

Mr. Jeff DeRouen Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602-0615

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PUBLIC SERVICE COMMISSION

Kentucky Utilities Company State Regulation and Rates 220 West Main Street PO Box 32010 Louisville, Kentucky 40232 www.lge-ku.com

Robert M. Conroy Director - Rates T 502-627-3324 F 502-627-3213 robert.conroy@|ge-ku.com

May 15, 2012

Subject: Application of Kentucky Utilities Company for Approval of a

Special Contract

Dear Mr. DeRouen:

Pursuant to 807 KAR 5:011, Sections 2 and 13, 807 KAR 5:001, Section 8, and other applicable law, Kentucky Utilities Company ("KU") respectfully requests approval of a special contract between KU and Weisenberger Mill ("WM") for net metering service. Enclosed for filing are an original and twelve copies of the cover letter, application, and attachments. Please confirm your receipt of this filing by placing the stamp of your office with the date received on the enclosed additional copy of this filing.

Should you have any questions regarding the enclosed, please contact me at your convenience.

Sincerely,

Robert M. Conroy

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:		
APPLICATION OF KENTUCKY UTILITIES)	
COMPANY FOR THEAPPROVAL OF A SPECIAL)	
CONTRACT)	CASE NO. 2012-00

APPLICATION

Kentucky Utilities Company ("KU" or the "Company") hereby petitions the Kentucky Public Service Commission ("Commission") by application pursuant to 807 KAR 5:011, Sections 2 and 13, and 807 KAR 5:001, Section 8, and other applicable law, and requests the Kentucky Public Service Commission to grant approval of the attached Special Contract which is an Agreement for Net Metering Service by and between KU and Weisenberger Mill.

In support of this Application, the Company states as follows:

- 1. <u>Addresses</u>: KU's full name and business address is: Kentucky Utilities Company, One Quality Street, Lexington, Kentucky 40507. KU's mailing address is Kentucky Utilities Company c/o Louisville Gas and Electric Company, Post Office Box 32010, 220 West Main Street, Louisville, Kentucky 40232.
- 2. <u>Articles of Incorporation</u>: A certified copy of KU's current Articles of Incorporation is on file with the Commission in Case No. 2010-00204, *In the Matter of: Joint Application of PPL Corporation, E.ON AG, E.ON U.S. Investments Corp., E.ON U.S. LLC, Louisville Gas and Electric Company and Kentucky Utilities Company for Approval of an Acquisition of Ownership and Control of Utilities filed on May 28, 2010, and is incorporated by reference herein pursuant to 807 KAR 5:001, Section 8(3).*

3. KU is a public utility, as defined in KRS 278.010(3)(a), engaged in the electric business. KU generates and purchases electricity, and distributes and sells electricity at retail in the following counties in Central, Northern, Southeastern, and Western Kentucky:

Edmonson Jessamine Ohio Adair Anderson Estill Knox Oldham Ballard Fayette Larue Owen Barren Fleming Laurel Pendleton Bath Franklin Lee Pulaski Bell. Fulton Lincoln Robertson Bourbon Gallatin Livingston Rockcastle Boyle Garrard Lyon Rowan Bracken Grant Madison Russell Bullitt Marion Scott Gravson Caldwell Green Mason Shelby Campbell Hardin McCracken Spencer Carlisle McCreary **Taylor** Harlan Carroll Trimble Harrison McLean Casev Hart Mercer Union Christian Henderson Montgomery Washington Clark Muhlenberg Webster Henry Hickman Nelson Whitley Clay Crittenden **Hopkins Nicholas** Woodford Daviess

- 4. KU has provided service to Weisenberger Mill for several decades under a General Service ("GS") Contract for Electric Service and under the Small Capacity Cogeneration Qualifying Facilities Rider. Over the course of time, the turbine at the mill has become damaged resulting in reduced water flow through the turbine. As a result, the original 30 kW generator only produces 14 kW. Weisenberger Mill wishes to replace the original generator with a 50 kW generator and operate under KU's Net Meter Service ("NMS") as part of its "Demonstration of Variable Speed Permanent Magnet Generator at Small, Low-Head Hydro Site" five-year project.
- 5. Although KU's NMS tariff at Original Sheet No. 57 limits availability of net metering service to generation facilities with a maximum rated capacity of 30 kilowatts and the nameplate capacity of the new generator at Weisenberger Mill will be 50 kilowatts, it is not

expected to produce generation in excess of the 30 kilowatt limitation for the duration of the contract due to limitations in available water flow at the site.

