

421 West Main Street Post Office Box 634 Frankfort, KY 40602-0634 [502] 223-3477

December 16, 2020

Mark R. Overstreet (502) 209-1219 (502) 779-8349 FAX moverstreet@stites.com

### FILED VIA ELECTRONIC TARIFF FILING SYSTEM

Linda C. Bridwell Executive Director Public Service Commission 211 Sower Boulevard P.O. Box 615 Frankfort, KY 40602-0615

RE: Cogeneration/Small Power Production Agreement Between Kentucky Power Company And Inez Power, LLC

Dear Ms. Bridwell:

Kentucky Power Company files with the Public Service Commission of Kentucky the Cogeneration/Small Power Production Agreement between the Company and Inez Power. The filing is being made in accordance with 807 KAR 5:054, Section 7(9).

Also being filed is the Company's motion for confidential treatment of Inez Power's Kentucky Power account number.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

Mark R. Overstreet

MRO

# COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

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Filing Of Cogeneration/Small Power Production	,
Agreement Between Kentucky Power Company	•
And Inez Power, LLC Pursuant To 807 KAR 5:054,	
Section 7(9)	

### Kentucky Power Company's Motion For Confidential Treatment

Kentucky Power Company ("Kentucky Power" or "Company") moves the Public Service Commission of Kentucky ("Commission") pursuant to 807 KAR 5:001, Section 13(2) and KRS 61.878(1)(a) for an Order granting confidential treatment to the following portion of the Cogeneration/Small Power Production Agreement between Kentucky Power and Inez Power, LLC ("Inez Power"):

Exhibit A – the customer account number of Inez Power.

Pursuant to 807 KAR 5:001, Section 13, Kentucky Power is filing under seal that part of Exhibit A containing confidential information with the confidential portion highlighted in yellow. Kentucky Power is also a filing redacted version of the affected document. Kentucky Power will notify the Commission when it determines the information for which confidential treatment is sought is no longer confidential.

### A. The Requests and the Statutory Standard.

Kentucky Power does not object to filing the identified information for which it is seeking confidential treatment, but requests that the identified portion of Exhibit A be excluded from the public record and public disclosure.

KRS 61.878(1) excludes from the Open Records Act:

(a) Public records containing of a personal nature where the public disclosure thereof would constitute a clearly unwarranted invasion of personal privacy.

KRS 61.878(1)(a) exempts Inez Power's Kentucky Power account number from public disclosure.

The Company requests that the Inez Power account number be afforded confidential treatment for such period of time as Inez Power remains a customer of Kentucky Power and is identified in the business records of Kentucky Power by means of the account number.

B. The Identified Information is Exempt From Disclosure Under Kentucky

Law.

The Commission previously has recognized that customer account numbers are exempt from disclosure under the Open Records Act.<sup>1</sup> The exemption extends to the utility account numbers of commercial entities<sup>2</sup> such as Inez Power.

The information for which Kentucky Power is seeking confidential treatment is treated confidentially by Kentucky Power and by Inez Power. Dissemination of the information for which confidential treatment is being requested is restricted by Inez Power, according to information provided the Company by Inez Power, and by Kentucky Power. Inez Power and the Company take all reasonable measures to prevent the disclosure of the confidential information to the public, as well as to persons within the Company who do not have a need for the information. Within Kentucky Power, the information is available only upon a confidential need-to-know basis that

<sup>&</sup>lt;sup>1</sup> In the Matter of: Glen And Patricia A. Damron v. Louisville Gas And Electric Co., Case No. 2013-00008 at 3-4 (Ky. P.S.C. November 13, 2013) (recognizing that account numbers are "specifically assigned to ... [customers]. Utilities generally require a customer to provide an account number before making changes to the customer's account, including disconnection of service" and thus are both confidential and protected from disclosure.)

<sup>&</sup>lt;sup>2</sup> In the Matter of: Proposed Revision Of Rules Regarding The Provision Of Wholesale Water Service By The City Of Versailles To Northeast Woodford Water District, Case No. 2011-00419 at 1 (Ky. P.S.C. March 14, 2012) ("Commercial account information is considered confidential and exempted from disclosure under the Kentucky Open Records Act") (citing Ky AOG 05-ORD-104 (June 1, 2005) (citing KRS 61.878(1)(a)).

does not extend beyond those employees with a legitimate business need to know and act upon the identified information.

> C. The Identified Information is Required to be Disclosed to an Agency.

The identified information is by the terms of 807 KAR 5:054, Section 7(9) required to be disclosed to the Commission. The Commission is a "public agency" as that term is defined in KRS 61.870(1).

WHEREFORE, Kentucky Power Company respectfully requests the Commission to enter an Order:

- According confidential status to and withholding from public disclosure the 1. Kentucky Power account number for Inez Power for such period of time as Inez Power remains a customer of Kentucky Power and is identified in the business records of Kentucky Power by means of the account number; and
  - 2. Granting Kentucky Power all further relief to which it may be entitled.

Respectfully submitted

Mark R. Overstreet

Katie M. Glass

STITES & HARBISON PLLC

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(502) 223-3477

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(502) 223-4124

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COUNSEL FOR KENTUCKY POWER **COMPANY** 

### INTERCONNECTION AGREEMENT

This interconnection agreement ("Agreement") is made and entered into this 25th day of February, 2020, by and between Kentucky Power Company ("Company"), and Inez Power, LLC ("Customer"). Company and Customer are hereinafter sometimes referred to individually as "Party" or collectively as "Parties".

