STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

July 3, 2014

Anthony Star
Director
Illinois Power Agency
Via email (Anthony.star@illinois.gov)

Dear Mr. Star:

Attached, please find the response of the staff of the Illinois Commerce Commission ("ICC") to the Illinois Power Agency's June 17, 2014 "Full Requirements Products Request for Comments."

Thank you for your attention.

Sincerely,

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ICC Staff Response to the IPA's Request for Comments on Full Requirements Contracting

1. At the June 5th workshop some participants suggested that an analysis of a potential full requirements procurement should be for a product that includes capacity, ancillary services, etc., not just a load following energy product (as the IPA had analyzed in the 2014 Procurement Plan). Please comment on the advantages and disadvantages of this product definition, and explain which ancillary services should, or should not, be included (e.g., active power reserves but not voltage support).

   Response:

   Advantages of bundling. While most of the risk of providing electric supply service has been due to the variability of energy prices, variability of energy prices is not the only source of risk. Hence, if one of the goals of IPA procurements is to reduce consumers' exposure to risk, then including capacity, ancillary services, and other elements in the product definition is worth considering. Furthermore, it is conceivable that, in providing a bundled product, some third-party suppliers experience economies of scope that are not available to the IPA or the utilities. Hence, it is conceivable that the increase in ratepayers' expected costs needed to reduce risk would be less than the increase that would be anticipated if third party suppliers are assumed to operate in the same manner as the IPA and the utilities.

   Disadvantages of bundling. Additional complexity.

   Specific ancillary services. With respect to which ancillary service should or should not be included in a bundled product, obviously they should be limited to those that can be considered supply services, as opposed to delivery services. Beyond that requirement, Staff has no specific recommendations at this time. While it may be somewhat instructive to include such details in the type of analytical planning models discussed below, one might also consider such details to be merely post-planning implementation issues.

   Other considerations. At either the wholesale or retail levels, or both, it seems reasonable to expect that sellers' risks and risk premiums move in the same direction. Thus, while there are fewer risks associated with a supplier's acquisition and resale of capacity and ancillary services than its acquisition and resale of electric energy, the risk premiums associated with the former should be less than those associated with the latter. Furthermore, whatever risk premiums are embedded in the utility company's supply portfolio will be transferred to eligible retail customers. Hence, while eligible retail customers probably have less to gain from a utility portfolio that, in addition to load-following energy, includes capacity and ancillary services, the additional cost paid by the customers for those capacity and ancillary service components will probably be

low. For this reason, Staff is somewhat ambivalent about bundling capacity and ancillary services into any full-requirements products that are purchased by the utilities. Staff recommends that the decision hinge primarily on what type of contracts wholesale suppliers find the most appealing. That is, the IPA should take into account which type of contracts will draw the greater levels of participation and competition among suppliers.

2. A participant at the workshop indicated that suppliers of fixed-price full requirements products assume price risks associated with capacity, ancillary services, etc. How would one quantify the anticipated costs of including the non-load following energy components (capacity, ancillary services, etc.) in the product described in question 1?

   Response: For both full-requirements and block-and-spot products, one can attempt to construct bottom-up supplier cost analyses, of the kind attempted by the IPA's planning consultant, PA Consulting. Several problems with PA Consulting's analysis were pointed out during the proceeding. Based on those criticisms, refinements are warranted. On the other hand, any attempt to model a typical supplier's costs will fail to take into account differences between suppliers. Ideally, one should be more interested in modeling the "marginal" supplier's costs, since it is that supplier that will set the price in a competitive procurement. Consideration like this render it very difficult to model bidding behavior, so bottom-up supplier cost analyses may not accurately predict the results of either full requirements or block energy RFPs. Direct observation, when and where feasible, may be more useful for measuring the difference between modeled costs and actual bids. Empirically, the difference between modeled costs and actual bids may be strongly correlated with factors such as spot price volatility and, in the case of full-requirements contracts, class load volatility and customer switching volatility. Even if such analyses fail to predict price differences between full-requirements and block-and-spot contracts, when coupled with a model of the utilities' procurement of different types of supply contracts over time, such analyses can provide insights into how different contract types (or different portfolios of various contract types) affect retail price volatility and/or the build-up of deferred cost recovery imbalances.

