ATTACHMENT 1 TO APPLICATION FOR REHEARING

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

The Illinois Power Agency	**)**	
	)	
Petition for Approval of the	**)**	**Docket No. 13-0546**
2014 IPA Procurement Plan pursuant to	**)**	
Section 16-111.5(d)(4) of the	**)**	
Public Utilities Act.	**)**	

DIRECT TESTIMONY ON REHEARING OF

CRAIG A. GORDON

ON BEHALF OF

THE RENEWABLES SUPPLIERS

RENEWABLES SUPPLIERS EXHIBIT 1.0

JANUARY 21, 2014

Q. Please state your name, present position, and business address.

A. My name is Craig A. Gordon. I am Vice President of Sales and Marketing at Invenergy LLC ("Invenergy"). My business address is One South Wacker Drive, Chicago, Illinois.

Q. What is the business of Invenergy?

A. Invenergy is a clean energy developer, owner, and operator of clean energy projects throughout North America, including in Illinois, and parts of Europe.

Q. What are your duties and responsibilities as Vice President of Sales and Marketing at Invenergy?

A. As Vice President of Sales and Marketing, my duties include leading Invenergy's sales and marketing efforts. I am responsible for identifying and obtaining new business opportunities for Invenergy, which means that I am responsible for finding customers willing to purchase the long-term output of the clean energy projects we have under development.

Q. Please describe your educational background and business experience.

A. I graduated from Wheaton College (IL) in 1994 with a B.S. degree in Geology. I graduated from the Olin School of Business, Washington University in St. Louis in 2001 with a M.B.A degree with a focus in Finance. I was employed from 2002 to 2004 by Ameren Services Corporation as a Credit Analyst and Credit Supervisor. My responsibilities in these positions included evaluating and managing counterparty credit risk exposures for the power trading businesses of Ameren Energy, Inc. and Ameren Energy Marketing Company, as well as negotiating the credit terms in the EEI Master Power Purchase and Sale Agreements. From 2004 to 2010, I was employed by Ameren Energy Marketing Company as an hourly power trader/generation dispatcher, short-term power trader, and long-term wholesale power sales executive. In those roles, I was responsible for identifying, negotiating, and executing electricity hedges for the Illinois

located power generation portfolio. From 2010 until now, I have been employed by Invenergy, first as Director of Origination and currently as Vice President of Sales and Marketing. As Director of Origination, I was responsible for guiding Invenergy's participation in the Illinois Power Agency's ("IPA") long-term renewable resources Request for Proposal ("RFP") Process which took place in the fall of 2010. Because two subsidiaries of Invenergy were awarded long-term power purchase agreements ("LTPPAs") as a result of the 2010 RFP, and the subsequent significant events that have occurred in the Illinois retail power supply markets due to the adoption of municipal aggregation programs, I have remained very attentive to the regulatory and legislative developments in Illinois as they impact the value of Invenergy's clean energy investments in the State of Illinois.

Q. On whose behalf are you testifying in this rehearing proceeding?

A. I am testifying on behalf of the group of intervenors referred to as the Renewables Suppliers. The companies comprising the Renewables Suppliers are listed on page 1 of their Application for Rehearing and Reconsideration in this docket. Each of the Renewables Suppliers, through their project companies, has entered into one or more LTPPAs with one or both of the Illinois electric utilities to supply renewable energy resources.

Q. What is the subject matter of your direct testimony in this rehearing proceeding?

A. I am testifying in support of the Renewables Suppliers' primary and alternative proposals relating to the curtailments of their LTPPAs to prevent the Renewable Portfolio Standard ("RPS") price caps from being exceeded. My direct testimony will discuss key elements of the LTPPAs and why curtailments for contracted Renewable Energy Credits ("RECs") under the LTPPAs in order to comply with the RPS price cap provisions in the Illinois

Power Agency Act should not include curtailments of the associated contracted energy under the LTPPAs.

Q. What do you mean by "associated contracted energy"?

A. A REC can only be created when a renewable energy facility actually generates a megawatt hour ("MWh") of electricity. The LTPPAs are contracts for the sale and purchase of both the specified quantities of RECs and the MWhs that are generated by a specified renewable energy facility to create the RECs.

Q. Does your company have LTPPAs with ComEd or Ameren Illinois?

A. Yes, two of Invenergy's affiliates, Grand Ridge IV LLC and Invenergy Illinois Solar I LLC, have LTPPA contracts with ComEd that were awarded as a result of the IPA's 2010 RFP and were executed in December 2010.

Q. Are the renewable energy facilities of Grand Ridge IV LLC and Invenergy Illinois Solar I LLC that are used to perform the LTPPAs located in the State of Illinois?

A. Yes. The Grand Ridge IV LLC facility is located near Marseilles in LaSalle County. The solar energy facility of Invenergy Illinois Solar I LLC is located near Streator in LaSalle County. Other affiliates of Invenergy own other renewable energy facilities in Illinois.

Q. What is the Renewables Suppliers' primary proposal relating to the curtailment of the LTPPAs?

A. The Renewables Suppliers primarily propose that, in the event that the Commission should direct the curtailment of REC purchases under the LTPPAs to the extent necessary to keep within the RPS price caps, the utility counterparty also should be directed to continue to settle the associated contracted energy under the LTPPAs based on the applicable energy price in the IPA's 2010 forward energy price curve (which I will describe later in this testimony) less the current Day-Ahead Hourly Locational Marginal

Prices ("LMP") in the applicable load zone (which I will also describe later in this testimony). In other words, the LTPPA Suppliers (the sellers under the LTPPAs) should not suffer the lost value of all the MWh otherwise supplied simply as a result of the required REC curtailment.

Q. What is the Renewables Suppliers' secondary, alternative proposal relating to the curtailment of the LTPPAs?

A. The Renewables Suppliers' secondary, alternative proposal is that in the event of a required REC curtailment of the LTPPAs to comply with the RPS price caps, the utility counterparty should be directed to purchase curtailed RECs using the utility's accumulated fund of Alternative Compliance Payments ("ACP") made in respect of its kilowatt-hour ("kwh") sales to its customers served under the utility's hourly pricing tariff, at a price equal to the Contract Price specified in the LTPPA less the current Day-Ahead Hourly LMPs in the applicable load zone. (Ideally, the IPA would also use this price calculation in purchasing curtailed RECs using monies in the Renewable Energy Resources Fund, but we understand that the Commission cannot direct the IPA to do so.)