### WITNESSETH:

WHEREAS, Customer is installing, or has installed, generation equipment, controls, and protective relays and equipment ("Generation Facilities") used to interconnect and operate in parallel with Company's electric system, which Generation Facilities are more fully described in Exhibit A, attached hereto and incorporated herein by this Agreement, and as follows:

Location: 900 Middle Fork, Wolf Creek Road, Debord, KY 41224

Generator Size and Type: 6800kW BE1 - 11g Generator

NOW, THEREFORE, in consideration thereof, Customer and Company agree as follows:

- 1. Interconnection Application. It is understood and agreed that this Agreement applies only to the operation of the Generation Facilities described above and on Exhibit A.
- 2. **Interconnection.** Company agrees to allow Customer to interconnect and operate the Generation Facilities in parallel with Company's electric system in accordance with any operating procedures or other conditions specified in Exhibit B. The Company does not give any warranty, express or implied, by this Agreement, or by inspection, if any, or by nonrejection, or by approval, or in any other way, as to the adequacy, safety, compliance with applicable codes or requirements, or as to any other characteristics, of the Generation Facilities. The Generation Facilities installed and operated by or for Customer shall comply with, and Customer represents and warrants their compliance with: Electrical Code and the National Electrical Safety Code, as each may be revised from time to time; (b) Company's rules and regulations, including Company's COGEN/SPP II (Cogeneration and/or Small Power Production - Over 100 KW) Tariff and Company's Teams and Conditions of Service, each as contained in Company's Retail Electric Tariff, as each may be revised from time to time with the approval of the Public Service Commission of Kentucky ("Commission"); (c) the rules and regulations of the Commission, including the provisions of 807 KAR 5:054, as such rules and regulations may be revised from time to time by the Commission; and (d) all other applicable local, state, and federal codes and laws, as the same may be in effect from time to time.

Customer shall install, operate, maintain, and test and inspect at Customer's sole cost and expense, the Generation Facilities in accordance with *IEEE 1547 "IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems."* (IEEE 1547) and the manufacturer's suggested practices for safe, efficient and reliable operation of the Generation Facilities in parallel with Company's electric system. Customer shall bear sole responsibility

for the installation, maintenance, and safe operation of the Generation Facilities. Upon request from the Company, Customer shall supply copies of periodic test reports or inspection logs.

Customer shall be responsible for protecting, at Customer's sole cost and expense, the Generation Facilities from any condition or disturbance on Company's electric system, including, but not limited to, voltage sags or swells, system faults, outages, loss of a single phase of supply, equipment failures, and lightning or switching surges.

Customer agrees that, without the prior written permission from Company, no changes shall be made to the configuration of the Generation Facilities, as that configuration is described in Exhibit A, and no relay or other control or protection settings specified in Exhibit A shall be set, reset, adjusted or tampered with, except to the extent necessary to verify that the Generation Facilities comply with Company approved settings.

3. Operation by Customer. Customer shall operate the Generation Facilities in such a manner as not to cause undue fluctuations in voltage, intermittent load characteristics or otherwise interfere with the operation of Company's electric system. At all times when the Generation Facilities are being operated in parallel with Company's electric system, Customer shall so operate the Generation Facilities in such a manner that no disturbance will be produced thereby to the service rendered by Company to any of its other customers or to any electric system interconnected with Company's electric system. Customer understands and agrees that the interconnection and operation of the Generation Facilities pursuant to this Agreement is secondary to, and shall not interfere with, Company's ability to meet its primary responsibility of furnishing reasonably adequate service to its customers.

Customer's control equipment for the Generation Facilities shall immediately, completely, and automatically disconnect and isolate the Generation Facilities from Company's electric system in the event of a fault on Company's electric system, a fault on Customer's electric system, or loss of a source or sources on Company's electric system. The automatic disconnecting device included in such control equipment shall not be capable of reclosing until after service is restored on Company's electric system. Additionally, if the fault is on Customer's electric system, such automatic disconnecting device shall not be reclosed until after the fault is isolated from Customer's electric system. Customer shall promptly notify Company whenever such automatic disconnecting devices operate.

4. Access and Inspection by Company. Customer shall provide the Company reasonable opportunity to inspect the Generation Facilities prior to operation, and shall furnish the Company the opportunity to witness the initial testing and commissioning of the Generation Facilities. Company may witness any commissioning tests required by IEEE 1547. Following the initial testing and inspection of the Generation Facilities and upon reasonable advance notice to Customer, Company shall have access at reasonable times to the Generation Facilities to perform reasonable on-site inspections to verify that the installation, maintenance and operation of the Generation Facilities comply with the requirements of this Agreement. The Company's cost of such inspection(s) shall be at Company's expense; however, Company shall not be responsible for any other cost Customer may incur as a result of such inspection(s). Customer shall inform Company of the

next scheduled maintenance and allow Company to witness the maintenance program and any associated testing. Company at all times shall have immediate access to Customer's breakers or any other equipment that will isolate the Generation Facilities from Company's electric system.

5. Disconnection of Generation Facilities. Company shall have the right and authority to isolate the Generation Facilities at Company's sole discretion if Company believes that: (a) continued interconnection and parallel operation of the Generation Facilities with Company's electric system creates or contributes (or will create or contribute) to a system emergency on either Company's or Customer's electric system; (b) the Generation Facilities are not in compliance with the requirements of this Agreement, and the non-compliance adversely affects the safety, reliability or power quality of Company's electric system; or (c) the Generation Facilities interfere with the operation of Company's electric system. Except in emergency situations, Company shall give Customer reasonable notice of noncompliance including a description of the specific noncompliance condition; Company shall allow Customer a reasonable time to cure the noncompliance prior to isolating the Generating Facilities.