3. Bids for full requirements contracts include compensation for various costs and risks borne by the product supplier (i.e., "residual compensation" as described in the ICEA presentation). Please comment on what factors influence the level of this cost and how it should be estimated. Other discussions of full requirements procurement (e.g., the IPA's 2014 Procurement Plan) discuss the concept of a "risk premium." Please also comment on the differences in definition between "residual compensation" and "risk premium" and how the two concepts should be differently understood.

   Response: In the context of investments, a "risk premium" on an investment with uncertain returns is typically defined as the amount of expected compensation in excess of the return on a "riskless" investment that is required to induce an investor to embark on the investment with uncertain returns. The investment with uncertain returns might be a simple undertaking, such as the purchase of common stock or a bond. However, it can also be a complex project or set of projects, such as the acquisition of generating assets with the hopes of selling electricity at a profit. In the context of electricity supply, it is difficult to conceive of a "riskless" scenario for a seller. However, the same term, "risk premium," might be meaningfully used in comparing two business opportunities (or strategies). For instance, strategy A may have an expected return that exceeds that of strategy B, and this difference likely reflects a difference in the riskiness of the two strategies to the sellers.

   From the perspective of electricity buyers, the difference in price between two similar products can also be called a "risk premium" if the two products differ in their affects upon the amount of risk absorbed by the buyer. However, there are other reasons why prices may differ. Furthermore, just because one product may entail less risk than another similar product does not mean that the former's price will include any risk premium. This is because not all sellers are speculators. For instance, purchasing a commodity in the futures market enables ***buyers*** to lock in a price, which reduces buyers' risk relative to purchasing entirely in the spot market. However, selling that commodity in the futures market enables ***sellers*** to lock in a price, which reduces sellers' risk relative to selling entirely in the spot market. Hence, while buyers' desire to reduce risk increases the demand for futures, sellers' desire to reduce risk increases the supply of futures. The net impact is uncertain but should entail a decrease or elimination of risk premiums, relative to a hypothetical market where all buyers are hedgers and all sellers are speculators.

   As used in the ICEA presentation, "residual compensation" refers to the difference between actual price bids and predictions of bid prices that are based on a model that attempts to add up all the expected cost components associated with providing the product. In a perfect model, the residual compensation would be zero. In the ICEA

presentation, there is an implicit assumption that the model does not explicitly take into account certain costs, so the residual compensation is expected to be positive.

Whether a supplier is passing along a cost of avoiding risk (which might make up part of a model's "residual compensation"), or charging a premium to absorb risk, is somewhat immaterial if either action results in the same bid.

As noted above, the risks and the cost to avoid those risks are likely to be correlated with factors such as spot price volatility, class load volatility, and customer switching volatility.

4. For the purposes of modeling the full requirements approach, there was discussion at the June 5th workshop about modeling for the 2015/16 delivery year an implementation of full requirements that would account for the existing block contracts as well as separately modeling (for the 2015/16 delivery year or future implementation years) an approach consisting entirely of full requirements contracts. Please discuss any limitations or adjustments to those two models, and how the existing contracts should be treated in the first model.

   Response: The threshold issue is determining the degree to which full requirements contracting should be integrated into an "ideal" steady-state portfolio (the one that should exist after any transition or phase-in is complete). The specific delivery period associated with that ideal state is not critical to the success of the analysis. If it is determined that some degree of full requirements contracting is desirable, then a second analysis would be used to develop a sensible approach to transitioning to the ideal portfolio. This would obviously depend on the state of the existing portfolio. If, for instance, the prompt delivery year were already hedged (as a percentage of expected load) by 52%, on average, but varied between 50% and 60% (depending on the sub-period), it may be appropriate to limit the procurement of new full requirements contracts to no more than 50% (as a percentage of actual hourly load). If desired, block and spot purchases could be used for the remaining 2% to 10% of expected load. On the other hand, if it is desired to transition more swiftly to a portfolio of 100% full-requirements contracts, then the existing portfolio of energy block contracts could be sold (either literally or effectively) and replaced by full-requirements contracts.

5. Please suggest models for how full requirements procurement could be phased into the existing ComEd and Ameren portfolios previously procured by the IPA.

