COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

APPLICATION OF KENTUCKY POWER COMPANY FOR APROVAL OF THE TERMS AND CONFITIONS OF THE RENEWABLE ENERGY PURCHAS AGREEMENT FOR BIOMASS ENERGY RESOURCES BETWEEN THE COMPANY AND ECOPOWER GENERATION-HAZARD LLC; AUTHORIZATION TO ENTER INTO THE AGREEMENT; GRANT OF CERTAIN DECLARATORY RELIEF; AND GRANT OF ALL OTHER REQUIRED APPROVALS AND RELIEF	)	Case No. 2013-00144

KENTUCKY POWER COMPANY RESPONSES TO

KIUC SECOND SET OF DATA REQUESTS

June 17, 2013

VERIFICATION

The undersigned, Jay F. Godfrey, being duly sworn, deposes and says he is the Managing Director for Renewable Energy, for American Electric Power Service Corporation and he has personal knowledge of the matters set forth in the forgoing responses for which he is identified as the witness and that the information contained therein is true and correct to the best of his information, knowledge and belief.

Jay F. Godfrey

STATE OF OHIO)
) CASE NO. 2013-144
COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Jay F. Godfrey, this the 5th day of June, 2013.

Notary Public

My Commission Expires: January 4, 2014

NOTARIAL SEAL
STATE OF OHIO

Donna J. Stephens
Notary Public, State of Ohio
My Commission Expires 01-04-2014

VERIFICATION

The undersigned, Ranie K. Wohnhas, being duly sworn, deposes and says he is the Managing Director Regulatory and Finance for Kentucky Power, that he has personal knowledge of the matters set forth in the forgoing responses for which he is the identified witness and that the information contained therein is true and correct to the best of his information, knowledge, and belief

Ranie K. Wohnhas

COMMONWEALTH OF KENTUCKY)
) CASE NO. 2013-00144
COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Ranie K. Wohnhas, this the 13th day of June 2013.

Judy K Rosquist 481393
Notary Public

My Commission Expires: January 23, 2017

KENTUCKY POWER COMPANY

REQUEST

In response to KPSC 1-1, Kentucky Power indicated that the potential contract price adjustment if ecoPower is able to qualify for the federal renewable energy production tax credit is in the range of $5-$10/MWh during the term of the credit. Except for the generalized reference in the final sentence of section 7.1 in the proposed ecoPower REPA, is the specific calculation of this downward adjustment to the contract price spelled out in detail in any other section of the REPA? If so, please state where in the REPA. If not, why not?

RESPONSE

Section 7.1 specifies how the value will be split and that it will be in a "fair and equitable manner" and further notes that if the parties do not promptly agree, that Section 13.9 (Dispute Resolution) will govern.

WITNESS: Jay F Godfrey

KENTUCKY POWER COMPANY

REQUEST

In response to KIUC 1-14, Kentucky Power provided an attachment that includes a Proposal Data Sheet (dated 6/30/11). At the bottom of that Proposal Data Sheet, there is an initially proposed sale price that is well below the final REPA contract price. The final REPA price appears to be 49% higher than the sale price in the 6/30/11 Proposal Data Sheet. Please document how and when the contract price changed from the time of the 6/30/11 Proposal Data Sheet through the execution of the REPA and for what reason(s).

RESPONSE

The price shown assumed that construction could commence in time to qualify for the Section 1603 30% cash grants which, have now expired and are no longer available for these types of projects. Additionally, given the later expected "placed in service" date, it is also not eligible for the 50% accelerated tax depreciation due to the expiration of that tax incentive. Finally, it was further represented that operating expenses have also increased.

WITNESS: Jay F Godfrey

KENTUCKY POWER COMPANY

REQUEST

Regarding the Proposal Data Sheet in Kentucky Power's response to KIUC 1-14, besides the proposed sale price, please document any other changes to the values in this Proposal Data Sheet that would bring the document up to Kentucky Power's latest understanding of the transaction or facility.

RESPONSE

Please see KIUC 2-3 Attachments 1 through 4. Confidential treatment is being sought for portions of Attachments 1 through 3.

WITNESS: Jay F Godfrey

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November 2, 2012

Mr. Gregory G. Pauley
President and Chief Operating Officer
Kentucky Power Company
101A Enterprise Drive
P.O. Box 5190
Frankfort, KY 40602-5190

Subject: ecoPower Generation – Hazard, LLC: Renewable Energy Purchase Proposal

Dear Greg,

ecoPower Generation – Hazard, LLC and our partners are pleased to enclose our proposal for your consideration. Our team of experienced fuel supply, energy and financing professionals haves worked diligently and is very optimistic that this proposal will provide reliable, cost effective, long-term renewable baseload biomass power in compliance with environmental standards.

ecoPower- Hazard (the project team of ecoPower Generation-Hazard, LLC and Greenleaf Power, LLC) is in advanced stages of developing and operating a 58.5 MW biomass fired power facility to be located near Hazard, Kentucky. The ecoPower - Hazard project will be connected to the grid at the Engle Substation directly into the KPC system. Our project was birthed out of our keen knowledge, experience, and understanding of the fuel supply. The ecoPower project has strong support from community and political leaders, and it provides diversity to Kentucky's energy portfolio into the future.

Our very experienced team stands ready, willing, and able to answer any and all questions you may have concerning this very important project. We also find it very important that AEP, the parent of Kentucky Power Company, has been a leading utility in the development and deployment of renewable energy projects.

As the need for our country to be more energy independent becomes increasingly more critical to our national security, we and all Kentuckians are thankful for your kind consideration of our proposal.

We are excited about a partnership with Kentucky Power and are pleased to submit the enclosed proposal. Should there be any additional information requested, we are more than happy to discuss those items. ecoPower looks forward to hearing from Kentucky Power regarding the next immediate steps in moving the Renewable Energy Purchase Agreement forward.

Sincerely,

Gary T. Crawford
Chief Executive Officer

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ecoPower Generation – Hazard, LLC

Proposal to Kentucky Power Company for 58.5 MW

Renewable Energy Purchase Agreement

November 2, 2012

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LIST OF ATTACHMENTS

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I. Executive Summary

Project Overview

- ecoPower Generation - Hazard is a biomass-fired power generation developer comprising experienced professionals from the power generation and forest products industries in Kentucky.
- The ecoPower Hazard Project is a nominal 58.5 MW (net) biomass-fired power generation project to be located near Hazard, Kentucky, at the Coal Fields Regional Industrial Park, a Brownfield site with existing industrial infrastructure.
- The Project will employ a fluidized bed boiler, a new steam turbine generator and an air-cooled condenser. The choice of cooling technology allows for minimal use of intake water and enables the Project to be located in the heart of a substantial fuel supply resource.
- An EPC contractor for the construction of the plant has been selected.
- Hazard will use approximately 550,000 green tons annually of low grade wood, timber harvest residuals and mill residuals. The Project has access to approximately nine times the required fuel resource within a one-hour trucking radius on a sustainable basis.
- AEP's Engle substation is located approximately 1.4 miles from the plant site. PJM interconnection studies show no overloads requiring mitigation due to the Project's potential interconnection. The cost of modest system upgrades have been factored into economic projections for the Project.
- The Project has received a final air permit.
- The Project has received approval of The Kentucky State Board on Electric Generation and Transmission Siting.
- All major aspects of the Project's permitting are in advanced development. ecoPower has an option to purchase the proposed site for the Project. The option will be exercised at financial close.

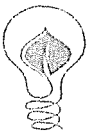
Key Project Attributes

Unique, Baseload Renewable Energy Asset

- Biomass power offers base load generation and addresses the intermittency of many other forms of utility-scale renewable energy.
- The region comprising Kentucky and many of its neighboring states has opportunities for utility-scale renewable power. Woody biomass in the Appalachian Mountain region is a substantial and largely untapped renewable energy resource.

Robust Fuel Supply

- Hazard is located in the heart of the eastern Kentucky wood basket with ready access to abundant sources of fuel wood. There are no local uses for the low grade wood and residuals that the Project will use. By providing a local market, the Project will access sustainable fuel resources that have previously been stranded in the forest or disposed of for minimal revenue by timber mills.