The Customer retains the option to temporarily disconnect from the Company's system at any time. Such temporary disconnection shall not be a termination of this Agreement unless the Customer exercises its termination rights under Section 9.

Company shall provide Customer with seven business days' notice of service interruptions for routine maintenance and repairs on Company's utility system.

- 6. Rates and Other Charges. (a) Customer shall take electric service from Company at the rates set forth in and pursuant to the terms and conditions of Company's Tariff COGEN/SPP II (Cogeneration and/or Small Power Production Over 100 KW) and Exhibit C as they may be amended from time to time. This Agreement does not constitute an agreement by Company to wheel power produced by the Generation Facilities, or to furnish any backup, supplemental or other power or services associated with the Generation Facilities, and this Agreement does not address any charges for facilities that may be installed by Company in connection with interconnection of the Generation Facilities.
- (b) It is understood that if Customer desires for the Company to wheel power produced by the Generation Facilities, or to furnish any backup, supplemental or other power or services associated with the Generation Facilities, then Company and Customer may enter into a separate mutually acceptable agreement detailing the charges, terms and conditions of such wheeling, or such backup, supplemental or other power or services. It is also understood that if any facilities are required, including any additional metering equipment, as determined by Company, in order for the Generation Facilities to interconnect with and operate in parallel with Company's electric system, then a separate agreement shall be executed by Company and Customer detailing the charges and terms and conditions of payment.
- 7. Insurance. Customer shall maintain at its sole cost reasonable amounts of insurance coverage against risks related to the Generation Facilities for which there is a reasonable

likelihood of occurrence as agreed by Customer and Company acting in good faith. Customer shall provide Company from time to time with proof of such insurance upon Company's request.

- 8. **Indemnification.** Each Party (the "Indemnifying Party") to the extent permitted by law shall indemnify and hold harmless the other Party from and against all claims, liability. damages and expenses, including attorney's fees, based on any injury to any person, including the loss of life, or damage to any property, including the loss of use thereof, arising out of, resulting from, or connected with, or that may be alleged to have arisen out of, resulted from, or connected with, an act or omission by the Indemnifying Party, its employees, agents, representatives, successors or assigns in the construction, ownership, operation or maintenance of the Indemnifying Party's facilities used in connection with this Agreement. Upon written request of the Party seeking relief under this Section 8, the Indemnifying Party shall defend at its expense any suit asserting a claim covered by this Section 8. If a Party is required to bring an action to enforce its rights under this Section 8, either as a separate action or in connection with another action, and the Indemnifying Party is determined by a final and non-appealable judgment to have breached its obligations under this Section 8, the Indemnifying Party shall reimburse such Party for all expenses, including attorney's fees, incurred in connection with establishing such breach.
- 9. Effective Term and Termination Rights. This Agreement shall become effective when executed by both Parties and shall continue in effect for at least one year and. thereafter, until terminated in accordance with the provisions of this Agreement. This Agreement may be terminated for the following reasons: (a) Customer may terminate this Agreement by giving Company at least sixty (60) days' prior written notice stating Customer's intent to terminate this Agreement at the expiration of such notice period; (b) Company may terminate this Agreement following Customer's failure to generate energy from the Generation Facilities in parallel with Company's electric system by the later of two years from the date of execution of this Agreement or twelve (12) months after completion of the interconnection provided for by this Agreement; (c) either Party may terminate this Agreement by giving the other Party at least sixty (60) days' prior written notice that the other Party is in default of any of the material terms and conditions of this Agreement, so long as the notice specifies the basis for termination and there is reasonable opportunity for the Party in default to cure the default; or (d) Company may terminate this Agreement by giving Customer at least sixty (60) days' prior written notice in the event that there is a change in an applicable rule or statute affecting this Agreement.

Upon termination of this Agreement, Customer's Generation Facilities shall be disconnected at Customer's sole expense from the Company's system.

Termination of this Agreement shall not relieve either party of its liabilities and obligations, owed or continuing at the time of the termination.

10. Termination of Any Applicable Existing Agreement. From and after the date when service commences under this Agreement, this Agreement shall supersede any oral and/or written agreement or understanding between Company and Customer concerning the

service covered by this Agreement and any such agreement or understanding shall be deemed to be terminated as of the date service commences under this Agreement.

11. Force Majeure. For purposes of this Agreement, the term "Force Majeure" means any cause or event not reasonably within the control of the Party claiming Force Majeure, including, but not limited to, the following: acts of God, strikes, lockouts, or other industrial disturbances; acts of public enemies; orders or permits or the absence of the necessary orders or permits of any kind which have been properly applied for from the government of the United States, the Commonwealth of Kentucky, any political subdivision or municipal subdivision or any of their departments, agencies or officials, or any civil or military authority; unavailability of a fuel or resource used in connection with the generation of electricity; extraordinary delay in transportation; unforeseen soil conditions; equipment, material, supplies, labor or machinery shortages; epidemics; landslides; lightning; earthquakes; fires; hurricanes; tornadoes; storms; floods; washouts; drought; arrest; war; civil disturbances; explosions; breakage or accident to machinery, transmission lines, pipes or canals; partial or entire failure of utilities; sabotage; injunction; blight; famine; blockade; or quarantine.