Q. Please summarize the transactions under the LTPPAs, assuming no curtailments.

A. Each LTPPA is for a specified annual amount of RECs and energy. Each LTPPA specifies a single Contract Price. On a monthly basis, the RECs and energy purchases and sales are financially settled by a payment equal to the Contract Price less the Day-Ahead Hourly LMPs, times the kwh and RECs generated in each hour up to the contract amount, aggregated for the month. There are provisions relating to shortfalls and overruns of RECs and energy compared to the contract amounts but these provisions are not important for purposes of discussing the curtailments and the Renewables Suppliers' proposals.

Q. What is the Day-Ahead Hourly LMP that you referred to in your previous answer?

A. In the PJM Regional Transmission Organization region ("PJM"), the Day-Ahead Hourly LMP is an hourly price calculated by PJM's Security Constrained Economic Dispatch computer model taking into account load forecasts, generation offers, and known transmission constraints. In the Midcontinent Independent System Operator region ("MISO"), the Day-Ahead Hourly LMP is an hourly price calculated by MISO's Security Constrained Economic Dispatch computer model taking into account load forecasts, generation offers, and known transmission constraints. For purposes of the issues in this case, the Day-Ahead Hourly LMP can be described as representing the current market price of electricity

Q. What is the settlement (or delivery) point used to determine the Day-Ahead Hourly LMPs for purposes of settling the LTPPAs?

A. The settlement point for the ComEd LTPPAs is the ComEd Zone of PJM. The settlement point for the Ameren LTPPAs is AMIL.BGS6 ("Ameren Load Zone"), which is an aggregated commercial pricing node comprised of a number of individual commercial pricing nodes. For settlement purposes, the LTPPAs are structured as swap contracts, with the utility as the Fixed Price Payor and the LTPPA Supplier as the Floating Price Payor. On each monthly invoice, the Fixed Amount is netted against the Floating Amount, leaving one party owing a net payment to the other party.

Q. How is the "Fixed Amount" of the LTPPA calculated each month?

A. The Fixed Amount is calculated as the summation of the hourly production of the renewable facility multiplied by the LTPPA Fixed Price. Per the swap structure of the LTPPA, the LTPPA Buyer (Ameren Illinois or ComEd) owes the Fixed Amount to the LTPPA Supplier.

Q. How is the "Floating Amount" of the LTPPA calculated each month?

A. The Floating Amount is calculated as the summation of the hourly production of the renewable facility multiplied by the associated Day-Ahead Hourly LMP. Per the swap structure of the LTPPA, the LTPPA Supplier owes the Floating Amount to ComEd (or Ameren Illinois).

Q. Does the fact that the LTPPAs are settled in the way you described mean that the LTPPAs do not actually provide for the purchase and sale of energy?

A. No. The settlement process I just described is a financial settlement mechanism. The LTPPA Suppliers have contracted to supply the contracted amounts of RECs and associated electricity, but the electricity is not actually delivered to the utility buyer. The LTPPA Suppliers produce and inject electricity into to the PJM (or MISO) power pool. In fact, the LTPPA Supplier can only create a REC by generating a MWh of energy. Likewise, ComEd and Ameren withdraw energy from the PJM and MISO power pools. Electricity injections and withdrawals reflect physical electricity flows for which generators receive payment from the power pools.

Q. What is the "2010 forward energy price curve" that you referred to earlier in this testimony?

A. The 2010 forward energy price curve ("2010 FEC") was developed by the IPA's Procurement Administrator (which was the consulting firm NERA) in consultation with the IPA, the Commission Staff, and the Procurement Monitor (which was the consulting firm Boston Pacific) for purposes of the 2010 long-term renewables procurement. The 2010 FEC is a projection of the annual energy price in the ComEd Zone of PJM and the Ameren Load Zone of MISO for each year of the 20-year term of the LTPPAs that were the subject of the 2010 procurement event. It is my understanding that the Procurement Administrator arrived at the 2010 FEC by estimating the around-the-clock average energy price at the ComEd Zone for a 20 year period. According to Appendix K to the

IPA's 2010 Procurement Plan that was approved by the Commission in Docket 09-0373, the 2010 FEC also incorporated the estimated "magnitude and timing of the price effects related to federal carbon controls."

Q. How was the 2010 FEC used in the 2010 LTPPA RFP process?

A. Because the RFP process for the LTPPAs called for the submission by bidders of a single proposed Contract Price for RECs plus the associated energy, the 2010 FEC was used to establish an imputed REC price component in each bid. The imputed REC price for each year of the term was equal to the Contract Price bid less the forecasted energy price for that year from the 2010 FEC. This procedure, using the projected energy prices in the 2010 FEC, enabled the IPA to evaluate whether the REC price component of an LTPPA bid was cost-effective as required by the IPA Act. Subsequently, the 2010 FEC has been used to calculate the REC component of the annual contract expenditures under the LTPPAs. Appendix K to the IPA's 2010 Procurement Plan stated:

> "In every delivery year, the imputed REC component of expenditures under the bundled renewable contracts will be determined as the difference between the expected annual contract expenditures for that year (based on the winning target Contract Quantities and Contract Prices) and the total target Contract Quantities times the forward price curve for each respective load zone for that year." (Appendix K, p. 3)

Q. What is your understanding of why this mechanism for determining the REC price component of the LTTPAs was developed?

A. Because the IPA Act, Section 1-75(c), which creates the RPS obligations, also capped the total cost of renewable compliance for eligible retail electric customers served by the utilities at 2.015% of the 2007 all-in cost for those customers, the IPA needed a mechanism to isolate the cost of the renewable component from the aggregate Contract

Price of the LTPPAs, in order to determine if the price caps were being met or exceeded by the renewable energy resources purchases in each year. The 2010 FEC created a long-term forward energy price curve that could be used to retrospectively calculate the implied value of the renewables component of the LTPPAs.

Q. Are the forecasted energy prices in the 2010 FEC used to determine if the RPS rate caps have been exceeded and whether a curtailment is needed for a particular year?