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- Within a 55-mile radius of the Project, there are more than 400,000 green tons of mill residuals and over 67 million green tons of standing low-grade wood with a growth rate of over 1 million green tons annually.
- Pine Mountain Lumber ("PML"), now bpm Lumber, is a 20-year old private hardwood manufacturer that produces over 60 million board feet per year and operates four log yards in Eastern Kentucky. bpm Lumber is the sister company of ecoPower–Hazard and will supply approximately [redacted] of the Project's fuel needs.

Access to Government Incentives

- The Project has received preliminary approval for up to $20 million in state tax incentives from the Kentucky Economic Development Finance Authority.

Strong Management Team

The ecoPower Hazard Project Team members bring over 275 years of experience to the development of projects. Team members have senior management experience in developing and financing power generation facilities, operating forest products companies, and managing wood supplies for companies in the forest industry in eastern Kentucky.

II. Management Team Experience

Richard Sturgill, Chairman and Founder

Over 25 years of experience in the timber and energy industries, currently as Executive Chairman and President of Pine Mountain Lumber, LLC and President of Mountain Energy Companies. Richard also is President of Sturley Investments.

Gary T. Crawford, Chief Executive Officer

Over 32 years of experience in the electric utility industry with senior management responsibilities at East Kentucky Power Cooperative, a generation and transmission utility, where he was responsible for over $2 billion of energy development and power generation projects.

J. Cooper Hartley, Chief Financial Officer

More than 30 years of finance experience and currently CFO of Pine Mountain Lumber, LLC and bpm Lumber, LLC.

Previously served as President of Central Rock Mineral Company, President of Big Elk Creek Coal Company, and CFO of Golden Oak Mining Company

Grant Curry, VP for Fuel Procurement

Over 20 years of professional forestry experience, most recently as the head of procurement for Weyerhaeuser's East Kentucky Timberstrand Plant based in Hazard, KY, where he was responsible for sourcing 400,000 tons of hardwood feedstock annually.

David Drake, Senior Advisor and Director

Over 40 years of experience in the finance and energy sectors of the economy, with 20 years in utility management. Kentucky's first Secretary of Energy and former Administrator of the Kentucky Center for Energy Research, and Director of the Kentucky Industrial Development Finance Authority.

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John Foley, Chief Executive Officer of BPM Lumber, LLC

More than 20 years of experience in the hardwood lumber industry, currently serving as Chief Executive Officer of BPM Lumber, LLC. BPM Lumber is the largest producer of hardwood lumber in Kentucky and involved in the management of over 300,000 acres of timberlands.

Hugh Smith, President – Greenleaf Power, LLC

As President, Hugh Smith oversees more than 100 employees and three biomass plants that generate in excess of 100 megawatts of power. Hugh brings more than 30 years of experience in the energy field to the position.

Robert Pennington, Director of Finance – Greenleaf Power, LLC

Rob Pennington joined Greenleaf Power in 2010 as Director of Finance. In this capacity, Rob evaluates opportunities for expansion of the Greenleaf platform through acquisitions and investment in new biomass power projects.

III. Pricing

ecoPower Hazard proposes to sell 100% of the power produced by its Hazard plant to Kentucky Power under a 20 year exclusive Renewable Energy Purchase Agreement ("REPA") under either of two pricing options provided below for Kentucky Power Company's consideration.

Option 1: Fixed Price Proposal:

ecoPower Hazard will provide to Kentucky Power Company its energy, capacity, and ancillary services for an initial price of [redacted] effective as of January 1, 2013. This price will escalate at a fixed rate of [redacted] per annum, beginning on January 1, 2014. The term of the contract will be twenty (20) years from the date of commercial operation.

Option 2: Limited Fuel Collar Proposal:

ecoPower Hazard will provide to KPC its energy, capacity, and ancillary services for an initial price effective January 1, 2013 of [redacted], separated into two components, a Fixed Energy Price initially [redacted] and a Fuel Energy Price [redacted] Both of these price components will escalate at a fixed rate of [redacted] per annum, beginning on January 1, 2014. The term of the contract will be twenty (20) years from the date of commercial operation. In the event actual cumulative fuel costs per MWh incurred deviate less than [redacted] from the annual payments made under the Fuel Energy Price, there will be no adjustment to the REPA price. To the extent actual annual fuel costs per MWh deviate in excess of [redacted] from the annual payments made under the Fuel Energy Price, such additional cost or benefit shall accrue to KPC.

KPC will also have the ability to mitigate any negative fuel price movements in the event the project experienced unfavorable Fuel Price Adjustments for more than two consecutive years through two separate mechanisms:

1. [redacted]

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[redacted]

2. KPC will have the sole right to appoint a party to manage fuel procurement for the ecoPower Hazard Project, or the right to procure fuel directly and deduct the Fuel Energy Price from all payments.

The power produced by the ecoPower facility is renewable power and as such has a renewable value that can be monetized. This proposal passes all available renewable energy credits ("REC's") and other environmental attributes to Kentucky Power Company at the stated prices in either Option 1 or 2.

The offer price does not include transmission service beyond Engle Substation since power is being delivered directly into the Kentucky Power system. Details of the proposal data are included in the attached Kentucky Power Company – Proposal Data Sheet.

IV. Financing:

Assets and rights to the ecoPower Hazard Project are owned by ecoPower Generation - Hazard LLC (the "Project Entity"), which in turn is owned by ecoPower Generation, LLC ("ecoPower") a Lexington, Kentucky based developer of renewable energy projects. ecoPower was founded by the senior management of Pine Mountain Lumber, LLC. Pine Mountain Lumber has now merged with Begley Lumber Company of London, Kentucky to form "bpm Lumber", the largest hardwood producer in Kentucky and one of the largest producers in North America. Due to the relationship with bpm Lumber, the Hazard Project has a significant advantage for fuel procurement. ecoPower Hazard has secured access to a vast, woody fuel resource available within a 55-mile radius of the Perry County, Kentucky plant, where there are more than 400,000 green tons of mill residuals available and 67.7 million green tons of standing low-grade timber resources which are growing at a rate of 1.01 million green tons annually. The 58.5 megawatt (MW) power plant located near Hazard, Kentucky will produce enough energy to power approximately 30,000 homes using woody biomass as its renewable fuel source.

Upon acceptance of this proposal by KPC, the Project Entity, ecoPower Hazard, will to enter into an agreement with an affiliate of Greenleaf Power LLC ("Greenleaf") to finance the continued development the Project. Greenleaf has aided ecoPower in the preparation of this proposal, and is supportive of the Project under this proposal. Subject to project development milestones and appropriate approvals, the Project will be financed through a combination of traditional senior secured non-recourse financing and equity investment from Greenleaf. Greenleaf is a Sacramento, California based owner and operator of biomass-to-electricity power facilities. Greenleaf currently owns and operates three biomass power plants totaling over 100MW of generating capacity. Greenleaf's management team includes individuals with extensive experience at regulated utilities, IPPs, and other alternative energy providers, and brings over 175 years of combined power generation experience. Greenleaf intends to own the majority of the Project Entity and operate the facility during the term of the agreement. Greenleaf Power's majority investors are private equity funds managed by Denham Capital Management, LP ("Denham"). Denham is a private equity firm focused on energy and commodities, with over $7.3 billion of invested and committed capital. Denham has recently closed its sixth fund with total third party commitments of $3 billion. Project debt financing terms

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are consistent with current financial markets and similar biomass project financings of which Greenleaf is aware. The terms in this proposal do not rely on any tax or other incentives that are not currently in place.

The Project has received preliminary approval for up to $20 million in state tax credit incentives from the Kentucky Economic Development Finance Authority under the Kentucky Incentives for Energy Independence Act.