- 6. KU committed its support to this project (*see* attached as Exhibit A the letter dated June 6, 2011 to David Brown Kinloch) as this new technology could potentially facilitate development of small low-head hydro projects at additional sites in the Commonwealth of Kentucky. Weisenberger Mill currently has a \$56,000 grant in place from the Federal Department of Energy (Award No. DE-EE0005429), under their Advanced Hydropower Development program. The grant is for three years. In addition, Weisenberger Mill has also applied for a \$30,000 grant from the Kentucky Department for Energy Development and Independence under the TVA Environmental Mitigation Settlement grant program. They expect to learn the results of this application in the middle of May.
- 7. As part of its support for this project, KU committed to install a recording meter on the line connected to the generator to collect output data both before and after the new generator is installed. This data will be supplied during the five-year term of the special contract and will provide the basis for calculations of the increased efficiency associated with this new technology.
- 8. In addition, KU agreed, subject to approval by the Commission, to allow the Weisenberger Mill to be served based upon terms consistent with KU's Net Metering tariff. Qualifying Weisenberger Mill for net metering service will help to ensure the value of the power generated by the new generator will meet the payback criteria calculated for the project. KU's tariff at Original Sheet No. 57 limits availability of net metering service to generation facilities with a maximum rated capacity of 30 kilowatts. In the case of Weisenberger Mill, however, the proposed technology is experimental and not expected to generate energy beyond the 30 kilowatt

capacity limit. As a result, KU agreed to enter into a special contract for net metering service for a five-year period. A copy of the proposed contract is attached as Exhibit B. If, at the end of the five-year period, Weisenberger Mill has met the conditions and limitations contained in the Net Metering tariff, including the 30 kilowatt limitation, Weisenberger Mill will continue to be served under the terms of the then-existing Net Metering tariff for so long as it continues to meet the conditions and limitations contained therein. However, if at the end of the five-year period, Weisenberger Mill has not met the conditions and limitations contained in the then-existing Net Metering tariff, the Company will be served under the appropriate rate schedule. Another important factor in this decision was that there is sufficient transmission capacity for this generation and no additional investment from the Company will be required.

9. Weisenberger Mill has requested net metering service to begin on or before the new PM generator is installed, which is currently expected to occur in August or September, 2012. As a result, KU respectfully requests the Commission to enter an order approving this contract by August 1, 2012.

WHEREFORE, Kentucky Utilities Company respectfully requests that the Commission review this filing on an expedited basis, and approve the proposed special contract between KU and Wiesenberger Mill, as described herein, by August 1, 2012.

Dated: May 15, 2012

Respectfully submitted,

Allyson K. Sturgeon

Senior Corporate Attorney

LG&E and KU Energy LLC

220 West Main Street

Louisville, Kentucky 40202 Telephone: (502) 627-2088

Counsel for Kentucky Utilities Company

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing Application was served on the following persons on the 15th day of May 2012, U.S. mail, postage prepaid:

Dennis G. Howard II Lawrence W. Cook Office of the Attorney General Office of Rate Intervention 1024 Capital Center Drive, Suite 200 Frankfort, KY 40601-8204

Counsel for Kentucky Utilities Company

EXHIBIT A



DOE: Advanced Hydropower Development Funding Opportunity Announcement Number: DE-FOA-0000486

Topic Area 1: Sustainable Small Hydropower Sub-topic 1.2: Innovative System Testing

June 6, 2011

David Brown Kinloch Shaker Landing Hydro Associates 414 S. Wenzel Street Louisville, KY 40204

Dear David.

On behalf of the Kentucky Utilities Company (KU), I am pleased to provide our commitment for support and involvement in the collaborative proposal "Demonstration of Variable Speed Permanent Magnet Generator at Small, Low-Head Hydro Site" at the Weisenberger Mill. KU is committed to supporting the demonstration of this new technology that could potentially facilitate development of small low-head hydro projects at additional sites in the Commonwealth.