If either Party is rendered wholly or partly unable to perform its obligations under this Agreement because of Force Majeure, both Parties shall be excused from whatever obligations under this Agreement are affected by the Force Majeure (other than the obligation to pay money) and shall not be liable or responsible for any delay in the performance of, or the inability to perform, any such obligations for so long as the Force Majeure continues. The Party suffering an occurrence of Force Majeure shall, as soon as is reasonably possible after such occurrence, give the other Party written notice describing the particulars of the occurrence and shall use commercially reasonable efforts to remedy its inability to perform; provided, however, that the settlement of any strike, walkout, lockout or other labor dispute shall be entirely within the discretion of the Party involved in such labor dispute.

- 12. Dispute Resolution. In the event that Customer and Company are unable to agree on matters relating to this Agreement, either Customer or Company may submit a complaint to the Commission or to a court of competent jurisdiction, as appropriate under the circumstances of the dispute.
- 13. Commission Jurisdiction. Both Company and this Agreement are subject to the jurisdiction of the Commission. To the extent that Commission approval of this Agreement may be required now or in the future, this Agreement and Company's commitments hereunder are subject to such approval.

IN WITNESS WHEREOF, the Parties have executed this Agreement, effective as of the date first above written.

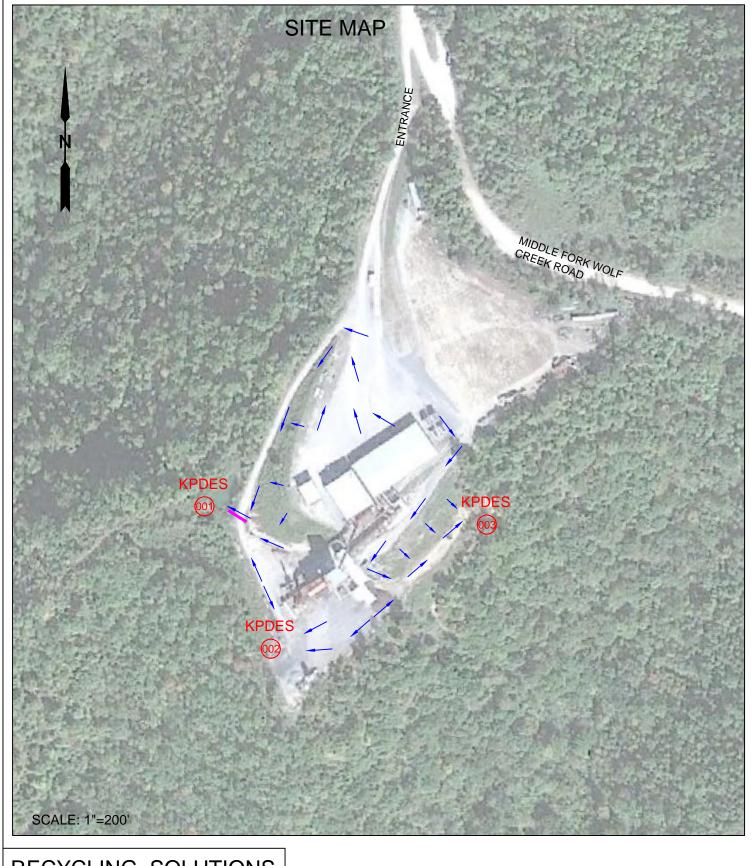
Kentucky Power Company	Inez Power, LLC
By:Borders	By: DB/Caree
Printed Name: Ken Borders	Printed Name: DB KAZEE
Title: Mgr. Cust and Dist Svces	Title: GC/Member

### Exhibit A - Generation Facilities

## Exhibit B – Facilities Required for Interconnection

Exhibit C - Cogeneration and/or Small Power Production Application

### EXHIBIT A



# RECYCLING SOLUTIONS TECHNOLOGY, LLC.

SITE DRAINAGE MAP/LOCATION MAP MIDDLE FORK WOLF CREEK ROAD MARTIN COUNTY, KY 2-20-2012

### LEGEND

KPDES

Proposed KPDES Monitoring Point

Surface Runoff Drainage Direction Existing Culvert

KPDES PNT.	LAT.	LON.
001	37°46'03"	82°35'44
002	37°46'00"	82°35'42
003	37°46'03"	82°35'37

LOCATION MAP
Davella Common Central Common Central Common Central Common Central Ce
Sign 780
BM (Cem /:)  1226 (Cem /:)  1356
RT.3
SITE LOCATION Cem 1 to 100
intines with the second
Substitute Cert NOTE: TAKEN FROM THE USGS INEZ 7.5 MINUTE QUANDRANGLE MAP
SCALE 11-2,000



# APPLICATION FOR INTERCONNECTION WITH THE AMERICAN ELECTRIC POWER DISTRIBUTION SYSTEM

### Instructions

Interconnection Customer declares its intention to interconnect with the AEP Distribution System.

In order for the Distributed Resource to be considered for interconnection to AEP's Distribution System, Interconnection Customer must submit (1) a completed Interconnection Request (The Interconnection Request shall be deemed complete when the required information has been provided by Interconnection Customer), and (2) the appropriate non-refundable application fee.

If requested information is not applicable, indicate by using "N/A".

Additional information to evaluate an Interconnection Request may be required by AEP as the application process proceeds.