Financial Close Milestones

Path to Successful ecoPower Hazard Financial Close

Category	Date	Activity
REPA	11/2/2012	Proposal Submittal
REPA	11/19/2012	REPA Executed
REPA	12/17/2012	Incorporation into KPC case
REPA	5/17/2013	PSC Final Order
EPC	10/31/2012	Received Updated Pricing proposal
EPC	12/15/2012	Reach agreement on T's and C's
EPC	4/30/2012	Final EPC Agreement Executed
EPC	6/30/2013	Final Notice to Proceed
EPC	9/30/2015	Substantial Completion
Fuel	12/31/2012	Execution of Key Fuel Supply Term Sheets
Fuel	3/31/2013	Execution of Key Fuel Supply Agreements
Fuel	6/30/2014	Execution of Supplemental Fuel Supply Agreements
Fuel	9/30/2015	Fuel Deliveries begin
Interconnect	10/30/2012	Re-application filed
Interconnect	1/31/2013	Feasibility Study Complete, System Impact Study Issued
Interconnect	9/30/2013	System Impact Study Complete, Execute ISA
Air Permit	12/14/2012	Submit Modification to Current Permit
Air Permit	2/1/2013	Amendment Draft complete
Air Permit	3/15/2013	Comment Period Ends
Air Permit	4/15/2013	Final Amendment Issued
Financing	11/30/2012	Greenleaf/ ecoPower project agreement
Financing	2/28/2013	Complete preparation of debt marketing material
Financing	5/30/2013	Receive final lender proposals

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Financing	8/31/2013	Fuel study, independent engineer reports received
Financing	9/30/2013	Final equity and debt financing commitments

To date, the development expenses of the Project have been funded by ecoPower Generation. Financing discussions have commenced to complete the initial evaluation and consideration of the project incorporating benefits and risks, technology, and other analyses necessary to procure the equity and debt commitments necessary to reach financial close and begin construction of the project. ecoPower Hazard has selected Greenleaf Power/Denham Capital as the Operating and Financing Partner that yields the lowest possible price for the power delivered to KPC.

V. Fuel Supply

ecoPower Hazard recognized that a key initial requirement for success was the need for access to abundant, affordable fuel resources. ecoPower Hazard has utilized both the resources of its sister company, bpm Lumber, and the abundant, sustainable supply of low cost fuel in the areas surrounding the proposed site to provide long term fuel price certainty.

ecoPower Hazard's strategy for access to lowest cost wood fuel consists of the following components:

- Compared to historically high freight cost markets, ecoPower will provide regional wood industries with a low freight cost, local market for mill residuals.
- Take advantage of access to multiple fuel sources to balance receipts of mill residuals, regionally over-abundant, low quality roundwood and "opportunity wood" to provide the ecoPower Hazard plant with a consistent, low cost source of wood fuels.
- Contracted purchase of more than [redacted] of annual fuel needs from bpm Lumber sawmills, timber harvesting contractors, and strategically sited log yards.
- Exclusive low quality log supply agreements with regionally significant forest landowners [redacted]
- Contracted purchase of high Btu residuals from other secondary wood manufacturers in the project area.
- Deployment of BPM Lumber sister company, Rockhouse Trucking, to provide turnkey, just-in-time transport of mill residuals for primary and secondary wood industries that lack in-house, wood residual freighting capabilities.

bpm Lumber, LLC

bpm Lumber, LLC has committed to supply ecoPower with residuals from its mills and roundwood from its contractors' timber harvesting operations. Based upon historical volume production and relationships with existing large landowners, bpm and its timber harvesting contractors will be able to annually supply ecoPower Hazard with at least 200,000 tons of roundwood. bpm has also committed to supply at least 112,000 tons of sawmill chips, sawdust,

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and bark to ecoPower Hazard. Copies of representative fuel supply contracts are available for review. A preliminary breakdown of the sources of the fuel for the ecoPower Hazard project is attached. ecoPower's "Report of Wood Availability and Cost" which includes the American Forest Management study is available for reference.

Asplundh

ecoPower Hazard has negotiated an agreement with Asplundh, a right-of-way clearing and maintenance contractor,for wood chips and bark that Asplundh delivers to the plant site. The agreement also allows Asplundh to dump wood chips at no cost at bpm Lumber's Whitesburg, KY mill site and at its Pike County and Breathitt County log yards. The Asplundh representatives for eastern Kentucky have estimated the volume of chips available for delivery from Asplundh is approximately 10,000 tons annually.

VI. Site Acquisition/Permitting and Environmental

After first assessing the availability and cost of fuel on a competitive basis, ecoPower Hazard then focused on the necessary site acquisition and associated permitting requirements to construct and operate a generation facility.

ecoPower Hazard has obtained option agreements for the purchase of the 125 acre plant site from the Coal Fields Industrial Authority, as well as all required easements and the rights of way for the transmission interconnection, copies of which are available. The options currently have been extended through October 2015 and will be exercised upon financial closing of the project.. An option from the City of Hazard has been obtained to provide make-up water to the plant from the municipal system available in the park.

ecoPower has also completed major licensing and permitting requirements for the construction and operation of the proposed facility. ecoPower Hazard has completed certification of the facility with the Kentucky State Board on Electric Generation and Transmission Siting. The approval was granted on May 18, 2010 under Casee 2009-00530. The Air Quality Permit (V-10-013) was issued on June 16, 2010. It has been extended through May 23, 2013. Revision of the permit to meet final contracted design parameters as required by the current permit is to be initiated immediately and is planned to be completed before May 2013. Due to the proximity of the site to the Wendell Ford Regional Airport, permits from the Federal Aviation Administration and the Kentucky Airport Zoning Commission have been finalized. .Construction stormwater and operating stormwater permits will be submitted upon completion of required engineering. The construction stormwater must be submitted seven days prior to construction start and is the responsibility of the EPC contractor. The operating stormwater permit application is dependent on final engineering development and must be submitted at least 180 days prior to startup of the plant.

VII. Interconnection Studies and Delivery

ecoPower Hazard has reviewed transmission studies that provide analysis of the electric loading and system impacts to the Kentucky Power system. Initial feasibility and system impact studies outlining interconnection requirements and associated cost estimates have been completed. Due to the incomplete nature of an off take agreement at the time and the

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Interconnection Services Agreement (ISA) requirement for a significant security, the ISA will be executed upon completion of the latest renewed PJM interconnection studies. The most recent re-application (Queue Y2-086) for the interconnection was submitted before the current queue deadline of October 31, 2012. Prior studies (Queue No's W4-039 and V3-055) by PJM/AEP have confirmed the scope and preliminary cost of local system improvements. ecoPower Hazard will request expedited review of the latest re-application. While the PJM Tariff specifies the timing of the queue process for the feasibility and system impact studies, an expedited ISA can be delivered with the SIS Report as was done under Queue V3-055.

VIII. Engineering, Procurement and Construction

ecoPower Hazard, working with Stone and Webster/Shaw Power, has developed an engineering, procurement and construction (EPC) proposal for the detailed design, planning and construction of the project. The proposal has now been updated to reflect the current project plan. Shaw has now performed a comprehensive review of the scope of work and obtained pricing confirmation and updates from our major suppliers and subcontractors to reflect adjustments to equipment, materials and wage costs. Based on the Scope of Work provided as in the Proposal and the updated Price submitted, we are very confident we can provide Kentucky Power with a Facility that can be operated in a safe and reliable manner and will meet all agreed performance requirements, including emission and plant performance. A copy of Stone and Webster's most recent affirmation of the EPC price is attached. Copies of relevant portions of the Stone and Webster EPC proposal are available.

IX. Regulatory Support

ecoPower has engaged the firm of Goss Samford, PLLC and its two principals – Mark David Goss and David Samford – to provide regulatory support in its effort to develop the Hazard generating station. Mr. Goss and Mr. Samford bring a wealth of regulatory experience and knowledge to the ecoPower team. Mr. Goss previously served as the Chairman of the Kentucky Public Service Commission and presided over numerous rate cases, Certificate of Public Convenience and Necessity cases, and financing cases, just to name a few. Mr. Goss also served as Chairman of the Kentucky Board on Electric Generating and Transmission Siting. Mr. Samford previously served as the General Counsel, Policy Advisor and Deputy Executive Director of the Kentucky Public Service Commission. In those roles, he provided legal counsel to the Commission in many contexts and frequently worked with legislators and policy makers on various aspects of energy policy – including the development of renewable power sources in the Commonwealth. Mr. Goss and Mr. Samford have the right blend of experience, knowledge and judgment to provide insightful guidance in the regulatory arena. ecoPower and its counsel will provide assistance to Kentucky Power in any manner requested.