A. Yes. The renewable component, or "implied REC value," of the LTPPAs, which is the dollar amount that is counted against the statutory RPS rate cap, is calculated individually for each of the Renewables Suppliers' LTPPAs because each LTPPA has a different Contract Price. For each contract year, the IPA calculates the implied REC value as the positive difference, if any, between the LTPPA Contract Price and the projected energy price for that year under the 2010 FEC. For example, if the Contract Price in an LTPPA for the 2014-2015 contract year is $50 and the projected energy price for that year in the 2010 FEC is $40, the implied REC value for that year would be $10 for all MWhs produced by the Renewable Supplier's facility. The imputed REC price for the LTPPA multiplied by the annual contract quantity under that LTPPA equals the renewable energy cost for which Ameren Illinois or ComEd has contracted for that year. Therefore, the sum of the renewable energy resources costs contracted for under all the LTPPAs equals the total renewable energy cost for which Ameren Illinois or ComEd has contracted for that year.

Q. Does the renewables cost component of the LTPPA change each year?

A. Yes, each year the implied REC component of the LTPPA is calculated as the difference between the Contract Price and the projected energy price for that year from the 2010 FEC. As was specified in the terms of the 2010 RFP, the Contract Price for each year in

each LTPPA is the original base year Contract Price adjusted for a 2 percent per year escalation factor.

Q. How is this information used to determine if the RPS rate caps will be exceeded for a contract year and whether and to what extent a curtailment under the LTPPAs is required?

A. The IPA calculates an amount for each year that is called the Renewable Resources Budget ("RRB"), which is the utility's projected kwh sales to eligible retail customers multiplied by the applicable RPS price cap per kwh for the year. The RRB is then compared to the utility's total contracted renewable energy resources cost described above. If the RRB is greater than the total contracted renewable energy resources cost for the year, the RPS price caps have not been exceeded. However, if the RRB is less than the total contracted renewable energy resources cost for the year, the RPS price caps have been exceeded. In the latter event, the IPA calculates the percentage by which REC deliveries must be reduced under the LTPPAs in order for the RRB to equal the total contracted renewable energy resources cost for the year. This percentage is the curtailment percentage. This procedure is described in Appendix K to the IPA's 2010 Plan. Renewables Suppliers' Exhibit 1.1 is a copy of Appendix K.

Q. Is this calculation illustrated in the IPA Procurement Plan for the 2014-2015 year that is the subject of this docket?

A. Yes, the calculation is shown and described for Ameren Illinois and for ComEd in tables 8-3 and 8-4 on pages 103-104, and the accompanying text, of the IPA Plan filed in this docket on September 30, 2013.

Q. Does the RPS price cap and curtailment calculation you have just described take into account the energy portion of the LTPPAs and the price of the energy portion?

A. No, the calculation only uses the imputed REC price in each LTPPA, which is calculated, as I described, using the projected energy price for the year in the 2010 FEC.

Q. What are the current RPS rate cap amounts for the electric utilities?

A. As stated on page 18 of the IPA Plan filed in this docket, 0.18917 cents per kwh for ComEd and 0.18054 cents per kwh for Ameren Illinois.

Q. In 2010 when the RFP event for the LTPPAs was held, did you anticipate a serious risk that the LTPPAs could need to be curtailed due to the RPS price caps being exceeded?

A. No. In fact, in order to ensure that the renewable costs of the LTPPAs never exceeded the RPS price cap, the IPA first adjusted downward the total annual quantity of renewables to be procured, which amounted to 1,400,000 MWhs, although contracts for only 1,261,725 MWhs were actually awarded. At the time, this contracted quantity was a mere 3.2% of ComEd's forecasted energy requirements to serve its eligible retail customers. Second, looking ahead at the estimated RRB for the 2012-2013 plan year (based on the projections at the time of ComEd's kwh requirements to serve its eligible retail customers in 2012-2013), the IPA imposed a budget cap for the LTPPA procurement at 30% of the estimated 2012-2013 RRB. In other words, the IPA specified that the cost of renewables purchased through the long-term renewables procurement event could not exceed 30% of the estimated RRB for the 2012-2013 plan year. Both of these measures were intended to demonstrate prudence and conservatism with respect to the energy supply portfolio that the IPA was overseeing.

Q. Have your LTPPAs been curtailed?

A. Yes, the two LTPPAs held by Invenergy's affiliates are curtailed for the June 1, 2013 – May 31, 2014 procurement year. June 1, 2013 coincided with the first anniversary of the

LTPPA start date. Based on the approved IPA Plan for 2014-2015, it is anticipated that the two Invenergy LTPPAs will also be curtailed for the upcoming procurement year.

Q. Given the precautions that were taken in connection with the 2010 long-term renewables procurement event to ensure that the RPS price caps would not be exceeded, why have the LTPPAs been curtailed?

A. The primary reason is due to load switching by eligible retail customers who otherwise would take service from a utility to Alternative Retail Electric Suppliers ("ARES") under municipal aggregation programs. As I stated earlier, when the LTPPAs were bid and awarded the kwh contracted for under the LTPPAs only represented about 3.2% of the ComEd eligible retail customer load; today, the kwh contracted for under the LTPPA represent about 11.3% of the ComEd eligible retail customer load. Because the number of eligible customers taking service from ComEd has shrunk so much, the calculation of REC cost/eligible retail customer kwhs has resulted in the REC cost per eligible retail customer kwh rising above the statutory RPS price cap values.

Q. When did the municipal aggregation programs begin?

A. In order for a municipality to institute a municipal aggregation program, it first has to pass a referendum authorizing the program. Then it has to select a power supplier for the program and negotiate a supply contract. The first successful referenda for municipal aggregation programs were held by about 20 municipalities in April 2011. A substantially larger number of successful referenda were held in 2012 and 2013.

Q. Why does it appear that the municipal aggregation programs have been so successful in terms of customers switching from the electric utilities to the ARES providing the power supply in the various municipal aggregation programs?

A. First, ComEd's tariffed price for eligible retail customers was higher than current market prices because its supply portfolio included some legacy supply contracts that were above

current market prices. ARES could offer prices for the municipal aggregation programs based on current wholesale market prices, and therefore had a distinct price advantage over the ComEd bundled service offering, at least during approximately the 2011-2014 period.

Second, because the municipal aggregation programs are "opt out" programs, many customers may not think it is worth the effort to evaluate whether to stay or be switched, or even read the materials that come in the mail, so they are "automatically" switched to the ARES that the municipality has selected as its supplier for its program.