Return Completed Application to:

American Electric Power

Distributed Generation Coordinator

I Riverside Plaza Columbus, Ohio 43215

### **Application Fee**

Indicate the amount of fee enclosed: \$ 100.00

### Section 1 Interconnection Customer Information

Indicate Distributed	Resource size:	X	Up to 30 kW 30 - 149 kW 150 - 749 kW 750 - 1,999 kW 2,000 kW and greater
Application is for:			ed Resource Facility ion to Existing Distributed Resource Facility
If capacity addition t	o existing facil	lity, please	e describe:

# Legal Name of Interconnection Customer (or, if an Individual, Individual's Name) Name: Inez Power LLC. Mailing Address: P.O. Box 367 City: Allen \_\_\_\_ State: KY Zip: 41601 Generating Facility Location (if different from above): 900 Middle Fork Wolfe Creek Rd Debord KY 41214 Requested Point of Interconnection: If the requested point of interconnection is the same as an existing electric service, provide the electric service account number. Proposed In-Service Date: 6/1/2018 Evening: 606-471-0051 Telephone: Daytime: 606-298-3080 E-Mail Address: recyclingsolutionstechnology@gmail.comFax: Alternative Contact Information (If different from Interconnection Customer information above) Contact Name: Lee Bazzle Title: Project Manager Mailing Address: 450 Sedgewich Rd City: Summerville State: SC \_\_\_\_ Zip: 29483 Daytime: 843-817-8383 Evening: 843-817-8383 Telephone: E-Mail Address: leebazzle@gmail.com Fax: Contact Name: Paul Aiken Title: Project Leader

Mailing Address: 421 Sycamore Hollow	
City: Prestonsburg	State: KY Zip: _41653
Telephone: Daytime:	Evening:
E-Mail Address:	Fax:
Section 2 Generator Qualifications  Energy Source:DieselHydro.	
	GasSolarWind
Type of Generator:  X SynchronousInduction  Generator Nameplate Rating: 7245	
Generator Nameplate KVA: 9056  Interconnection Customer or Customer-Site	
kW (if none, so state) (Typical) kVAR (Reactive Load, if known)	6000
Maximum physical export capability reques	sted:6800kW

### List components of the Generating Facility that are Pre-certified

Equipment Type	Pre-certifying Entity
Basler BE1-11i Intertie	UL
Protection Relay	
Basler BE1-11g Generator	UL
Protection Relay	
5kV Circuit Breaker	Manufactured to ANSI
	Standards
Surge arrestors	Manufactured to ANSI
o ango antostoro	Standards
Generator	Manufactured to ANSI
	Standards
94	
	17.0
Section 3 Generator Technica	al Information
A completed load flow data sheet must be su	upplied with the Interconnection Request
	FF
Distributed Resource manufacturer,	model name, number, and version:
Electric Machinery TEWAC siz	e 4G5250, 9056 kVA 0.8 nf
Electric Machinery 1247 to 512	
Serial number 184348211	
Nameplate output power rating in kV	N: (Summer) 7245 (Winter) 7245
Nameplate output power rating in K	9056
	(Summer) 9056 (Winter) 9050
Individual generator power factor:	Rated power factor leading: 0.8
individual generator power factor.	reacted power factor reading,
	Rated power factor lagging:0.8
	Pouler response.

### **Wind Generators**

Number of generators to be interconnected pursuant to this Interconnection Request:
Elevation: Single Phase Three Phase
Inverter manufacturer, model name, number, and version:
List of adjustable set points for the protective equipment or software:
Distributed Resource Facility Characteristic Data (for rotating machines)
Synchronous and Induction Generators:
Direct Axis Transient Reactance, X' <sub>d</sub> :0.17_ P.U.
Direct Axis Unsaturated Transient Reactance, X'di:P.U.
Direct Axis Subtransient Reactance, X" <sub>d</sub> :0.10 P.U.
Generator Saturation Constant (1.0):1.07
Generation Saturation Constant (1.2):1.18
Negative Sequence Reactance:0.20P.U.
Zero Sequence Reactance:P.U.
KVA Base:9056
RPM Frequency: 1800

Induction Generators:
(*) Field Volts:
(*) Field Amperes:
(*) Motoring Power (kW):
(*) Neutral Grounding Resistor (If Applicable):
(*) I <sub>2</sub> <sup>2</sup> t or K (Heating Time Constant):
(*) Rotor Resistance:
(*) Stator Resistance:
(*) Stator Reactance:
(*) Rotor Reactance:
(*) Magnetizing Reactance:
(*) Short Circuit Reactance:
(*) Exciting Current:
(*) Temperature Rise:
(*) Frame Size:
(*) Design Letter:
(*) Reactive Power Required In Vars (No Load):
(*) Reactive Power Required In Vars (Full Load):
(*) Total Rotating Inertia, H:Per Unit on KVA Base
Note: Please consult AFP prior to submitting the Interconnection Request to determine if the information

Note: Please consult AEP prior to submitting the Interconnection Request to determine if the information designated by (\*) is required.

### Excitation and Governor System Data (for Synchronous Generators only)

If determined to be required, provide appropriate IEEE model block diagram of excitation system, governor system, and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted. Note: System stability study is not required per customer guide for

interconnection, Appendix 1.