X. Development Status

ecoPower has been performing preliminary engineering and cost studies since June 2010 to develop the proposed project. A discussion relative to optimizing the proposed 58.5 MW power plant that will increase electricity generation through the use of renewable fuel has continued to develop through design, engineering and construction planning. ecoPower has noted the major milestones dates in the table below:

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Milestone Dates

- Site Access/Property Optioned – October, 2009
- Feasibility Phase Completed – December, 2009
- Kentucky Siting Board Permit Issued – May, 2010
- Final Air Quality Permit Issued – June, 2010
- Fuel Supply Studies Completed - July, 2010
- Transmission Line Easements Optioned - September, 2010
- Site Geotechnical Analysis for Foundation Design - November, 2010
- Civil Design Completion: September, 2011
- Board of Directors approval to advance project: Upon Date of PPA Award (anticipated June 2011)
- Financial Close: No Later Than September, 2013
- Anticipated date of estimated first large procurement contract commitment: No later than September 2013
- Construction Start Milestone Date: May 2013

The detailed project plan is the result of nearly three years of analyses and engineering among ecoPower Hazard and various project interests. As such, ecoPower is confident that the "commercial operation date" will occur on or before February 2016, the target date assuming the REPA is approved by May 15, 2013. A schedule float of two months is included in the COD. ecoPower anticipates a twenty-nine (29) month period from the Final Notice to Proceed until commercial operation commences.

The Company has developed the Project to manage risks associated with potential increased costs in several ways:

- Construction Contracting – The project will have a fixed price guarantee from its prime EPC contractor for the all-in cost of the project which includes normal contingencies.
- Fuel Contracting – The Company will enter into a contract with its sister company, bpm Lumber, to supply a minimum of sixty percent of the total fuel requirement for the project on a defined cost and schedule basis consistent with the pricing and terms of this proposal.
- Proven Technology – All components of the project, including the boiler, steam turbine and fuel handling system are provided by vendors and constructors that have a track record of proven operation in other commercial facilities of a similar nature.

In addition to the factors discussed above, when in operation, the Project will meet minimum debt service coverage ratios and loan-to-value ratios consistent with other similar projects in the investment portfolio of Greenleaf/Denham.

Upon receipt of an Approved Order from the Kentucky Public Service Commission (PSC) , ecoPower Hazard will post a mutually agreed letter of credit for the benefit of Kentucky Power Company to secure the contract pending PSC approval. Upon final PSC approval, a letter of credit to secure the obligations of ecoPower Hazard under the contract terms will be provided

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XI. Credit-Related Information

Full Legal Name: ecoPower Generation-Hazard, LLC

Dun & Bradstreet No.: 831297176

Type of Organization: (Corporation, Partnership, etc.): Limited Liability Corporation

Bidder's Percent Ownership in Proposed Project: 100%

Full Legal Name(s) of Parent Corporation: ecoPower Generation, LLC

Entity Providing Credit Support (if applicable): Greenleaf Investment Holdings II, LLC

Dun & Bradstreet No. of Entity Providing Credit Support: Later

Address for each entity referenced (provide additional sheets, if necessary):

Greenleaf Power, LLC
2600 Capital Avenue
Sacramento, CA 95816

ecoPower Generation

Confidential

Kentucky Power Company
Proposal Data Sheet
11/2/2012

Bundled All-In Price

Seller: ***ecoPower Generation - Hazard, LLC***

Product and Generation Characteristics:

Proposal Description ecoPower Generation - Hazard, LLC, Perry County Biomass Unit: nominally 58.5 MW net located at 1244 Coal Fields Industrial Drive, Chavies, KY 41727-9100. The plant burns a blend of wood residuals from the hardwood lumber industry and low-grade logs.

Generation Source Description: Rankine-cycle Bubbling Fluid Bed Boiler technology, Steam Turbine Generator, Air-Cooled Condenser, and Emission Controls.

Transmission Interconnection Point of the Source: Engle Substation (Kentucky Power (AEP)), Perry Co., KY

Point of Interconnection to the Grid Same (PJM Interconnection Node _____)

Fuel Price [redacted]

Start Date and Term of Contract: 12/1/2015, Pre-start option for commissioning, 20-year Term

Summer Firm Capacity Amount [redacted]

Summer Maximum Dispatch Capacity Amount: [redacted]

Summer Minimum Dispatch Capacity Amount [redacted]

Expected Heat Rate [redacted]

Winter Firm Capacity Amount: [redacted]

Winter Maximum Dispatch Capacity Amount [redacted]

Winter Minimum Dispatch Capacity Amount [redacted]

Output in 10 minutes [redacted]

Ramp capability [redacted]

Start-up time to minimum capability [redacted]

Start-up time to maximum capability [redacted]

Minimum run time [redacted]

Minimum down time [redacted]

Constraints on production time Base-load plant

Forced Outage Rate [redacted]

Guaranteed Availability [redacted]

Planned Outage Schedul[redacted]

Pricing Information:

Option 1: [redacted]

All-In Energy Pricing: [redacted]

Option 2: [redacted]

Fixed Energy Price: [redacted]

Fuel Energy Price: [redacted]

ADDRESS 1256 Manchester Street
Lexington KY 40504
United States of America

PHONE ph: 859-685-1106
fx: 859-252-6964

WEB info@ecopg.com
www.ecopg.com

Fuel Supply Summary[1]

Annual Fuel Requirement (green tons) 550,000
Project Useful Life (years) 25

Source	Fuel type	Status	Annual Green Tons Available	% of Fuel Requirement
Contracted Volume				
[redacted]	Chips, sawdust, bark, logs	Contracted Supply	[redacted]	[redacted]
[redacted]	Low grade logs	Letter of Intent to Supply	[redacted]	[redacted]
[redacted]	Low grade logs	Letter of Intent to Supply	[redacted]	[redacted]
[redacted]	Right of Way chips, logs	Supply Agreement	[redacted]	[redacted]
Total Contracted Volume			[redacted]	[redacted]
Additional Sustainable Fuel Resources				
[redacted]	Logs,cutoffs	Open Market Availability	[redacted]	[redacted]
[redacted]	Chips, sawdust	Open Market Availability	[redacted]	[redacted]
[redacted]	Chips, sawdust, bark	Open Market Availability	[redacted]	[redacted]
[redacted]	Low grade logs	Open Market Availability	[redacted]	[redacted]
Total Additional Sustainable Fuel Resources			[redacted]	[redacted]
Growing Stock				
[redacted]	Low grade logs	Open Market Availability	[redacted]	
Growing Stock per Year of Project Useful Life			[redacted]	[redacted]
Total Available Fuel Resources				[redacted]
Contracted Volume/Gate Wood Fuel Required(2)	Chips, sawdust, bark, logs	Contracted/Open Market	550,000	100.0%

(1) - Other than contracted volume, assumes only fuel available in a 55-mile radius of the Plant

[redacted]

KPSC Case No. 2013-00144
KIUC's Second Set of Data Requests
Received June 5, 2013
Item No. 3
Attachment 3
Page 1 of 1
REDACTED

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November 1, 2012

Gary Crawford
Chief Executive Officer
ecoPower Generation – Hazard, LLC
1256 Manchester Street
Lexington, KY 40504

Subject: ecoPower Generation – Hazard, LLC
EPC Lump Sum Proposal
66 MW Nominal Gross Output Hazard Biomass Facility

Dear Mr. Crawford:

Stone & Webster Inc., a Shaw Group Company (Shaw) is pleased to provide ecoPower with an EPC Lump Sum Price, for the ecoPower 66 MW (Nominal Gross) Biomass Facility located in Hazard (Perry County), Kentucky.

Shaw entered into a Memorandum of Understanding (MOU) with ecoPower on March 14, 2011 to develop an EPC Lump Sum Price Proposal, and Shaw has now updated the EPC price at ecoPower's request to make it more current. As part of the price-update effort, Shaw performed a comprehensive review of the scope of work and obtained pricing confirmation and updates from our major suppliers and subcontractors to reflect adjustments to equipment, materials and wage costs. We have a high degree of confidence in the validity of this updated EPC Lump Sum Price for the Hazard Biomass Facility.