Q. What have been the specific curtailment percentages?

A. For plan year 2013-2014, the IPA recommended an 18.64% reduction in the annual quantities for the Renewables Suppliers who have LTPPAs with ComEd. The IPA did not recommend any curtailments for Renewables Suppliers having contracts with Ameren Illinois. For the 2014-2015 plan year that is the subject of this docket, the IPA Plan indicates a curtailment percentage of 19.6% for the LTPPAs with ComEd and 7.6% for the LTPPAs with Ameren Illinois, subject to a final determination of the curtailment amount based on the utilities' Spring 2014 load forecast updates that will be submitted to the IPA. As the curtailments were implemented for the 2013-2014 plan year and as they are proposed to be implemented for the 2014-2015 plan year, the utility counterparty curtails the purchase of RECs and the settlement of the associated energy by a reduction of the contract quantities under the LTPPAs by the amount of the curtailment percentage.

Q. Did the Invenergy affiliates who have LTPPAs execute REC contracts with ComEd or the IPA for the curtailed RECs for the 2013-2014 plan year?

A. Yes, both Grand Ridge IV LLC and Invenergy Illinois Solar I LLC signed REC contracts with ComEd and the IPA for the curtailed quantities of RECs. It is my understanding that all of the other Renewables Suppliers did so as well.

Q. What is the purchase price for the curtailed RECs that are being purchased by ComEd and by the IPA?

A. The purchase price is the Contract Price under the LTPPA less the projected energy price for the year from the 2010 FEC. In other words, the purchase price for the curtailed RECs is the imputed REC price in the LTPPA, calculated in the same manner as I described earlier in this testimony.

Q. Have the curtailments led to a loss of revenue under the LTPPAs?

A. Yes.

Q. If you entered into the supplemental REC contracts with ComEd and the IPA, why have you lost revenue?

A. Our projects have lost revenues due to the curtailments because the projected 2013-2014 energy price from the 2010 FEC, which was used to calculate the implied REC value, is higher than the current generation-weighted average Day-Ahead Hourly LMPs, leading to the loss of revenues equal to the difference between the energy price for the year from the 2010 FEC (as adjusted for the Resource Value in our LTPPAs) and the generation-weighted average Day-Ahead Hourly LMP. "Generation-weighted" refers to the fact that the Day-Ahead Hourly LMP in each hour is weighed by the MWh generated in each hour to calculate the average Day-Ahead Hourly LMP for the month. The "Resource Value" in the LTPPAs is 1.20 for solar resources and 0.98 for wind resources. The Resource Value was used to adjust the 2010 FEC (which is an "around the clock" average price expectation) for the expected time of day value of the production. For example, solar plants only produce electricity during daylight hours; therefore, the dollar value of electricity produced by a solar plant is more valuable than the daily average power price since power prices are, generally, higher during daylight hours. The tables below illustrate the how the implied REC values are calculated, how the current curtailment

methodology results in lost revenues, and how the Renewables Suppliers' methodology under our primary proposal would restore the lost revenues.

TABLE 1: Calculation of Implied REC Value			
	Variables	**Input**	**Output**
LTPPA Price	A		$53.00
2010 FEC (13/14)	B	$39.15	
Resource Value	C	0.98	
Adjusted 2010 FEC	B*C		$38.37
Implied REC Value	A-(B*C)		$14.63

TABLE 2: Example of Lost Revenues – Current Methodology	
	Output
Energy Revenues from Curtailed Quantity of LTPPAs	$0.00
Generation-weighted Average Day-Ahead Hourly LMP	$30.00
Supplemental REC Revenues (Implied REC Value)	$14.63
Total Market and Supplement REC Revenues	**$44.63**
Revenue Loss relative to LTPPA Price ($53.00)	***($8.37)***

TABLE 3: Example of Lost Revenues – Proposed Methodology	
	Output
Energy Revenues from Curtailed Quantity of LTPPAs	$8.37
Generation-weighted Average Day-Ahead LMP	$30.00
Supplemental REC Revenues (from Implied REC Value)	$14.63
Total Market and Supplement REC Revenues	**$53.00**
Revenue Loss relative to LTPPA Price ($53.00)	***$0.00***

Q. Do you only lose these revenues on the curtailed energy quantity of the LTPPAs?

A. Yes. We do not lose these revenues on the uncurtailed energy quantity of the LTPPAs.

Q. Are the lost revenues associated with energy or RECs?

A. The lost revenues are only from curtailment of the contracted energy quantity associated with the REC purchases that are being curtailed.

Q. Aren't you aware that your company's LTPPAs carried the risk that the RPS rate caps could be exceeded and therefore it would be necessary to implement curtailments to the extent necessary to cause the RPS rate caps to not be exceeded?

A. Yes, we were aware that the LTPPAs included provisions under which they could be curtailed to the extent needed to keep the RPS rate caps from being exceeded. However, our concern is that while curtailment of contracted RECs, at the imputed REC prices in the LTPPAs, is sufficient to prevent the RPS rate caps from being exceeded, the curtailments are being implemented by curtailing both contracted RECs and the associated contracted energy under the LTPPAs. Therefore, LTPPA Suppliers are being deprived of revenues under the LTPPAs in an amount greater than the amount needed to prevent the RPS rate caps from being exceeded.

Q. Is it your understanding that the electric utilities are allowed to recover the costs they incur under the LTPPAs by including those costs in their tariffed charges to their customers?

A. Yes, that is my understanding, subject to the limitation that if the RPS price caps are exceeded (or projected to be exceeded), the Commission can order a curtailment of the LTPPAs in order to prevent the RPS price caps from being exceeded.

Q. What is an energy price hedge?

A. Energy hedging is a customary, prudent and widely accepted practice throughout the electric industry used to protect customers against volatile and potentially uncapped energy prices. Purchasers of hedges recognize that market prices may in the end be

lower than the hedge price, due to a variety of unpredictable factors, but nevertheless purchasers of hedges use this contracting structure to protect themselves or their customers against extreme (high) electricity prices to the extent such prices exceed the hedge price amount.