Section 4. Interconnecting Equipment Technical Data Information

Will a transformer be used Interconnection? X Yes		buted Reso	ource and	the Point of
Transformer is assume on preliminary discussion	•	by AEP at	this poir	nt in time, based
Transformer Data for In	nterconnection Cu	ustomer-O	wned Tra	ansformer (if applicable)
Load loss watts values will be es specified.	stimated at 5-10% of n	ameplate imp	pedance if lo	oad loss watts values are not
The transformer is:	_single phase _	three p	hase	Size:KVA
Transformer impedance: _	% on	KV	'A Base	
If Three Phase:				
Transformer Primary:	Volts _	Delta	Wye _	Wye Grounded
Transformer Secondary: _	Volts	Delta	Wye _	Wye Grounded
Transformer Fuse Data 1	or Interconnectio	n Custom	er-owned	Fuse (if applicable)
Note: Please attach a copy of fu	se manufacturer's min	imum melt ar	nd total clea	aring time- current curves
Fuse Manufacturer:				
Туре:	Size:		Speed	:

Interconnecting	Circuit Breaker (if applicable	<u>l</u>
Manufacturer:	T.B.D. (To be determine	d)
Type: T.B.D.	Load Rating (Amps): 2000	Interrupting Rating (Amps): 29 kA
Trip Speed (Cycles	s): _5	
	<b>Interconnection Protect</b>	ive Relays (if applicable)
Note: Please attach a	a copy of any proposed time-overc	urrent coordination curves
Manufacturer:	Basler	
		T.B.D. Proposed Setting: T.B.D.
Manufacturer:		
		Proposed Setting:
Manufacturer:		
Type:	Style/Catalog No.:	Proposed Setting:
Manufacturer:		
Туре:	Style/Catalog No.:	Proposed Setting:
Manufacturer:		
		Proposed Setting:
	Current Transforme	er Data (if applicable)
Note: Please attach	a copy of manufacturer's excitation	n & ratio correction curves
Manufacturer:	T.B.D.	
		Proposed Ratio Connection:1200/5
Manufacturer:		
Type:	Accuracy Class:	Proposed Ratio Connection:/5

## Potential Transformer Data (if applicable)

Manufacturer: T.B.D.	· · · · · · · · · · · · · · · · · · ·
Type: T. BD. Accuracy Class: 0.3	Proposed Ratio Connection: 4160/120
Manufacturer:	
Type: Accuracy Class:	Proposed Ratio Connection:/5
Section 5. General Information	
X Attached is a one-line diagram showing the equipment, current and potential circuits, and pro Note: Detailed design one line diagram is in included X Attached is site documentation that indicate proposed generating facility (e.g., USGS topographic Attached is documentation that describes a and control schemes.	progress. General one line es the precise physical location of the map or other diagram or documentation).
Note: Detailed P&C design is in progress.  Proposed location of protective interface equipme from Interconnection Customer's address):	ent on property (Include address if different
Attached are copies of schematic drawings relay current circuits, relay potential circuits, and Note: Detailed P&C design is in progress. XAttached is Site Control documentation.	
Does Interconnection Customer currently have co	ontrol of the cite? X Vec No