The basis of our estimate, the clarifications and assumptions as well as the EPC terms remain the same as those that formed the basis of our original 2011 pricing to you.

Our Price is premised upon ecoPower issuing to Shaw a Contract Award and Notice to Proceed in June 2013. Shaw and ecoPower can proceed quickly with good-faith negotiations of an EPC contract based on industry-standard allocation of risk and responsibility and which incorporates the terms and assumptions that formed the basis for Shaw's pricing. It is understood that the final EPC price and terms will be subject to the approval of the Board of Directors of both companies.

Based on the Scope of Work provided as the basis of our Proposal and the updated Price submitted herein, we are confident we can provide ecoPower with a Facility that can be operated in a safe and reliable manner and will meet all agreed performance requirements, including emission and plant performance.

Shaw appreciates the opportunity to work with ecoPower in the development of this 66 MW (Nominal Gross) biomass plant. We look forward to undertaking this very important project and continuing our strong working relationship.

Should you have any questions regarding this proposal, please do not hesitate to contact me at 704-343-7534 (chuck.white@shawgrp.com) or Josh Skudlarick at 704-807-4017 (josh.skudlarick@shawgrp.com).

Regards,

Josh Skudlarick
for

Chuck White
Sr. Vice President
Shaw Power

Attachment: Executive Summary of Price

KENTUCKY POWER COMPANY

REQUEST

Please confirm that the REPA obligates Kentucky Power to purchase up to 62.5 MW of the ecoPower facility's output during the term of the transaction. In Kentucky Power's application, the facility's net nominal capacity is described as 58.5 MW (paragraph 8, page 5). Given that section 3.1 of the REPA gives ecoPower the right to develop a facility with an aggregate nominal or "nameplate" (gross) capacity of up to 66 MW, please provide all basis and foundation for Kentucky Power's assumption that the facility's full load net capacity will be 58.5 MW.

RESPONSE

Section 7.1 requires the Kentucky Power to purchase all Renewable Energy from the Facility, but not to exceed 62.5 MW in any Clock Hour.

The Facility nameplate capacity is 66 MW, which is the maximum design output at the Facility's generator and prior to the Facility's parasitic load and transmission line losses to the point of interconnection with the Company. As discussed in the Company's Response to KIUC 2-5, the difference between the Facility nameplate capacity (66 MW) and the nominal 58.5 MW (net) capacity is the average total loss associated with the Facility's parasitic load and transmission line losses. These average losses total 7.5 MW.

The nominal 58.5 MW (net) capacity refers to the average MW production level over a one year period, which is delivered to and metered at the point of interconnection with the Company. This is the generation that will be paid for by the Company at the Contract Rate.

Facility output will fluctuate throughout the year as outside air temperatures change, with greater production in the winter months and lower production in the summer months. The primary reason for this effect is the cooling capability of the air cooled condenser. The condenser (air cooled) is the greatest heat thermal energy loss in a power generation facility using a steam turbine. It is significantly more efficient when using outside air in the winter versus the summer. The specifics of the facility's winter and summer dispatch capacities are detailed in ecoPower's 11/2/2012 Proposal Data Sheet provided in response to KIUC 2-3. Note that the average net capacity of 58.5 MW is not a simple average of the Summer and Winter maximum capacities. Rather, it represents the expected average of a year by taking into consideration the changing temperature profile throughout a typical year.

WITNESS: Jay F Godfrey

KENTUCKY POWER COMPANY

REQUEST

What is the expected house load (in MW) for the ecoPower facility that is assumed in Kentucky Power's net capacity estimate?

RESPONSE

The expected parasitic load has not been supplied to Kentucky Power Company; however, an estimate of the average parasitic load and transmission line losses to the Engle Substation can be estimated at ~7.5 MW. It is calculated by subtracting the net generation delivered (58.5 MW) from the gross generation capability (66 MW).

WITNESS: Jay F Godfrey

KENTUCKY POWER COMPANY

REQUEST

Please provide Kentucky Power's expected annual energy purchases (in MWhs) from the ecoPower facility that are assumed in Exhibit RKW-1. What net capacity is assumed in this annual energy purchase estimate?

RESPONSE

450,000 MWh. The expected capacity factor is 88%.

WITNESS: Ranie K Wohnhas

KENTUCKY POWER COMPANY

REQUEST

What is the vintage or when was Kentucky Power provided with the financial model in the confidential attachment of Kentucky Power's response to KIUC 1-14? Is this the latest version that Kentucky Power has? If not, please provide the latest version.

RESPONSE

a. The financial model in question was sent to the Company on November 5, 2012.

b. Yes, it is the latest model.

WITNESS: Jay F Godfrey

KENTUCKY POWER COMPANY

REQUEST

Is the financial information in Kentucky Power's response to KIUC 1-24 (dated 6/7/11) the latest such information that Kentucky Power has? If not, please provide the latest version.

RESPONSE

Refer to response to KIUC 2-7.

WITNESS: Jay F Godfrey

KENTUCKY POWER COMPANY

REQUEST

In response to the KPSC 1-10, Kentucky Power noted that there were 75 hours during the 5/1/12-4/30/13 period where the cost of PJM energy and capacity was greater than the proposed REPA price. Please provide, in electronic format, the hourly PJM price (in $/MWh) for every hour of the 5/1/12-4/30/13 period that went into the above determination. If that PJM price is divisible into energy and capacity price components, please provide those components.

RESPONSE

Please see the enclosed CD for the requested information in electronic format.

WITNESS: Ranie K. Wohnhas

KENTUCKY POWER COMPANY

REQUEST

As part of its utility planning process, does Kentucky Power have a forecast of market energy prices at which Kentucky Power may be able to buy or sell energy in the future? If so, please provide such forecast in electronic format for as many years as possible during the proposed REPA term and at the most detailed time level available (e.g., hourly, monthly on-peak/off-peak, etc.). If there are two different forecasts for purchases and sales, please provide both.

RESPONSE

Please see Attachment 1 of this response. This is SCW-Exhibit 3 from Case No. 2012-00578. The exhibit, provided by AEP's Fundamental Analysis Group, contains estimates of PJM on-peak and off-peak energy pricing at the AEP generating hub. The pricing data is grouped into five unique pricing views based on differing assumptions about future carbon mitigation.

WITNESS: Ranie K. Wohnhas

Summary of Long-Term Commodity Price Forecast Scenarios Used in Strategist© Modeling

(Source: AEP Fundamental Analysis)

Unless otherwise note, all Annual-Average pricing is represented in 'Nominal' Dollars

NATURAL GAS (Henry Hub)

($/MMBtu)

	'BASE' Fleet Transition: CSAPR Carbon in 2022	Alternative Scenarios: FT-CSAPR: HIGHER Band Carbon in 2022	FT-CSAPR: LOWER Band Carbon in 2022	FT-CSAPR: Early Carbon Carbon in 2017	FT-CSAPR: No Carbon
2012	4.48	4.48	3.94	4.48	4.48
2013	4.94	5.43	4.35	4.94	4.94
2014	5.38	6.02	4.73	5.38	5.38
2015	5.52	6.29	4.86	5.52	5.52
2016	5.99	6.94	5.27	5.99	5.99
2017	6.13	7.23	5.39	6.42	6.13
2018	6.32	7.46	5.56	6.60	6.32
2019	6.46	7.62	5.68	6.73	6.46
2020	6.52	7.69	5.73	6.78	6.52
2021	6.75	7.97	5.94	7.06	6.60
2022	7.07	8.34	6.22	7.22	6.68
2023	7.26	8.57	6.39	7.35	6.86
2024	7.51	8.86	6.61	7.51	7.10
2025	7.75	9.14	6.82	7.75	7.32
2026	7.85	9.26	6.91	7.85	7.42
2027	8.04	9.49	7.08	8.04	7.60
2028	8.22	9.78	7.23	8.22	7.77
2029	8.41	10.08	7.40	8.41	7.94
2030	8.52	10.48	7.50	8.52	8.05

NATURAL GAS (Henry Hub) (REAL, 2010 $)

($/MMBtu)