Q. Do the LTPPAs provide an energy price hedge?

A. Yes. Each LTPPA has a fixed Contract Price for the term of the LTPPA (specifically, the base Contract Price plus a 2 percent per year escalation). This means that the costs paid by the utility counterparty, and passed on to its eligible retail customers through its tariffed charges, for RECs plus energy under the LTPPAs, cannot exceed the Contract Price, even if in a future year the market price of RECs plus energy exceeds the Contract Price. If the imputed REC price as calculated by the IPA is then taken into account, the LTPPA provides an energy price hedge equal to the projected energy price for the year from the 2010 FEC.

Q. Under the LTPPAs, and assuming no curtailment, if the generation-weighted average Day-Ahead Hourly LMP is higher than the energy price in the 2010 FEC, what are the rate consequences for the utility's eligible retail customers?

A. The utility realizes a gain on the energy hedge and passes along the cost savings from the gain on the energy hedge to its eligible retail customers.

Q. If the Day-Ahead Hourly LMP is lower than the energy price in the 2010 FEC on average, what are the rate consequences for the utility's eligible retail customers?

A. The utility pays the LTPPA Supplier the energy price in the 2010 FEC and charges its eligible retail customers for that cost, which is higher than the Day-Ahead Hourly LMP.

Q. If there are circumstances, as you just described, where the eligible retail customers are charged more than the current market price of energy, how is this provision of the LTPPA beneficial to the customers?

A. The provision is beneficial to eligible retail customers because it provides the benefit of the energy price hedge. In the scenario presented in the previous question, the provision required the customers to pay more than the current market price of energy, but in the scenario presented by the second preceding question, the customers' price exposure was capped at the hedge price. Regardless of whether the Day-Ahead Hourly LMP is higher or lower than the fixed price of a hedge, the eligible retail customers benefit from the assurance of a known and stable price.

Q. Why would a utility purchaser enter into a contract with an energy hedge if there is the chance that doing so could result in higher electricity prices under the contract relative to current market prices, during the term of the contract?

A. For the reasons I explained earlier in describing what an energy price hedge is, the buyer is agreeing that the contract price may exceed the current market price at certain times, in exchange for the protection and certainty that if the current market price increases to be greater than the contract price, the buyer's cost is capped at the contract price. In essence, the buyer is purchasing insurance against the market price rising above the contract price.

Q. When ComEd curtails your LTPPAs, what happens to the contracted energy component of the LTPPA associated with the curtailed RECs?

A. Although LTPPA suppliers are able to sell the energy associated with the curtailed RECs into the wholesale market, at the current market price, which as I have described is currently less than the projected market price of energy from the 2010 FEC, this energy component of the LTPPA is not otherwise recognized for purposes of the settlement under the LTPPA and essentially "disappears", despite the fact that the LTPPA Supplier actually produces and injects electricity into the power pool.

Q. Mechanically, is there a simple way in terms of financial settlements under the LTPPAs to only curtail the REC component of the LTPPA?

A. Yes, curtailing only the REC component of the LTPPA is an easy calculation that can be performed during the monthly settlements process. A credit for the curtailed REC amount would be calculated simply by multiplying the following three quantities: (1) the total monthly production (not exceeding the maximum contract quantity), (2) the curtailment quantity percentage (18.64%), and (3) the implied REC price. This credit amount would be deducted from the normal monthly settlement amount under the LTPPAs of (Contract Price less generation-weighted Day-Ahead Hourly LMP) times the quantity of energy generated for the month (up to the LTPPA contract maximum).

Q. If gains and losses from energy hedges always flow through to the ratepayer, is the utility counterparty harmed by continuing to settle the energy hedge value of the LTPPAs as proposed by the Renewables' Suppliers in their primary proposal?

A. No, the utility counterparty is not harmed because the costs of hedges deemed prudent by the Commission are fully recoverable.

Q. What are the benefits of the LTPPAs?

A. First, obviously, the LTPPAs serve to fulfill a portion of the State's renewable energy (RPS) goals.

Second, the LTPPAs provide ComEd's customers with long-term price certainty. With certain limited exceptions, renewable energy suppliers are capable of providing long-term fixed price energy hedges. This is because the fuel source for wind turbines and solar panels is free. Similarly, the utility's eligible retail customers benefit from the long-term price certainty associated with a fixed energy hedge that is not adjusted due to market conditions, such as natural gas spikes, incremental environmental costs, and other factors.

Third, LTPPAs have, in some instances led to increased investment and jobs, as was the case for the Illinois solar project owned by Invenergy's affiliate that specifically was built on the basis of the LTPPA with ComEd. The construction of this project was financed on the basis of the 20-year revenue stream that would be provided by its LTPPA with ComEd. Renewables Suppliers' witnesses John DiDonato, Eric Thumma and William Whitlock discuss the importance of long-term off-take contracts to the decisions of renewable energy resources developers as to whether and where to develop new projects.

Fourth, as discussed by Renewables Suppliers' witness Eric Thumma, long-term off-take contracts lead to a lower cost of financing for renewable energy project developers and therefore, ultimately, lower RPS compliance costs and greater assurance of sufficient renewable energy supplies to meet the RPS objectives.

Finally, because of the wind and solar projects contracted to the utilities pursuant to the LTPPAs, as well as the other wind and solar projects in the state, retail customers benefit from lower overall wholesale power prices. The IPA released a study dated March 30, 2012, which it was required by statute to conduct, that concluded that the integration of renewable resources into the power grid led to lower LMPs, which led to wholesale cost savings for Illinois (reduction in total load payment for generation), in the amount of $176.85 million in 2011. (Illinois Power Agency, *Annual Report: The Costs and Benefits of Renewable Resource Procurement in Illinois Under the Illinois Power Agency and Illinois Public Utilities Acts*, March 30, 2012, at 3.)

Q. Do the Renewables Suppliers believe that they are asking the Commission to "change the contracts"?

A. No. While I am not giving a legal opinion, our view is that the contract allows the Commission to determine how the curtailments under the LTPPAs should be

implemented, so long as this is done in a way that the RPS price caps are not exceeded. Since only the curtailment of the REC purchases (based on the imputed REC prices in the LTPPAs) is needed to stay within the RPS price caps, there is no need to curtail any other part of the contracts, in particular the associated contracted energy.

Q. What are the sources of the funds used by the utilities to buy curtailed RECs and by the IPA to buy curtailed RECs?

A. First, the utilities collect ACP funds from customers taking service under their respective real-time hourly pricing tariff ("hourly ACP funds"). The amount of the hourly ACP funds accumulated by each utility is a function of (i) the applicable ACP rate for the relevant time period, and (ii) the MWhs sold to the utilities' customers under the hourly pricing tariffs. Because these customers are not eligible retail electric customers, the RPS compliance comes in the form of an ACP payment to the utility.