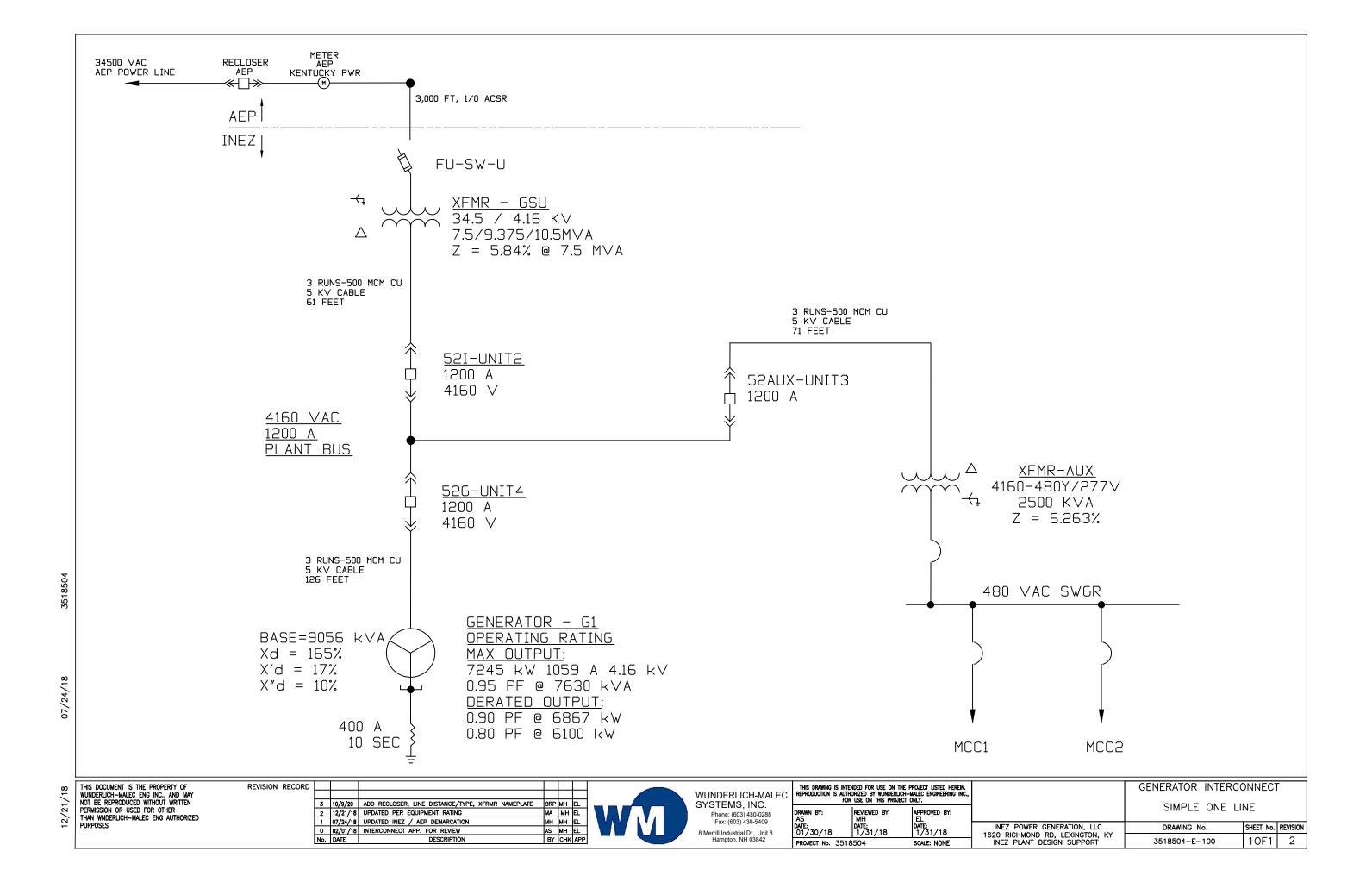
### Section 6. Signature

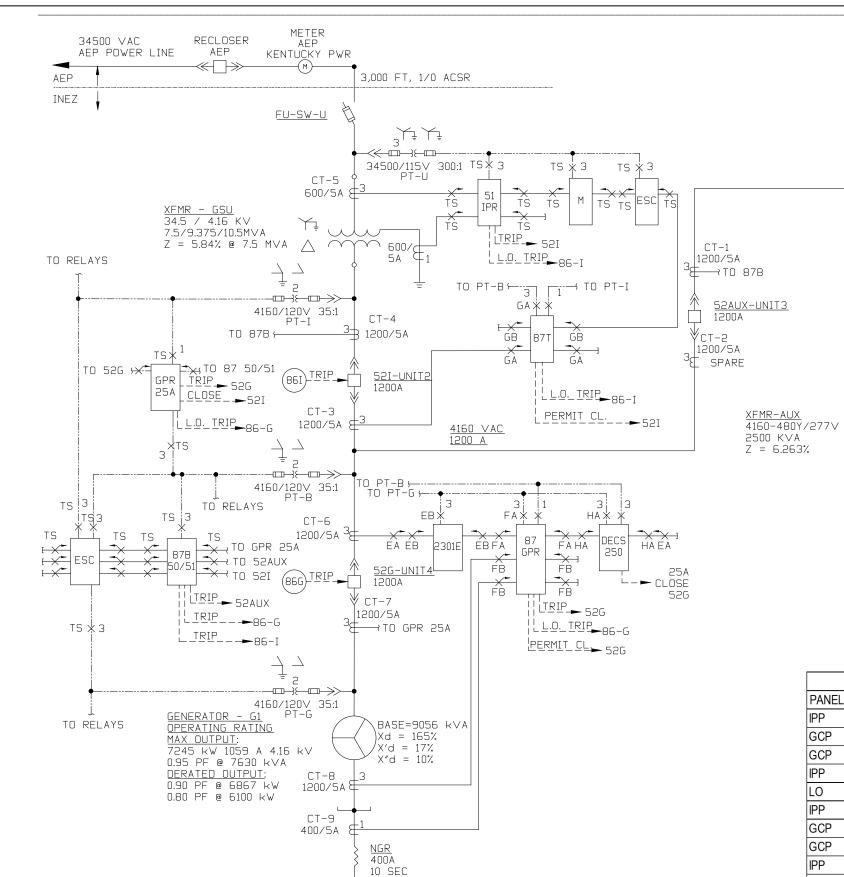
I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct. For Interconnection Customer:

Print Name: Lee Bazzle

Signature: Shell

Date: 2/7/19





LEGEND:

TSX TEST SWITCH

TSX SHORTING TEST SWITCH WITH TEST PORT

### OPERATING DESCRIPTION - NORMAL OPERATION

- PLANT EXPORTS TO AEP BASED ON AVAILABLE PROCESS HEAT FOR STEAM TURBINE.
- 51IPR INTERCONNECT FUNCTIONS 59/27/51 SET MORE SENSITIVE TO ISOLATE PLANT INTO ISLAND MODEL OPENING 52I UPON SYSTEM DISTURBANCE.
- 87GPR SET AT LESS SENSITIVE LEVEL FOR G1 GENERATOR EQUIPMENT PROTECTION.

PROTECTION FUNCTION LIST				
DEVICE	MODEL	PART NO.	ANSI FUNCTION	TRIP / OPERATE
			59, 27, 810/U, 47, 81ROCOF	521
51IPR	BE1-11i	BE1-11I5A1M4J1N0E000	51G, 46, 51	861
			25	52I PERMIT CL.
			87	861
87T	BE1-11T	BE1-11T6D1N2J1B0E000	50, 51, 51G (52I)	861
			59, 27, 810	52G
			87, 51G, 32, 51, 81U, 40	86G
87GPR	BE1-11G	BE1-11G6D1N2J1P0E000	25	52G PERMIT CL.
			50, 51, 51G (52 Aux)	52Aux
87B, 50/51	BE1-CDS240	BE1-CDS240-3E3N1H1N3A1	87	86G, 86I, 52Aux
			59, 27, 810, 81U	52G
			25A	52I CLOSE
GPR 25A	BE1-11G	BE1-11G6D1M4J1T0E000	51	86G