	'BASE' Fleet Transition: CSAPR Carbon in 2022	Alternative Scenarios: FT-CSAPR: HIGHER Band Carbon in 2022	FT-CSAPR: LOWER Band Carbon in 2022	FT-CSAPR: Early Carbon Carbon in 2017	FT-CSAPR: No Carbon
2012	4.22	4.22	3.71	4.22	4.22
2013	4.57	5.03	4.02	4.57	4.57
2014	4.84	5.42	4.26	4.84	4.84
2015	4.86	5.54	4.27	4.86	4.86
2016	5.18	6.01	4.56	5.18	5.18
2017	5.22	6.16	4.60	5.47	5.22
2018	5.30	6.26	4.67	5.54	5.30
2019	5.34	6.30	4.70	5.56	5.34
2020	5.31	6.26	4.67	5.52	5.31
2021	5.42	6.39	4.77	5.67	5.30
2022	5.59	6.59	4.92	5.70	5.28
2023	5.66	6.68	4.98	5.73	5.35
2024	5.76	6.80	5.07	5.76	5.45
2025	5.86	6.91	5.15	5.86	5.53
2026	5.85	6.90	5.15	5.85	5.53
2027	5.90	6.96	5.19	5.90	5.58
2028	5.94	7.07	5.23	5.94	5.62
2029	5.99	7.18	5.27	5.99	5.66
2030	5.99	7.36	5.27	5.99	5.66

CO2

($/Metric Tonne)

	'BASE' Fleet Transition: CSAPR Carbon in 2022	Alternative Scenarios: FT-CSAPR: HIGHER Band Carbon in 2022	FT-CSAPR: LOWER Band Carbon in 2022	FT-CSAPR: Early Carbon Carbon in 2017	FT-CSAPR: No Carbon
2012	0.00	0.00	0.00	0.00	0.00
2013	0.00	0.00	0.00	0.00	0.00
2014	0.00	0.00	0.00	0.00	0.00
2015	0.00	0.00	0.00	0.00	0.00
2016	0.00	0.00	0.00	0.00	0.00
2017	0.00	0.00	0.00	15.08	0.00
2018	0.00	0.00	0.00	15.28	0.00
2019	0.00	0.00	0.00	15.47	0.00
2020	0.00	0.00	0.00	15.68	0.00
2021	0.00	0.00	0.00	15.88	0.00
2022	15.08	15.48	15.48	16.08	0.00
2023	15.28	15.67	15.67	16.29	0.00
2024	15.48	15.88	15.88	16.50	0.00
2025	15.67	16.08	16.08	16.72	0.00
2026	15.88	16.29	16.29	16.94	0.00
2027	16.08	16.50	16.50	17.16	0.00
2028	16.29	16.72	16.72	17.38	0.00
2029	16.50	16.94	16.94	17.60	0.00
2030	16.72	17.12	17.16	17.84	0.00

NAPP (6.0#)

($/Ton-FOB Mine)

	'BASE' Fleet Transition: CSAPR Carbon in 2022	Alternative Scenarios: FT-CSAPR: HIGHER Band Carbon in 2022	FT-CSAPR: LOWER Band Carbon in 2022	FT-CSAPR: Early Carbon Carbon in 2017	FT-CSAPR: No Carbon
2012	56.75	64.13	53.91	56.75	56.75
2013	58.00	66.70	53.36	58.00	58.00
2014	60.00	69.00	53.40	60.00	60.00
2015	62.36	72.34	55.50	62.36	62.36
2016	64.72	75.08	57.60	64.72	64.72
2017	65.92	76.47	58.67	64.00	65.92
2018	67.18	77.93	59.79	65.22	67.18
2019	68.45	79.40	60.92	66.46	68.45
2020	69.71	80.87	62.05	67.68	69.71
2021	71.18	82.57	63.35	69.10	71.18
2022	70.90	82.24	63.10	70.55	72.67
2023	72.37	83.95	64.41	72.02	74.18
2024	73.87	85.69	65.74	73.51	75.71
2025	75.38	87.44	67.09	75.01	77.26
2026	76.91	89.22	68.45	76.54	78.84
2027	78.46	91.02	69.83	78.08	80.43
2028	80.04	92.85	71.24	79.65	82.04
2029	81.65	94.71	72.66	81.25	83.69
2030	83.27	96.60	74.11	82.87	85.36

CAPP (1.6#)

($/Ton-FOB Mine)

	'BASE' Fleet Transition: CSAPR Carbon in 2022	Alternative Scenarios: FT-CSAPR: HIGHER Band Carbon in 2022	FT-CSAPR: LOWER Band Carbon in 2022	FT-CSAPR: Early Carbon Carbon in 2017	FT-CSAPR: No Carbon
2012	79.97	91.46	75.97	79.97	79.97
2013	83.46	97.95	75.11	83.46	83.46
2014	84.83	101.44	74.65	84.83	84.83
2015	85.21	102.25	74.98	85.21	85.21
2016	85.52	102.62	75.26	85.52	85.52
2017	85.31	102.37	75.07	82.83	85.31
2018	86.94	104.33	76.51	84.41	86.94
2019	88.58	106.30	77.95	86.00	88.58
2020	90.22	108.26	79.39	87.59	90.22
2021	92.07	110.48	81.02	89.38	92.07
2022	91.66	109.99	80.66	91.21	93.95
2023	93.52	112.22	82.30	93.07	95.86
2024	95.41	114.49	83.96	94.94	97.79
2025	97.31	116.77	85.63	96.84	99.74
2026	99.24	119.09	87.33	98.76	101.72
2027	101.19	121.43	89.05	100.70	103.72
2028	103.18	123.81	90.80	102.68	105.76
2029	105.19	126.23	92.57	104.68	107.82
2030	107.24	128.69	94.37	106.72	109.92

ON-Peak Energy (PJM-AEP Gen Hub)

($/Mwh)

	'BASE' Fleet Transition: CSAPR Carbon in 2022	Alternative Scenarios: FT-CSAPR: HIGHER Band Carbon in 2022	FT-CSAPR: LOWER Band Carbon in 2022	FT-CSAPR: Early Carbon Carbon in 2017	FT-CSAPR: No Carbon
2012	50.57	55.16	47.59	49.73	50.30
2013	50.14	55.48	44.98	48.59	47.85
2014	54.24	62.03	49.26	54.28	54.45
2015	56.71	65.49	53.60	56.42	56.79
2016	63.56	71.80	58.75	62.42	63.74
2017	63.48	71.72	59.20	71.84	64.41
2018	64.18	73.15	60.06	72.73	65.25
2019	65.44	74.08	60.90	73.21	66.31
2020	66.33	75.16	60.86	73.82	66.55
2021	67.64	77.00	62.38	75.75	67.28
2022	76.79	85.88	72.64	77.34	68.31
2023	78.33	87.97	74.25	78.43	70.32
2024	80.34	89.78	74.99	79.55	71.04
2025	82.18	92.27	76.25	81.48	73.07
2026	83.23	93.67	77.71	82.70	73.94
2027	84.57	95.54	79.22	84.24	75.28
2028	86.25	98.14	80.55	86.25	76.51
2029	87.64	100.30	81.53	87.32	77.70
2030	89.34	103.70	82.78	88.75	78.95

OFF-Peak Energy (PJM-AEP Gen Hub)

($/Mwh)

	'BASE' Fleet Transition: CSAPR Carbon in 2022	Alternative Scenarios: FT-CSAPR: HIGHER Band Carbon in 2022	FT-CSAPR: LOWER Band Carbon in 2022	FT-CSAPR: Early Carbon Carbon in 2017	FT-CSAPR: No Carbon
2012	30.92	33.66	29.07	30.33	30.27
2013	30.55	35.01	28.55	30.15	29.97
2014	33.26	38.84	31.15	32.95	33.34
2015	33.89	40.47	32.16	33.73	34.34
2016	39.57	45.94	36.16	38.65	40.12
2017	41.57	48.09	38.59	51.00	41.67
2018	42.57	49.48	39.25	52.03	42.70
2019	43.60	50.18	40.01	52.82	43.47
2020	44.18	51.40	40.52	53.54	44.35
2021	45.76	53.01	41.76	55.14	45.22
2022	55.93	63.44	52.41	56.56	46.22
2023	56.84	65.25	53.42	57.35	47.67
2024	58.85	66.65	54.17	58.69	48.94
2025	60.37	68.79	55.93	60.38	50.72
2026	61.06	70.11	56.67	61.28	51.59
2027	62.64	72.07	58.15	62.85	53.19
2028	64.05	74.08	59.05	64.56	54.40
2029	65.66	76.20	60.20	65.80	55.78
2030	67.49	78.87	61.12	66.82	56.65