KU is committed to provide this proposed project support in two ways. First, KU will install a recording meter on the line connected to the generator to collect output data both before and after the new generator is installed. This independently collected data will be supplied to the project during the term of the first five years of the demonstration project and will provide the basis for calculations of the increased efficiency associated with this new technology. The in-kind value of this contribution, including installation and removal of the metering equipment, use of the meter, and data retrieval and transmission has an estimated value of \$2,000.

Secondly, KU is committed to allowing the Weisenberger Mill to be served based on terms consistent with KU's Net Metering tariff, to ensure the value of the power generated by the new generator will meet the payback criteria calculated for this project. Although KU's Net Metering tariff is limited to generation facilities with a maximum rated capacity of 30 kilowatts, the proposed technology is experimental and not expected to generate energy beyond that capacity limit. As a result, KU agrees to enter into a special contract for a five-year period with your Company to allow service based upon terms consistent with its Net Metering tariff, subject to approval by the Kentucky Public Service Commission. If, at the end of that five-year period, the Company has met the conditions and limitations

LG&E and KU Energy LLC Customer Energy Efficiency & Smart Grid Strategy 220 West Main Street Louisville, KY 40202 www.lge-ku.com

David E. Huff Director T 502-627-4662 F 502-217-0271 david.huff@lge-ku.com contained in the Net Metering tariff, the Company will continue to be served under the terms of the then-existing Net Metering tariff. However, if at the end of the five-year period, the Company has not met the conditions and limitations contained in the then-existing Net Metering tariff, the Company will be served under the appropriate rate schedule.

KU is pleased to be involved in research within its service territory that can further the development of renewable energy sources, and is eager to participate in this project.

Sincerely,

David E. Huff, Director

Customer Energy Efficiency &

Smart Grid Strategy

EXHIBIT B

Contract Account		
Common Account		

CONTRACT FOR ELECTRIC SERVICE

This contract made and entered into this 24 day of	of March ,20 12 by
and between Kentucky Utilities Company ("Company")	(SC testamont)
and Weisenberger Mill Company	("Customer")
WITNESSETH:	
	, or as soon thereafter as connection is made,
Company will sell and deliver to Customer at 2545 Wei	
for the operation of mill	
All electric capacity and energy taken under this contract	will be delivered as
3 phase, 60 cycle, alternating current, at a nomin	nal voltage at the point of
120/240 volts, metered and billed as Second	aty service. condary/Primary/Transmission
Sec.	condary/Primary/Transmission
This point of delivery requires an estimated system capac	
70 kW, or kVA as is appropriate, of Contract C	аряону,
Each month Customer will pay to Company for all capaci	ty and energy delivered to Customer in the
preceding billing period an amount determined in accorda	ance with
GS Rate Schedule and, as is appropr	
NMS - Level 2 Rider, contract attached if requir	
Rider, contract attached if requir	
Rider, contract attached if requir	<u>eg.</u>
Comments:	•
Errativa dada bassa wille	a social form Kentucky
Effective date begins with Public Service Commission.	approvac From Remocky
FUBLIC Service Commission.	
A (A MARINE)	
TARIFF PROVISIONS:	
It is mutually agreed that Company's general terms and c	anditions and applicable rate schedule, as from
time to time approved by and on file with the Public Serv	vice Commission of Kentucky, are made a part of
this contract as fully as if written here.	to continuous of training) are many a part of
IN WITNESS WHEREOF, the parties hereto have caus	red this contract to be executed by their duly
authorized representatives this day and year shown above	
KENTUCKY UTILITIES COMPANY	Weisenberger Mill Company
la Da	
By 7 Thoward Same	By W be Wesenburger
Manager Tariffs/Special Contract	Kings,
Official Capacity	Official Copacity
Simoth A. Mellon	Down In The
Allest	Allest

Kentucky Utilities Company

P.S.C. No. 15, First Revision of Original Sheet No. 67.6 Canceling P.S.C. No. 15, Original Sheet No. 67.8