   Response: As noted above, this depends on the existing portfolio and the ideal (post transition) portfolio. Designing a transition plan should be straightforward.

6. The analysis conducted by PA Consulting for the IPA as part of the 2014 Procurement Plan included assumptions that suppliers bidding in a full requirements procurement would hedge their price exposure with forward contracts. Please provide input on what models suppliers use for estimating the costs and risks (including, but not limited to, price and load risk) that they bear as a full requirements product supplier and what inputs the IPA should consider when modeling supplier bidding behavior in a full requirements procurement.

   Response: See responses to 1, 2, and 3, above.

7. To what degree, and how, could the potential benefits of procuring full requirements products (as compared to a block procurement approach) be quantified rather than qualitatively described? What are some of the relevant risk metrics that should be included in such an analysis, and how should they be compared to known procurement costs? Additionally, what are some of the inputs and variables that must be appropriately captured in order to quantitatively assess potential benefits? Are there benefits of the block procurement approach (as compared to a full requirements approach) that could also be assessed and quantified?

Response: (A) While any given person may be able to articulate, in the form of equations, how he values one portfolio over another, deriving a social welfare function to represent all affected persons would be futile. Listing "pro" and "cons," estimating expected price differences and risks, and presenting such analyses to decision makers is the only practical approach. (B) Useful risk metrics would include the following:

- Variability between predicted average costs and actual average costs (which impinges on the degree to which it is feasible to offer "fixed" rates to consumers at the time of the prediction.

- Variability between the revenues from applying a "fixed" retail rate and the costs actually incurred over any given time period (accumulated under or over recovery due to attempts to maintain fixed rates).

- Variability in retail prices from month to month (notwithstanding efforts to maintain a "fixed" rate) and from year to year (volatility), with particular focus on the upward end of the distribution ("rate shock").

  Note that each of the above measures of variability can be measured on an expected basis for a base-case scenario, or across multiple scenarios with Monte-Carlo and/or sensitivity analyses.

8. The IPA's traditional procurement approach hedges in the forward market a percentage of expected load taking into account market conditions. In the 2014 Procurement Plan, the IPA hedged 106% of average load for the summer months to mitigate shaping risk, and for the first time, the IPA is planning a fall procurement for ComEd to adjust the balance of the current delivery year supply to balance an updated summer load forecast. The goal of this second procurement is to reduce load risk. Given the legislative mandate of the Agency to "develop electricity procurement plans to ensure adequate, reliable, affordable, efficient, and environmentally sustainable electric service at the lowest total cost over time, taking into account any benefits of price stability," are there strategies other than full requirements procurement and the IPA's current approach that the IPA could consider for managing risks?

   Response: In its 2013-filed procurement plan, the IPA itself indicated that it was considering various forms of options contracts as a risk mitigation tool, adding, "The Agency did not conduct a full analysis of the economic and regulatory implications of including options in the 2014 Procurement Plan; however, the IPA plans to investigate those implications in developing its 2015 Procurement Plan."

9. During the workshop the idea was raised that there may be ways to achieve rate stability other than utilizing a full requirements supply strategy. How could the utilities provide firm prices for a defined period through a tariff mechanism? Could the utilities adjust the PEA on an annual basis, as opposed to a monthly basis? Would a "rate stabilization account" approach add unnecessary costs? Are there ways to achieve additional utility price/rate certainty while utilizing the IPA's current competitively-bid block procurement strategy?

   Response: With fixed quantity supply contracts, the ability to use rate design to stabilize prices is limited to the extent to which the utility's loads are unpredictable. For a utility operating in a dynamic open-access retail market, with no right to lock retail customers into long-term contracts, a portfolio heavily reliant on the block-and-spot strategy is inherently incapable of stabilizing average costs. Holding a PEA fixed for some period of time merely postpones the inevitable and may increase the expected size of the accumulated over or under collection that must be eliminated.

10. Please provide examples of studies or other evidence that assesses or quantifies the interest of Illinois residential (and/or small commercial) customers in firm rates. To the extent available, please correlate those examples to evidence of customer choice and switching. Please also provide examples from other retail markets.

    Response: Staff has not researched this area of inquiry.