatts," into the IPA's portfolio may assist Illinois down the road in complying with the U.S. Environmental Protection Agency (EPA) Clean Power Plan proposal[6], by fostering the negawatts market that will be necessary to reducing Illinois' carbon intensity.

Disparities between load forecast and actual demand can vary due to a variety of factors, including customer switching between ARES and utility supply and weather events such as last winter's Polar Vortex. When prepurchased supply blocks are insufficient to cover demand, energy must be purchased on the spot market, resulting in price risk for eligible retail customers through the PEA. On a daily basis, the difference between on- and off-peak demand is greatest in the summer months, as shown in Figure 3-18 of the Draft Plan,[7] which shows the coefficient of variation of Commonwealth Edison (ComEd) daily peak-period loads for each month, from June 2002 through 2013. This means that if average load is higher than forecasts for the summer months, whether due to a hotter-than-average summer or a large number of municipalities returning to utility-supplied energy, then the on-peak supply blocks during June, July, and August will be the most under-hedged positions of the planning year, leading to high PEA

[6] "Carbon Pollution Emission Guidelines for Existing Stationary Sources:
Electric Utility Generating Units; Proposed Rule" 79 Federal Register 117 (18 June 2014), pp. 34830-34958.

[7] IPA, 2015 Draft Procurement Plan, pg. 28.

charges. Procurement of EEAASR for super-peak hours during these months, when load would be at its highest level, will have the effect of lowering peak demand, mitigating this price risk.

A number of empirical studies have found that reducing peak-hour demand has system-wide benefits, including reducing energy costs for all consumers whether or not they are participating energy efficiency programs. A recent Brattle Group study found that a 3% reduction in peak demand yielded price reductions of 5-8%;[8] another study of Pennsylvania-Jersey-Maryland Interconnection (PJM),[9] found a 5-8% reduction in energy prices resulting from peak load reduction of less than 1%.[10] Procuring EEAASR provides the IPA an opportunity to increase the benefits to ratepayers from considerable investment capital provided by Illinois ratepayers to modernize ComEd and Ameren distribution infrastructure through the Energy Infrastructure Modernization Act (EIMA). Incorporating negawatts into the IPA's supply portfolio creates environmental benefits, as increased efficiency will cut down on greenhouse gas pollution by avoiding the need for fossil-fueled peak generators.

In comments posted on the IPA's proposal, some commenters claim that the IPA's authority to purchase energy efficiency or demand response is limited to, in the case of DR, capacity products procured through PJM, and in the case of energy efficiency, to the "incremental" energy efficiency procurement under Section 16-111.5B[11]. The underlying assumption of this claim is that "negawatts" "—the procurement of EE and DR as a supply-side resource— represent a fundamentally different product from megawatts, and that the IPA would need specific authorization to procure them, separate from the Agency's authority under Section 1-75 of the Illinois Power Agency Act (IPA Act). CUB and EDF believe this represents a false dichotomy. The IPA has an obligation to "[develop] electricity procurement plans to ensure adequate, reliable, affordable, efficient, and environmentally sustainable electric service at the

[8] Brattle Group. *Quantifying Demand Response Benefits in PJM*. PJM and MADRI, 2007.

[9] PJM is the Regional Transmission Organization (RTO) serving Northern Illinois, and the RTO to which ComEd belongs.

[10] Gottstein, Schwartz. *The Role of Forward Capacity Markets in Increasing Demand-side and other low-carbon resources.* The Regulatory Assistance Project, 2010.