Capacity Value (PJM-RTO RPM) *

($/MW-Day)

	'BASE' Fleet Transition: CSAPR Carbon in 2022	Alternative Scenarios: FT-CSAPR: HIGHER Band Carbon in 2022	FT-CSAPR: LOWER Band Carbon in 2022	FT-CSAPR: Early Carbon Carbon in 2017	FT-CSAPR: No Carbon
2012	55.44	55.44	55.44	55.44	55.44
2013	23.03	23.03	23.03	23.03	23.03
2014	85.05	85.05	85.05	85.05	85.05
2015	215.25	215.25	215.25	215.25	215.25
2016	281.92	281.92	281.92	281.92	281.92
2017	235.98	199.63	230.85	210.98	240.98
2018	200.39	166.43	179.76	180.39	205.39
2019	224.57	211.40	186.64	214.57	230.57
2020	253.47	253.86	212.57	243.47	261.47
2021	280.05	293.65	238.70	265.05	295.05
2022	304.18	330.64	264.71	289.18	322.18
2023	325.73	364.68	288.14	310.73	345.73
2024	344.58	391.96	308.40	329.58	364.58
2025	360.58	405.21	325.58	345.58	380.58
2026	373.61	411.28	340.04	358.61	394.61
2027	383.50	417.45	350.60	363.50	405.50
2028	390.13	423.72	358.23	370.13	413.13
2029	392.94	430.07	362.96	372.94	416.94
2030	392.16	436.27	361.29	372.16	418.16

* Represents forecasted PJM-RTO Base Residual Auction UCAP clearing prices for those respective XXXX/(XXXX+1) forward PJM Planning Years

Exhibit SCW-3

KPSC Case No. 2013-00144
KIUC's Second Set of Data Requests
Dated June 5, 2013
Item No. 10
Attachment 1
Page 1 of 1

KENTUCKY POWER COMPANY

REQUEST

As part of its utility planning process, does Kentucky Power have a forecast of renewable energy credit (REC) prices at which Kentucky Power may be able to buy or sell RECs in the future? If so, please provide such forecast for as many years as possible during the proposed REPA term. If there are two different forecasts for purchases and sales, please provide both.

RESPONSE

Kentucky Power does not have a forecast for future REC prices.

WITNESS: Ranie K Wohnhas

KENTUCKY POWER COMPANY

REQUEST

Refer to the Company's response to KIUC 1-22, which sought "all reasons for the Company's position on sharing these incremental margins" on the additional energy that will be sold into the market (after recovering the entirety of the purchased power expense related to the proposed PPA through the rider) 60% to customers and 40% to the Company.

a. In its response, the Company did not provide any reasons. Instead, the Company merely asserted that the present 60%/40% approved pursuant to the Commission's adoption of a settlement in Case No. 2009-00459 "is a fair, just, and reasonable allocation" until the issue is again addressed in the Company's next base rate case. Please provide all reasons why the Company believes that it should retain 40% of the margins on the additional energy sold into the market while customers will be required to pay for 100% of the costs pursuant to the proposed PPA.

b. Please confirm that the "must run" status of the proposed PPA (see response to KIUC 1-23) will force the Company's other lower cost generation to move up the dispatch "stack" out of economic order and thus, shift the Company's lower cost energy from serving retail load at cost to supplying off-system sales at market. Please explain your response.

RESPONSE

a. For the reasons set forth in its response to KIUC 1-22, the Company objects to the request because it seeks information that is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence. Without waving this objection, and further conditioning the following response on the Company's right to modify, abandon, or supplement the reasons for maintaining the current 60%/40% System Sales Clause split when the issue is properly before the Commission, the Company states as follows:

   Assuming the Mitchell Transfer is approved and that Big Sandy Unit 1 is converted to natural gas, the Company anticipates that the ecoPower facility will represent approximately four percent of the generation available to Kentucky Power at the time it becomes operational. Such a small percentage of generation available for off-system sales does not represent a credible basis for modifying the System Sales Clause split.

b. The Company confirms that it will purchase all energy produced by the facility. When the facility is running, all other generation will be economically dispatched after the ecoPower facility.

WITNESS: Ranie K. Wohnhas

KENTUCKY POWER COMPANY

REQUEST

Refer to the Company's response to KIUC 1-34 regarding AEP's consideration of debt equivalents in the evaluation of PPA resource bids. Please describe with specificity how AEP incorporates the effects of S&P's or any other rating agency's treatment of a PPA as a debt equivalent in the quantifications used to rank alternative resource bids or options that include one or more PPAs. Please provide an illustration or actual example of the mechanics of these quantifications, including the mechanics of the projected cash flows, discounting, risk factor applied, and the calculation of the additional equity contribution.

RESPONSE

As part of an RFP process, the cumulative present worth (CPW) of a PPA proposal's cost impact on a company's revenue requirement is determined using a resource planning model. The CPW of a PPA's debt equivalence impacts is then added to the revenue requirements CPW to create a total CPW impact for a PPA proposal. However, this contract was not reviewed as part of an RFP process, and the Company has reduced the imputed debt risk via language in the REPA (termination rights) which protects the Company in the event of less than full cost recovery.

The mechanics of the projected cash flows were included in confidential Attachment 1 in response to KIUC 1-38. The response included risk factors of both 10% and 25%, and the discount rate used was Kentucky Power's cost of debt, which was 6.46%. The final risk factor will be determined by the rating agencies upon review of the terms of the agreement, the final order in this case, and any relevant legislation. The Company believes the risk of imputed debt costs have been reduced.

WITNESS: Ranie K. Wohnhas

KENTUCKY POWER COMPANY

REQUEST

Refer to the Company's response to KIUC 1-38 and the attachment to that response regarding AEP's consideration of debt equivalents in the evaluation of PPA resource bids.

a. Please describe the Company's calculation of the additional equity contributions that are shown on the attachment to this response and provide the electronic spreadsheet with formulas intact. In addition, please describe and source all assumptions used in this calculation.

b. Please explain why the Company calculated the additional equity contribution as 45.0% of the debt equivalent under the 10% and 25% risk factor assumptions rather than solving so that the equity ratio was 45.0% of total capitalization after including the PPA debt equivalent in total capitalization. Was it the Company's intent to calculate the additional equity contribution so that the equity ratio was 45.0% of total capitalization after including the PPA debt equivalent in total capitalization? If that was not the Company's intent, then please explain why it was not.

RESPONSE

a. The Company multiplied the imputed debt by 45%, which assumed that after adjusting for the PPA, KPCo would still be capitalized in the 55% debt to capitalization range post PPA analysis. There were no further assumptions for this calculation. See KIUC 2-14, Attachment 1 on the enclosed CD for the spreadsheet with formulas intact. Confidential treatment is being sought for Attachment 1 in its entirety.

b. Multiplying the debt imputation by 45% was a quick analysis that was conducted to manage the overall debt to capitalization to the 55% range. It was KPCo's intent to keep the debt to capitalization in the 55% range for this analysis.

WITNESS: Ranie K Wohnhas

KENTUCKY POWER COMPANY

REQUEST

Refer to Wohnhas Exhibit RKW-1.

a. Please explain why Mr. Wohnhas did not include the cost of the additional equity contribution in the capital structure to offset the PPA debt equivalent in total capitalization.

b. Please confirm that if Mr. Wohnhas had included the costs associated with a richer common equity ratio necessary to offset the imputed PPA debt equivalent that it would increase the incremental revenue requirement and the percentage increase.

c. Is it the Company's position that it will not seek to include the costs associated with a richer common equity ratio necessary to offset the imputed PPA debt equivalent in the revenue requirement, regardless of the effect would have been reflected in whole or in part in the proposed recovery rider, in base rates, ECR rider, or any other rider or rate that includes a return on rate base investment or capitalization? If this is the Company's position, then please explain how it will adjust the test year common equity ratio for ratemaking purposes to exclude the increment necessary to offset the PPA debt equivalent. Please be specific. If this is not the Company's position, then please confirm that it will seek to include the costs associated with a richer common equity ratio necessary to offset the imputed PPA debt equivalent in the revenue requirement, describe how it will seek to do so and in which tariff components (proposed rider, ECR, base, etc.).