Second, the IPA collects ACPs from the ARES operating in the state. The ARES have an RPS obligation, based on the kwh load of the customers that they serve. Obviously, an ARES customer is not an eligible retail customer of an electric utility. Currently, an ARES may comply with the RPS requirements by making an ACP to the IPA for 100% the ARES' RPS obligation. If an ARES desires to satisfy a portion of its RPS obligation with the purchase of RECs, the ARES must still make an ACP to the IPA for a minimum of 50% of its RPS obligation. These ACPs that the ARES make to the IPA go into the IPA Renewable Energy Resources Fund ("RERF"), which is to be used to purchase additional RECs.

Q. Do the utilities and/or the IPA include in charges to customers the moneys they expend to purchase curtailed RECs?

A. No, as I described above, the utilities collect ACP funds from their hourly real-time pricing tariff customers and the IPA collects ACP funds from the ARES. The amount of

ACPs that an ARES is required to make or voluntarily makes into the RERF is completely independent of how the IPA spends the monies in the RERF. Stated differently, when the utility purchases curtailed RECs using its accumulated hourly ACP funds, it does not charge its customers for the costs it just incurred. Similarly, when the IPA purchases curtailed REC using monies in the RERF, it does not charge either the ARES or retail customers of the ARES or the utilities for the costs it just incurred.

Q. Does this complete your prepared direct testimony?

A. Yes, it does.

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

The Illinois Power Agency	)	
	)	
Petition for Approval of the	)	**Docket No. 13-0546**
2014 IPA Procurement Plan pursuant to	)	
Section 16-11.5(d)(4) of the	)	
Public Utilities Act.	)	

VERIFICATION OF CRAIG A. GORDON

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

Craig A. Gordon, on oath, states that he is Vice President of Sales and Marketing at Invenergy LLC, one of the Renewables Suppliers (as listed on page 1 of the "Application for Rehearing and Reconsideration of the Renewables Suppliers" in ICC Docket 13-0546); that he prepared the foregoing "Direct Testimony on Rehearing of Craig A. Gordon on Behalf of the Renewables Suppliers," identified as Renewables Suppliers Exhibit 1.0, and the accompanying Exhibit 1.1; that he adopts Renewables Suppliers Exhibit 1.0 as his Direct Testimony on Rehearing in ICC Docket 13-0546; that the information set forth in Renewables Suppliers Exhibits 1.0 and 1.1 is true and correct to the best of his knowledge, information and belief; and that if called to testify in ICC Docket 13-0546 and asked the questions shown in Renewables Suppliers Exhibit 1.0, he would give the answers shown therein.

Craig A. Gordon

Subscribed and sworn to before me
this 20th day of January, 2014.

Notary Public

OFFICIAL SEAL
RUTH M NADOLNY
Notary Public - State of Illinois
My Commission Expires Mar 8, 2017

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

ILLINOIS POWER AGENCY	:	
	:	**Docket No. 09-0373**
Petition for Approval of Initial Procurement Plan	:	

APPENDIX K

Long-Term Renewable Resources

In support of the goals outlined in the Illinois Power Agency Act, and in response to comments filed by various interveners in this proceeding[1], the Illinois Power Agency ("IPA") intends to solicit bids for long-term power purchase agreements ("Long-Term PPAs") to procure renewable energy. As discussed in the IPA Procurement Plan ("Plan"), the purpose of this solicitation is to protect Commonwealth Edison Company ("ComEd") and the Ameren Illinois Utility ("Ameren") customers from price risk associated with federal carbon controls.[2] Having considered all of the parties' comments[3], the IPA concludes that the Plan contains sufficient information to enable this process and provides the following additional information in the form of an appendix ("Appendix K") to the Plan.

This Appendix K sets forth the framework under which the IPA plans to procure Long-Term PPAs for renewable resources, as well as providing further detail, requested by the parties, regarding the contract terms and conditions for these PPAs.

SUMMARY

The Long-Term PPAs will represent a small portion of the overall portfolio, currently estimated at approximately 3.5%. The Long-Term PPAs will provide price certainty for acquiring long-term renewable energy and Renewable Energy Credits ("RECs"), which will assist the IPA in partially meeting the Illinois Renewable Portfolio Standard ("RPS") requirements for ComEd and Ameren.

LEGAL AUTHORITY

The Illinois Power Agency has broad authority to meet the electricity procurement needs of the State through a variety of means in order to ensure the maximum benefit to the citizens of Illinois. The IPA has elected for this year's Plan to solicit bids for Long-Term PPAs to procure renewable energy under and in compliance with the terms of the RPS established by Section 1-75(c) of the IPA Act. The IPA, however, notes that Long-Term PPAs for renewable energy are also permissible under Section 16-111.5 of the Public Utilities Act, if such procurements comply with the terms and conditions specified therein.

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[1] *See generally* comments of the People of the State of Illinois (pp. 5-8), the Environmental Law and Policy Center and the Illinois Wind Energy Association.

[2] On June 26, 2009, the U.S. House of Representatives passed HR 2454, the Clean Energy and Security Act of 2009, which would limit the emission of greenhouse gases from stationary sources. The U.S. Senate is currently considering the Clean Energy Jobs & American Power Act (S. 1733), which contains similar provisions.

[3] Objections to Long-Term PPAs were filed by Ameren pp. 1-7, Commonwealth Edison Company pp. 6-10, Illinois Commerce Commission Staff pp. 10-18.

Long-Term Renewable Resources

PROCUREMENT PLAN

The IPA will solicit bids for twenty-year PPAs to purchase up to two million MWhs of renewable energy and the associated RECs each year. This will result in a total of 40 million MWhs of renewable energy purchased through the Long-Term PPAs over their twenty-year lives. This amount represents less than 4% of the IPA total expected energy requirements in the 2012 planning period. Having considered the need to hedge carbon risk, the opportunity to capture consumer benefits by procuring Long-Term PPAs at a time when unprecedented federal and State incentives are available to renewable energy producers, and the potential uncertainties associated with variable generation and interconnection costs, the IPA finds that two million MWh is the appropriate near-term target for this planning cycle. The two million MWhs will be split between the Ameren and ComEd service territories:

- Ameren: 600,000 MWhs each year for the life of the PPA.
- ComEd: 1,400,000 MWhs each year for the life of the PPA.