[11] ComEd Response to IPA's request for comments on Energy Efficiency/DR Procurement.

lowest total cost over time."[12] This obligation includes the procurement of EE/DR products not only as a capacity product, as authorized in 16-111.5(b)(3), but as a standard energy supply product comparable to the supply block hedges that currently make up the bulk of the IPA's annual procurement. Neither the PUA nor the IPA Act define a difference between megawatts and negawatts, nor do they anywhere limit the IPA's authority to procure EE or DR outside of the capacity products and incremental energy efficiency programs ComEd references in their response. The opportunity before the IPA to pursue an EEAASR procurement goes beyond current incremental energy efficiency procurement and existing Energy Efficiency Portfolio Standard (EEPS) programs in that it would specifically target periods of the year with the highest electricity demand, helping to reshape the daily load curve. By procuring resources at super-peak summer blocks, the IPA can maximize the cost-saving benefit for consumers, mitigate the supply price risk of under-hedging, and maximize environmental benefits by avoiding the use of high-emitting peaker plants during these periods of high demand.

While CUB and EDF support the procurement of energy efficiency as a supply resource, below are some comments on the specifics of the IPA's proposal:

- **Super-Peak Blocks on Pre-Scheduled Dates/Times:** The IPA proposal to procure demand-side products during summer super-peak hours is reasonable, as these periods represent the best match between available demand-side resources and price risk. As Comverge notes in their response to the July 2014 EEAASR workshop, direct load control of air conditioning is a reliable supply resource, as are traditional commercial and industrial demand resources. Energy efficient building design can also greatly lower the energy required during these periods, and the summer super-peak energy value of building upgrades represents a rich negawatt resource. Summer super-peak hours then, with advanced deployment of smart meters, would have a broad population in which to find sufficient volume of EEAASR participants. These hours represent one of the greatest sources of supply price risk within a delivery year, meaning such a procurement would lessen the risk exposure of the IPA portfolio as a whole. Super-peak hours represent an

[12] 20 ILCS 3855/1-20 (a)(1).

opportunity to maximize the environmental benefits of energy efficiency, as supplying super-peak load typically requires the use of carbon-intensive fossil-fueled "peaker" plants, which would be curtailed in an EEAASR procurement.

- **Multi-Year Contracts:** CUB and EDF support limiting the initial procurement to three-year contracts. Multi-year contracts would provide assurance to participants that they could recoup any capital investment required to enroll. Energy efficiency upgrades and demand response participation require up-front capital investment, with a cash-flow payback period of greater than one year. Considering the numerous uncertainties in year-to-year eligible retail demand, and without a multi-year contract, potential participants could reasonably question whether a similar EEAASR procurement would be held in future years, making the prospect of seeing a return on their investment less certain.
- **100 kW blocks:** The IPA's proposal to procuring negawatts in 100 kW blocks is an appropriate balance between being small enough to allow maximum participation, while still minimizing administrative burden. It is important to allow this market to develop; the 100 kW block size would allow smaller industrial systems to participate, and make it easier for smaller residential and commercial customers to self-organize into procurement blocks. However, procuring blocks smaller than 100 kW would increase the workload of a procurement administrator and drive up the administrative cost of the procurement. This presents a two-fold inefficiency, as it would direct a larger proportion of the costs to a third party, and drive up supplier fees, likely deterring some potential market entrants.
- **Sufficient Volume to Reduce Relative Procurement Cost:** The IPA proposes a procurement of sufficient size to maximize the cost-effectiveness of the EEAASR procurement. In the past, the cost of administering IPA's standard procurement events has been covered primarily through supplier fees levied on successful bidders. The total cost of these events has varied according to the size of the procurement, with supplier fees for peak hour bids of approximately $0.70/MWh of energy supply. Taking the total cost of these procurements as guide, if the cost of an EEAASR event is conservatively set at $200,000 and the supplier fee ratio remained at $0.70/MWh, the IPA would need to procure 11,000 100 kW blocks. The required volume can be minimized in one of two

ways: keeping the administrative cost of procurement low, or levying higher supplier fee rates. If the cost of the procurement event can be lowered to $100,000, the cost could be covered by procuring 5,500 100 kW blocks; if the supplier fee is set at $2/MWh, the administrative cost would be covered by procuring 4,000 100 kW blocks.