RESPONSE

a. Exhibit RKW-1 demonstrates only the cost to be recovered through the cost recovery rider. The effect, if any, of any additional equity contribution on the Company's base rates was not calculated because it was not relevant to the calculation in Exhibit RKW-1.

b. The question misstates the effect of any required equity capital contribution. It will not, as the question states, result in "a richer common equity ratio." To the contrary, the equity contribution would be for the purpose of maintaining the existing debt/equity ratio. Subject to that clarification, please see the Company's response to part (c) below.

c. No. To the extent that additional equity is necessary to maintain the BBB/Baa2 investment grade credit rating, KPCo expects to earn a return on that equity in rates. However, the plant will not be in service until 2017, and any adjustment to equity would not be made until the plant goes into service. Between now and 2017, there will be any number of positive and negative items that would affect the capitalization and the cost of capital for Kentucky Power, and any additional equity would be part of the overall financing plan for the Company.

WITNESS: Ranie K. Wohnhas

KENTUCKY POWER COMPANY

REQUEST

Refer to page 3 Exhibit RKW-2, which replicates the S&P's methodology for imputing debt for U.S. utilities' power purchase agreements, wherein S&P's states:

In cases where a regulator has established a power cost adjustment mechanism that recovers all prudent PPA costs, we employ a risk factor of 25% because the recovery hurdle is lower than it is for a utility that must litigate time and again its right to recover costs.

Please provide all written evidence and documentation that S&P's would use or has ever used a risk factor of less than 25% where a regulator has established a power cost adjustment mechanism that recovers all prudent PPA costs. In addition, provide all examples of which AEP is aware where S&P's used a risk factor of less than 25% to calculate the risk factor for imputing debt for a PPA. Provide all relevant facts for each such example.

RESPONSE

The Company is not aware of any reports where S&P publishes PPA risk factor calculations by contract.

The Company understands that most regulated PPAs are assigned a 25% risk factor. However, on Page 3 of Exhibit RKW-2, S&P states that these risk factors typically range between 0% to 50% but can be as high as 100%. The strongest recovery mechanisms translate into the smallest risk factors.

With the legislation in place in Kentucky whereas future Commissions cannot disallow approved contracts, the Company believes that a low risk factor should be used for analyzing the contract.

WITNESS: Ranie K Wohnhas

KENTUCKY POWER COMPANY

REQUEST

Please provide all written evidence and documentation that AEP bargained for a lower rate than is reflected in the proposed REPA and shown on Exhibit RKW-1. To the extent that AEP actually bargained for a lower rate, please describe this process, including the time period and major milestones and dates during this bargaining process, and provide a copy of all related correspondence and analyses demonstrating that AEP indeed bargained for a lower rate and that it considered the impact of these rates/costs on its Kentucky retail customers.

RESPONSE

During the second half of 2012, the Company inquired with ecoPower to determine the reason for the increase in the proposed price from the 2011 proposal. As noted in the answer to KIUC 2-2, the major change in price was due to the loss in tax benefits (30% Section 1603 Grants and 50% first year "bonus" tax depreciation). To review this, the Company requested a copy of the current financial model (see KIUC 1-14) which included the updated forecast for capital expenditures, cost of capital for the project, operating expenses and cash flows for the life of the proposed REPA. The model was provided, and the Company reviewed it. Subsequently, the Company set up a call with ecoPower to walk through the financial model. Participating in the November 9, 2012 call was ecoPower's proposed development / financial partner, Greenleaf.

Because financing assumptions are a significant portion of the cost of energy to be produced, the Company scheduled an informational call on November 16, 2012, with a major power sector project finance lender to confirm market rates for non-recourse power asset transactions, similar to ecoPower. Neither ecoPower nor Greenleaf participated in the call with this finance lender. From what the Company was able to discern, the debt assumptions in the ecoPower model (leverage, coverage ratios, spread and fees) seemed reasonable at the time.

Having confirmed that the inputs to ecoPower's model were reasonable given the technology, the Company focused on areas for improving the terms of the transaction. One option that ecoPower suggested was to lower the starting rate for the power price in return for Kentucky Power and its customers bearing the fuel price risk (see page 6 of Exhibit 1 in KIUC 2-3) associated with the project. The Company was not interested in that option because of its lack of experience in the wood industry and associated risks. Negotiations then moved on to exploring ways to share any upside in the event that the project was able to qualify for Section 45 Production Tax Credits. The results of these negotiations are included the REPA.

The Company is in the process of reviewing e-mails to determine whether additional information related to the above question exists and will supplement as appropriate.

WITNESS: Jay F Godfrey

KENTUCKY POWER COMPANY

REQUEST

The Company's Application seeks a declaratory order "that the concurrent recovery by means of a monthly rider or surcharge to Kentucky Power's rates of all costs associated with the REPA is appropriate." However, the Company does not provide an actual proposed rider or surcharge in conjunction with the Application or the testimony of its witnesses. Please provide an actual proposed rider or surcharge or explain why the Company cannot provide the proposed rider or surcharge in this proceeding and instead, only can provide the proposed rider or surcharge in conjunction with its next base rate filing.

RESPONSE

Please see Attachment 1 of this response.

WITNESS: Ranie K Wohnhas

KENTUCKY POWER COMPANY

P.S.C. KY. NO. 10 ORIGINAL SHEET NO. 19-1
CANCELING P.S.C. KY. NO. 10 _____ SHEET NO. 19-1

TARIFF B. E. R.
(Biomass Energy Rider)

APPLICABLE.

To Tariffs R.S., R.S.-L.M.-T.O.D., R.S.-T.O.D., Experimental R.S.-T.O.D.2, S.G.S., Experimental S.G.S.-T.O.D., M.G.S., M.G.S.-T.O.D., L.G.S., L.G.S.-T.O.D., Q.P., C.I.P.-T.O.D., C.S.-I.R.P., M.W., O.L. and S.L.

RATE.

1. When energy is generated and sold to the Company from the ecoPower biomass facility, an additional charge equal to the product of the kWh of sales and a biomass adjustment factor (A) shall be made, where "A", calculated to the nearest 0.0001 mill per kilowatt-hour, is defined as set forth below.

   Biomass Adjustment Factor (A) = (R*Pm)/Sm

   In the above formulas "R" is the rate for the current calendar year approved by this commission in the REPA between ecoPower and Kentucky Power Company, "P" is the amount of kwh purchased by Kentucky Power Company in the current (m) period, and "S" is the kWh sales in the current (m) period, all defined below.

2. Rate (R) shall be the dollar per MWh as defined in the REPA between ecoPower and Kentucky Power Company, including any applicable escalation factor as defined in the REPA.

3. Produced energy (P) shall be the MWh produced and sold to Kentucky Power Company.

4. Sales (S) shall be all kWh sold, excluding intersystem sales. Utility used energy shall not be excluded in the determination of sales (S)

5. The monthly bio mass energy rider shall be filed with the Commission ten (10) days before it is scheduled to go into effect, along with all the necessary supporting data to justify the amount of the adjustment, which shall include data, and information as may be required by the Commission.

6. Copies of all documents required to be filed with the Commission shall be open and made available for public inspection at the office of the Public Service Commission pursuant to the provisions of KRS 61.870 to 61.884

DATE OF ISSUE XXXXXXX

DATE EFFECTIVE SERVICE RENDERED ON AND AFTER XXXXXX

ISSUED BY Lila P. Munsey

TITLE: MANAGER OF REGULATORY SERVICES

BY AUTHORITY OF ORDER BY THE PUBLIC SERVICE COMMISSION

IN CASE NO. XXX-XXXX DATED