Use this application form when a generaling facility is not inverter-based or is not cartified by a nationally recognized testing laboratory to meet the requirements of UL 1741 or does not meet any of the additional conditions under Level 1. Submit this Application, along with an application fee of \$100, to: Kentucky Utilities Company, Atin: Customer Commitment, P. O. Box 32010, Louisville, KY 40232 If you have questions regarding this Application or its status, contact KU at: 502-627-2202 or customer.commitment@ige-ku.com Customer Name:	tandard Rate Rider NMS
Application for Interconnection and Net Metering Use this application form when a generating facility is not invaler-based or is not certified by a nationally recognized testing loboratory to meet the requirements of UL 1741 or does not meet entry of the additional conditional con	Net Metering Service
Use this application form when a generating facility is not invester-based or is not certified by a neitoneity recognized testing laboratory to meet the requirements of UL 1741 or does not meet eny of the additional conditions under Lovel 1. Submit this Application, along with an application fee of \$100, to: Kentucky Utilities Company, Attn: Customer Commitment, P. O. Box 32010, Louisville, KY 40232 If you have questions regarding this Application or its status, contact KU at: 502-627-2202 or customer.commitment@lgs-ku.com Customer Name:	LEVEL 2
If you have questions regarding this Application or its status, contact KU at:	Application for Interconnection and Net Metering Use this application form when a generaling facility is not inverter-based or is not certified by a nationally recognized testing laboratory to meet the requirements of UL 1741 or does not meet any of the additional conditions under Level 1.
Customer Name; Welden berger Mill Co. Account Number Customer Address: 2545 Weisen berger Mill Co. Account Number Customer Address: 2545 Weisen berger Mill Co. Account Number Customer Address: 2545 Weisen berger Mill Road Project Contact Person: Man Weisen berger Mill Road Project Contact Person: Man Weisen berger Mill Road Provide names and contact Information for other contractors, installers, or engineering firms involved in the design and installation of the generating facilities: Provide names and contact information for other contractors, installers, or engineering firms involved in the design and installation of the generating facilities: Provide names and contact information must be submitted with this application to be considered complete. Typically this should include the following: 1. Single-line diagram of the customer's system showing at electrical equipment from the generator to the point of information with the Ulfifty distribution system, including generators, transformer, switchgear, switchgear, switches, breakers, fuses, voltage transformers, current transformers, who sizes, equipment ratings, and transformer connections. 2. Control drawings for relays and breakers. 3. Site Plans showing the physical location of major equipment. 4. Relevant ratings of equipment. Transformer information should include capacity ratings, voltage ratings, winding arrangements, and impedance. 5. If protective relays are used, settings applicable to the Interconnection protection. A description of how the relay is programmed to operate as applicable to interconnection protection. A for inventors, the manufacturer and model number, nameplate ratings, and impedance data (Xd, Xd, & Xd). 9. For induction generators, manufacturer and model number, nameplate ratings, and impedance data (Xd, Xd, & Xd).	Submit this Application, along with an application fee of \$100, to:
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Customer Name; Weisen berger Mill Co. Account Number Customer Address: 2545 Weisen berger Mill Road Project Contact Person: Mac Weisen berger Mill Road Phone No.: 859 354-5382 E-mail Address (Optional): mac weisen berger. Com Provide names and contact information for other contractors, installers, or engineering firms involved in the design and installation of the generating facilities: Fotal Generating Capacity of Generating Facility: 50 KW Type of Generator:inverter-BasedSynchronousinduction Power Source:SolarWindWhydroBlogasBlomass adequate documentation and information must be submitted with this application to be considered complete. Typically this should reclude the following: 1. Single-line diagram of the customer's system showing all electrical equipment from the generator to the point of interconnection with the Ultify's distribution system, including generators, transformers, switchgeer, switches, breakers, fuses, voltage transformers, current transformers, wire sizes, equipment retings, and transformer connections. 2. Control drawings for relays and breakers. 3. Site Plans showing the physical location of major equipment. 4. Relevant ratings of equipment. Transformer information should include capacity ratings, vallage ratings, winding arrangements, and impedance. 5. If protective relays are used, settings applicable to the Interconnection protection. If programmatic generators are used, a description of how the relay is programmed to operate as applicable to Interconnection protection. 6. A description of how the generator system will be operated including all modes of operation. 7. For inverters, the menufactorer name, model number, nameplate ratings, and locked rotor current. 8. For synchronous generators, manufacturer and model number, nameplate ratings, and locked rotor current.	If you have questions regarding this Application or its status, contact KU at:
Customer Address: 2545 Weisen berger Mill Road Project Contact Person: Mac Weisenberger Mill Road Phone No.: 89 254-5382 E-mail Address (Optional): mace weisergec. com Provide names and contact Information for other contractors, installers, or engineering firms involved in the design and installation of the generating facilities: Proteil Generating Capacity of Generating Facility: 50 kw Type of Generator: Inverter-Based Synchronous Induction Power Source: Solar Wind Hydro Blogas Blomass Adequate documentation and information must be submitted with this application to be considered complete. Typically this should include the following: 1. Single-line diagram of the customer's system showing at electrical equipment from the generator to the point of inferconnection with the Utility's distribution system, including generators, fransformers, switches, breakers, fuses, voltage transformers, current transformers, wire sizes, equipment ratings, and transformer connections. 2. Control drawings for relays and breakers. 3. Site Plans showing the physical location of major equipment. 4. Relevant ratings of equipment. Transformer information should include capacity ratings, voltage ratings, winding arrangements, and impedance. 5. If protective relays are used, settings applicable to the Interconnection protection. If programmable relays are used, a description of frow the relay is programmed to operate as applicable to Interconnection protection. 6. A description of frow the generator system will be operated including all modes of operation. 7. For inverters, the menufacturer name, model number, and AC power rating. For capital requirements of UL 1741. 8. For synchronous generators, manufacturer and model number, nameplate ratings, and impedance data (Xd, Xd, & Xd). 9. For Induction generators, manufacturer and model number, nameplate ratings, and locked rotor current.	502-627-2202 or customer.commitment@fge-ku.com
Project Contact Person: Man Welsenberger. Phone No.: 859 254-5382 E-mail Address (Optional): mane welsenberger, can Provide names and contact information for other contractors, installers, or engineering firms involved in the design and installation of the generating facilities: Fotal Generating Capacity of Generating Facility: 50 km Fotal Generating Capacity of Generating Facility: 50 km Fover Source: Solar Wind Hydro Blogas Biomass adequate documentation and information must be submitted with this application to be considered complete. Typically this should interconnection with the Utifity's distribution system, including generators, windered complete interconnection with the Utifity's distribution system, including generators, windered severes, fuses, voltage transformers, current transformers, wire eizes, equipment ratings, and transformer connections. 2. Control drawings for relays and breakers. 3. Site Plans showing the physical location of major equipment. 4. Relevant ratings of equipment. Transformer information should include capacity ratings, voltage ratings, winding arrangements, and impedence. 5. If protective relays are used, seitings applicable to the Interconnection protection. 6. A description of now the generator system will be operated as applicable to Interconnection protection. 7. For inverters, the manufacturer name, model number, nameplate ratings, and impedance data (Xd, Xd, & Xd). 9. For Induction generators, manufacturer and model number, nameplate ratings, and impedance data (Xd, Xd, & Xd).	Customer Name: Weisen berger Mill Co. Account Number
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 Site Plans showing the physical location of major equipment. Relevant ratings of equipment. Transformer information should include capacity ratings, voltage ratings, winding arrangements, and impedence. If protective relays are used, settings applicable to the interconnection protection. If programmable relays are used, a description of how the relay is programmed to operate as applicable to interconnection protection. A description of how the generator system will be operated including all modes of operation. For inverters, the manufacturer name, model number, and AC power rating. For certified inverters, attach documentation showing that inverter is certified by a nationally recognized testing laboratory to meet the requirements of UL 1741. For synchronous generators, manufacturer and model number, nameplate ratings, and impedance data (Xd, Xd, & Xd). For induction generators, manufacturer and model number, nameplate ratings, and locked rotor current. 	 Single-line diagram of the customer's system showing all electrical equipment from the generator to the point of interconnection with the Utifity's distribution system, including generators, transformers, switchgear, switches, breakers, fuses, voltage transformers, current transformers, wire sizes, equipment ratings, and transformer connections.
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8. For synchronous generators, manufacturer and model number, nameplate ratings, and impedance data (Xd, Xd, & Xd). 9. For induction generators, manufacturer and model number, nameplate ratings, and locked rotor current.	showing that inverter is certified by a nationally recognized testing laboratory to meet the requirements of UL 1741.
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