7.1.4 EEAASR Procurement Issues to Resolve

The IPA requested comment on a number of issues yet to be resolved in planning an EEAASR procurement.

- **Vendor/Program Qualification:** Since demand response resources are an established commodity in other jurisdictions, there is little need for the IPA to invent entirely new qualification protocols. The ISO-New England *Manual for Measurement and Verification of Demand Reduction Value from Demand Resources* provides an established set of best practices. This is a critical issue. As an EEAASR procurement would effectively bring a large class of participants into the category of energy suppliers, from a consumer protection viewpoint, those parties would need to be vetted, as business entities, as thoroughly as any traditional generator, in order to minimize risk.
- **Other Programs:** CUB and EDF do not believe EEAASR participants should be barred from participating in other energy efficiency programs; however, it is important to avoid double counting energy savings. The ultimate goal of the procurement event should be to incentivize new energy savings opportunities – double counting delegitimizes the program and undermines this goal. CUB and EDF believe that requiring program bidders to verify that no double counting occurs for scheduled periods, through a clause in the EM&V portion of the supply contract, would serve to differentiate contracted kWh reductions from those performed under other programs.
- **Product Definition:** To enable as wide a rollout as possible, CUB and EDF support an inclusive definition of eligible resources. The IPA should set the parameters for super peak demand reduction (hours, days, quantity, etc.), and allow bidders to participate based on these criteria. Eligible products ought to include all verifiable resources that reduce load during peak hours, and are on the customer side of the meter. As per the distinction between energy efficiency measures and demand resource, PJM's Reliability

Pricing Model defines the primary difference as dispatchability; energy efficiency measures are changes made to existing infrastructure that lower year-round energy usage, whereas demand response resources represent a temporary reduction in usage in response to a signal or request. CUB and EDF believe an EEAASR procurement could include both demand response and energy efficiency resources. Participation can easily be measured through smart meters, and verified energy efficiency resources with an annual impact can be quantitatively converted into their super peak hour impacts and priced accordingly.

- **Credit Requirements and Non-Delivery Penalties:** Since the purpose behind an EEAASR procurement is fundamentally to provide Illinois citizens with lower cost, more reliable electricity, the question of non-delivery penalties is vital. The risk to the grid of non-delivery is time-dependent, and equal to the spot-price of energy required to make up for the shortfall of the non-performing asset. One method would be to assess a penalty equal to the real-time LMP at the time of non-delivery, times the length of non-delivery. This method would have the advantage of making consumers and utilities whole, but would set a high financial bar for participants.
- **Verification:** As with the question of vendor qualification, there are existing best practices for demand response verification. Also, the continued deployment of AMI will simplify verification.

Section 8: Renewable Resources Availability and Procurement

8.3.1 Use of Hourly ACPs Held by the Utilities

Per the PUA, the utilities collect Alternative Compliance Payments (ACPs) from hourly eligible retail customers, with which they are required to purchase renewable energy resources for the following planning year.[13] CUB and EDF support the IPA's view that as the current Long-Term Power Purchase Agreements (LTPPAs) with renewable generators are sufficient to

[13] 20 ILCS 3855/1-75(c)(5).

cover the utilities' respective Renewable Portfolio Standard (RPS) requirements, and a 2015-2016 curtailment of those LTPPAs is unlikely,[14] the appropriate use of the ACPs currently held by the utilities is a distributed generation Renewable Energy Credits (RECs) procurement to bring the utilities up to their annual goals under the RPS.. In the Draft Plan, the IPA requested comment on two issues: the manner of a distributed generation procurement, and the statutory requirement for third-party aggregators of at least one MW in capacity. The IPA offered three potential models for this procurement event:

- **Full Competitive Procurement:** the IPA would conduct a competitive bid process for projects of all sizes, selecting bids solely on a basis of price, and maintaining a 50/50 split between systems above and below 25 kW in size. This model could allow for aggregators to focus solely on systems above or below the 25 kW threshold, or to incorporate systems of all sizes.
- **2013 Plan Model:** the IPA would conduct a competitive bid process for large systems (greater than 25 kW), and use the price results to develop a standard offer for RECs from systems small systems (less than 25 kW), scaled to system size. Alternatively, this model could use results of the supplemental solar REC procurement to develop a standard offer for all distributed generation system sizes. This model would also require the use of multiple third party aggregators.
- **Program Administrator as Aggregator:** the IPA would conduct a competitive bid process for a single aggregator to supply distributed generation RECs for each utility. The respective aggregators would be responsible for structuring their own offers and maintaining the required split between large and small systems.

In comments on the IPA's supplemental procurement plan from July, 2014, CUB and EDF expressed that a balance of auctions and a standard offers will have the best chance of meeting the IPA's goals for renewable procurement. This opinion applies to this proposed procurement as well. A standard offer for small systems, which are largely residential and commercial, represents the best practice throughout the country, as it provides the clearest price

[14] IPA, 2015 Draft Plan, pg. 94.

signal for homeowners and small business owners, and is far simpler than participation in an auction. Conversely, a competitive bid process for large systems will ensure the IPA secures RECs at the lowest average price for Illinois consumers, while providing large distributed generation projects the opportunity to compete against like systems, rather than bidding against utility scale projects at the wholesale/transmission level. With this principle in mind, CUB and EDF oppose the first option: holding a competitive bid process for large and small systems together.

CUB and EDF recommended that no procurement events require the use of an aggregator, as incorporating third parties would inevitably create inefficiencies in project development. However, as the IPA is conducting this procurement under Section 1-75 of the IPA Act, rather than Section 1-56(i) as with the forthcoming supplemental solar photovoltaic procurement, it is required to utilize aggregators, up to a system size of at least one megawatt. The IPA's proposed third option, using a single aggregator for each utility, would place significant market power in the respective third party aggregators, effectively creating an extra layer of cost between DG systems and the utilities. The IPA's second option, which would allow for multiple aggregators, would require aggregators to compete against each other, likely minimizing the inefficiency imposed on individual DG systems. For this reason, CUB and EDF support the second option, following the IPA's 2013 Procurement Plan for a hybrid procurement, with a competitive bid process for systems greater than 25 kW, and using those results to create a scaled standard offer for small systems. This would require aggregators to self-differentiate between large and small systems.

8.3.2 Use of ACPs Held by the IPA

The current balance of ACP fund from ARES payments to the Renewable Energy Resources Fund (RERF) is over $51 million, and set to grow by $77 million from payments for the 2013-2014 planning year. CUB and EDF support the IPA's plan to use $30 million of the RERF funds in a supplemental photovoltaic resources procurement. This procurement is an appropriate first step towards utilizing these funds according to the "spirit of the law" that created the RERF in the first place, and will bolster the continued development of a distributed

solar generation market in Illinois. CUB and EDF also echo the IPA's hope that future legislation will free the Agency's hand in applying the RERF balance more broadly.

Conclusion

Navigating the shifting needs of Illinois electric consumers from year to year is not a straightforward process, and in 2015, the IPA faces the particular challenges of uncertain utility load estimates stemming from customer switching rates, impending federal carbon rules, and a difficult balance between statutory renewable energy requirements and restrictions on its authority to procure renewable resources. To effectively deal with these challenges, the Draft Plan incorporates strategies of mitigating the carbon intensity of its supply portfolio and incentivizing energy efficiency and demand response participation among consumers, while continuing a standard procurement strategy that protects consumers against volatile energy prices spikes without using expensive risk insurance contracts. CUB and EDF offer the following comments and support for these strategies, and look forward to working with the IPA, the Illinois Commerce Commission (ICC), and the utilities to further the development of energy efficiency and distributed generation in bolstering Illinois' electricity infrastructure.