PREQUALIFICATION PROCESS

The Procurement Administrator, in consultation with the IPA, the ICC Staff, the Procurement Monitor, and the utilities will perform a pre-qualification process with eligible bidders, open to both existing renewable energy projects not under long-term power purchase agreements and renewable energy projects under development that have completed appropriate development and interconnection milestones. The IPA will keep all responses and conclusions confidential to promote competition.

PROCUREMENT PROCESS

Prices will be set through the IPA's competitive RFP process, where the contract terms will be standardized and winning bids will be selected on the basis of price alone. The procurement process for Long-Term PPAs, on a stand-alone basis, will be designed and conducted in accordance with Section 16-111.5 of the Public Utilities Act and Section 1-75 of the IPA Act and the preferences set forth in Section 1-75(c) of the IPA Act shall be applied to the selection process (*e.g.*, "[t]o the extent it is available, at least 75% of the renewable energy resources . . . shall come from wind generation;" it shall be "cost-effective" as defined in that Section; the locational preferences shall be applied as set forth in that Section).

- **Benchmarks**. The Procurement Administrator, in consultation with the IPA, the Procurement Monitor, and the ICC Staff shall develop confidential benchmarks to protect consumers that will be approved by the ICC for the resources procured under this solicitation. The benchmarks will be used to evaluate bids and to reject bids that exceed the benchmarks.
- **Application to the RPS**. The IPA intends to count the REC portion of the procurement toward the RPS requirements and bill-impact cap. To quantify the annual cost of the RECs for the purpose of the RPS, the Procurement Administrator, in consultation with

the IPA, ICC Staff, and the Procurement Monitor shall develop a confidential 20 year forward price curve for energy at the load zone, including the estimated magnitude and timing of the price effects related to federal carbon controls. Each forward curve shall contain a specific value of the forecasted market price of electricity for each annual delivery year of the contract. In every delivery year, the imputed REC component of expenditures under the bundled renewable contracts will be determined as the difference between the expected annual contract expenditures for that year (based on the winning target Contract Quantities and Contract Prices) and the total target Contract Quantities times the forward price curve for each respective load zone for that year. For purposes of determining the maximum expenditure allowed under the RPS bill-impact cap, the forward price curve values will be fixed over the life of the contracts and cannot be subsequently changed or updated, except as follows: if, in any year, the expected annual contract spend is lower than the total Contract Quantities times the forward price curve value for that year, the forward price curve will be updated by the Procurement Administrator, in consultation with the IPA, ICC Staff, and the Procurement Monitor using then currently available price forecast data. If the expected annual contract spend is still lower than the total Contract Quantities times the updated forward price curve value for that year, the REC portion of the bundled bids will essentially become a credit, and the Commission will determine at that time, how to account for that credit in the determination of the bill-impact cap.

Because the quantities of RECs purchased under Long-Term PPAs will be insufficient to meet the statutory renewable targets, the IPA, subject to ICC approval, will determine how to address the remainder consistent with the statute. The way in which the IPA proposes to address such targets for the current procurement cycle are addressed in the main body of this Plan. Following the successful conclusion of a long-term renewable procurement event, the IPA will submit a confidential report to the Commission and the affected utility which contains the REC spend in each year of the resulting contracts that will be counted toward the renewable resources price cap.

PPA STRUCTURE

Generally, the PPAs will be standardized to allow for direct comparison of the bids on the basis of price alone. Renewable suppliers will have an opportunity to offer an annual target fixed quantity of energy and RECs. While some flexibility is included in the timing of certain delivery requirements, recognizing year-to-year and intra-annual variability of renewable resources, the PPAs will: (1) provide for reasonable minimum deliveries of energy and RECs, as a percentage of the target annual fixed quantity, on both a rolling 2-year basis and over the contract term; (2) provide for reasonable collateral to cover damages to the extent such minimums are not met; and (3) make clear that over the life of the contracts, the utilities will be obligated to purchase no more than the amount of energy and RECs equal to the annual quantity times 20 (years) at the contract price. The Procurement Administrator, in consultation with the IPA, the ICC Staff, and Procurement Monitor may also make appropriate price adjustments, for bid evaluation purposes, to allow for direct comparison of offers from renewable resources that have significantly different expected production profiles.

Long-Term Renewable Resources

Specific Terms and Conditions:

- **Term of PPAs.** In order to obtain a competitive, transparent price for the energy generated from renewable sources, the IPA will request long-term power purchase agreement contracts on a per MWh basis, for a term of 20 years.

- **Fixed Price Escalation.** The RFP criteria will require all offers to be in the form of a base price with a fixed escalation rate of 2% per year, provided that short-falls and carry-overs (as discussed in the Performance Guarantee section below) will be priced as of the year delivery was/is due.

- **Product Definition.** All resources that qualify as renewable energy resources under Section 1-10 of the IPA Act are eligible to submit offers in this procurement event. Sellers will specify an annual target Contract Quantity for energy plus the associated RECs that are expected to be provided on average in each delivery year (June through the following May). Seller will identify the specific generating unit or units that will be the source of the renewable energy and RECs. Capacity is not part of the product being purchased and will be discussed later. The seller's price must include and take into account any relevant transmission interconnection costs as well as the scheduled lead times to accomplish any required transmission interconnection work.

- **Financial Settlements for Energy.** The delivery of energy will be accomplished through a fixed for floating financial swap. The fixed price for the swap will be the full bundled contract price for the renewable PPA. The floating price will be the Locational Marginal Price ("LMP") at the utility's load zone for each hour in the day-ahead market of the applicable Regional Transmission Organization. The quantity of energy swapped under these agreements will be directly tied and equal to the bid percentage multiplied by the actual energy produced by the sellers specified unit or units. Seller will provide hourly-integrated generation meter data (from a revenue quality meter that satisfies RTO requirements) on a day after basis to the utilities and the IPA to enable them to perform the necessary calculations. For all energy produced by the applicable percentage of the seller's specified unit(s), the utilities will calculate the difference between the hourly LMP in the day ahead market for their zone, and the Contract Price. The price differences will be multiplied by the applicable percentage of the volume of energy produced by the specified unit(s) in each hour. For every hour that the unit(s) produced energy, if the LMP in the day ahead market at the utility's zone is less than the Contract Price, the utility will pay seller the difference in these costs multiplied by the quantity of energy produced by the unit(s) multiplied by the bid percentage related to the output from the relevant generating unit. For every hour that the unit(s) produced energy, if the LMP in the day ahead market at their zone is higher than the Contract Price, the seller will pay the utility the difference in these costs multiplied by the quantity of energy produced by the unit(s) multiplied by the bid percentage related to the output from the relevant generating unit. The net of the positive and negative payments will be settled on a monthly basis.

  Use of this swap mechanism for the delivery of energy will not affect sellers' obligation to deliver all RECs associated with all of the energy swapped.

Long-Term Renewable Resources

- **Contract Payment**. Utilities have ICC-approved pass-through tariffs to recover all reasonable costs incurred to comply with ICC-approved procurement plans, and all such costs are statutorily deemed to be prudently incurred. 220 ILCS 5/16-111.5(l). In accordance with that authorization, utilities will recover the costs of purchasing, under the terms of the Long-Term PPAs, the quantity of annual energy and RECs specified in the Long-Term PPAs, as it may vary year-to-year subject to a total cap on the contract quantity over the duration of the Long-Term PPAs. Utilities shall not be liable under the Long-Term PPAs (or any related financial swap agreements) for any costs that cannot be recovered from customers through those pass-through tariffs.

- **Performance Guarantee.** Seller will commit and guarantee a minimum quantity of energy and RECs to be delivered, ("Contract Quantity"). The same Contract Quantity will apply to both the energy and the RECs. In each delivery year (June 1 through May 31), all energy produced by the unit or units specified in the Contract, multiplied by the applicable percentage, will be used first to satisfy the annual Contract Quantity commitment along with any carry-over quantity for a future year and/or short-fall quantity for a prior year. After the annual contract commitment is fully met, the seller may retain the full benefit and value of all energy and RECs produced by the unit(s) until the beginning of the next delivery period.

    - Seller Option to Carry-over – Energy and RECs. At the seller's option, seller may deliver and be paid for up to 10% of the Contract Quantity above and beyond the annual commitment, which will be applied by the utilities to meet the Contract Quantity for the upcoming delivery year. In no event will the utility accept more than 120% of the Contract Quantity in any delivery year. The 120% would consist of 10% shortfall from the previous delivery year, 100% of the Contract Quantity in the current delivery year, and 10% carryover into the next delivery year.

    - Short-fall – RECs. In the event that at the conclusion of any delivery year the supplier has delivered, through the up to 10% carryover from the previous year and actual deliveries from the current year, less than 90% of the Contract Quantity, the seller will have 90 days to deliver replacement RECs, without the associated energy, to the utility so that sellers' total deliveries are not less than 90% for the delivery year. No payment will be made by the utilities for these replacement RECs. Replacement RECs must be of the same type (wind, solar, landfill, etc.) and locational preference (Illinois and adjacent State, non-adjacent State) as the RECs provided under the contract. In the event that the seller delivers at least 90%, but less than 100% of the Contract Quantities for any year, the seller may cure that deficiency in the following delivery year by producing and delivering excess RECs plus energy in that year equal to the previous years shortfall. In no event will a seller be allowed to carry a shortfall of RECs greater than 10% of the annual Contract Quantity for more than 90 days into the next delivery year.

Long-Term Renewable Resources

- Short-fall – Energy. Similarly, energy shortfalls of no more than 10% may be carried forward and satisfied in the next delivery year. In the event that the seller fails to produce at least 90% of the Contract Quantity, the utility will compare the Contract Price to the average LMP Price at the utility load zone for the previous delivery year. If the average LMP Price is lower than the contract price, the seller will not be required to make any payment. If the average LMP Price is higher than the contract price, the seller will pay the utility the difference between the average LMP price and the contract price, times a quantity that would bring the shortfall to within 10% of the Contract Quantity.

- **Location of Generation.** The IPA procurement will solicit bids for Long-Term PPAs for renewable energy from all sources – whether in Illinois or outside consistent with Section 1-75(c)(3).

- **Delivery Point.** The delivery point for financially settling the contract will be the utility load zone. REC deliveries under this contract will be accounted for through the PJM GATS system or MISO M-RETS system.

- **Supplier credit requirements.**

  For PPAs:

  There will be separate credit requirements for energy and for RECs. For energy, this will be a non-margining contract as long as the Contract Value (Contract Quantity times Contract Price) for a three-year forward period is higher than the three-year forward Around the Clock (ATC) energy price at the utility load zone multiplied by the applicable Contract Quantity and then multiplied by a factor that reflects the average energy value of the specific resource type compared to the average ATC value. The utilities will perform daily mark to market calculations to enable this calculation. If however, the three-year forward ATC energy price multiplied by the applicable Contract Quantity and then multiplied by a factor reflecting the average energy value of the resource is greater than the three-year forward Contract Value, the supplier will post cash or a letter of credit (net of any unsecured credit allowance) with the utility equal to the difference in these two values.

  For RECs:

  The seller will post $5 per REC in the form of cash or a letter of credit to guarantee delivery of the RECs over the three-year forward period (Contract Quantity times three). If the seller fails to deliver the required annual Contract Quantity of RECs and fails to cure that shortfall in the manner described above, the utilities may seize the REC collateral and direct the IPA to use the proceeds to procure as many replacement RECs as possible with the funds. In addition, the utility will have the right to terminate the contract if the seller fails to deliver all of the RECs in a delivery year (up to the Contract Quantity) associated with the specific unit(s) identified in the contract.

Long-Term Renewable Resources

- **Delivery Commencement.** Delivery under the Long-Term PPAs will begin on June 1, 2012.

- **New vs. Existing Generation.** The IPA procurement will solicit bids for Long-Term PPAs for renewable energy from new or existing projects.

- **Bundled.** The IPA procurement process will be on a bundled basis, for both the energy generated from the project as well as the RECs generated from the project.

- **Capacity Value to the ISO.** The capacity value of the renewable asset to PJM or MISO shall remain with the owner of the asset. Furthermore, any energy and RECs produced in excess of the PPA Contract Quantity remains an asset of the owner, available for sale to other buyers.