PROTECTION AND CONTROL DEVICE LIST				
PANEL	DESIGNATION	MODEL	MANUFACTURER	DESCRIPTION
IPP	51 IPR	BE1-11i	BASLER	INTERCONNECT PROTECTION RELAY
GCP	87T	BE1-11T	BASLER	TRANSFORMER RELAY
GCP	87 GPR	BE1-11G	BASLER	GENERATOR RELAY
IPP	GPR 25A	BE1-11G	BASLER	INTERCONNECT BREAKER SYNCHRONIZING
LO	86	SERIES 24	ELECTROSWITCH	LOCKOUT RELAY
IPP	87B 50/51	BE1-CDS240	BASLER	BUS DIFFERENTIAL AND OVERCURRENT
GCP	2301E	2301E-ST	WOODWARD	LOAD SHARING SPEED CONTROLLER
GCP	DECS 250	DECS 250	BASLER	VOLTAGE REGULATOR, AND GENERATOR BREAKER SYNCHRONIZING
IPP	М	735	SEL	OWNER METER
IPP	ESC	TBD	TBD	ELECTRICAL SYSTEM CONTROLLER

### Reference project 3519505 for panel drawings

REVISION RECORD THIS DOCUMENT IS THE PROPERTY OF 10/9/20 ADD RECLOSER, LINE DISTANCE/TYPE, XFRMR NAMEPLATE WUNDERLICH-MALEC ENG INC., AND MAY BRP MLH EL NOT BE REPRODUCED WITHOUT WRITTEN 3 11/6/19 ADD PT VOLTAGE AND RATIO BRP MLH EL PERMISSION OR USED FOR OTHER 4/3/19 UPDATE RATIO AND ISSUED FOR FRS / SOO REVIEW MA MLHEL THAN WNDERLICH-MALEC ENG AUTHORIZED 3/5/19 PART NUMBERS WERE UPDATED MA MLH EL 0 12/21 ISSUED FOR CLIENT REVIEW MA MLH EL No. DATE DESCRIPTION BY CHK APP



WUNDERLICH-MALEC
SYSTEMS, INC.
Phone: (603) 430-0288
Fax: (603) 430-5409
8 Merrill Industrial Dr., Unit 8

Hampton, NH 03842

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HIS DRAWING IS INTENDED FOR USE ON THE PROJECT LISTED HEREIN. PRODUCTION IS AUTHORIZED BY WUNDERLICH-MALEC ENGINEERING INC., FOR USE ON THIS PROJECT ONLY.			
AWN BY:	REVIEWED BY: MLH	APPROVED BY: EL	
TE: 2/21/18	DATE: 12/21/18	DATE: 12/21/18	1
ROJECT No. 3518	504	SCALE: NONE	

	GENERATOR INTERCONNECT		
	PROTECTION ONE	LINE	
INEZ POWER GENERATION, LLC 620 RICHMOND RD, LEXINGTON, KY	DRAWING No.	SHEET No.	REVISION
	3518504-E-101	10F1	1

### EXHIBIT B

## **Distribution Impact Study**

### **For Inez Power LLC**

# Distribution Generation Interconnection Request For 6,800 KVA of alternative powered generation

# 900 Middle Fork/Wolfe Creek Road

Debord, KY 41214

# **Confidential**

B. McMillion

Charleston Distribution System Planning

July 20, 2018

Distribution List: T. L. Hemsworth

L. M. Freeh

J. M. Neal

G. S. Sumner

T. F. Weaver

B. Combs

M. Lasslo

### Request

Inez Power LLC (INEZ) has requested to interconnect generation to Kentucky Power's distribution system via their existing metering point for facilities at 900 Middle Fork/Wolfe Creek Rd, Debord KY served from the Inez circuit on the Dewey sub-station. INEZ has requested to operate their generation interconnected to the Kentucky Power distribution grid generating 6,800 kVA back on to the grid, thus requiring this impact study.

### Disclaimer

The results of this impact study apply only to the system as described in INEZ's attached Application for Interconnection with the American Electric Power Distribution System. INEZ will only generate a maximum of 6,800 KVA back on to Kentucky Power. INEZ updated one line shown below.

This review is limited to how operating the generation in parallel could affect Kentucky Power's transmission and distribution systems and equipment. INEZ is required to take all necessary steps to assure compliance with all laws, ordinances, building codes and any other applicable regulations. Kentucky Power granting approval of the requested connection is not an endorsement of a particular design nor does it assure that the design will accomplish its intended function.

INEZ is expected to understand and comply with all aspects of IEEE 1547, relating to operating distributed generation.

### **Modeling and Assumptions**

It is assumed that INEZ has received a copy of the <u>Customer Guide to the Interconnection of Distributed Resources to the American Electric Power (AEP) Distribution System</u>, a copy is attached for reference.

INEZ's preferred feed is from the Inez circuit fed from the Dewey 138 kV to 34 kV, 25 MVA station. This station has volt var optimization installed which is designed to reduce the operating voltage of the circuit – the expected voltage range seen at INEZ metering based on 120 V base is 119V to 125V.

INEZ is requesting to connect a single 9,056 KVA synchronous generator operating at 4.16 kV. The point of common coupling (PCC) is assumed to be at INEZ's existing primary metering point (pole # 38830862C10025 – GPS 37.768542, -82.602161). For circuit modeling, a 2100 foot line section was assumed between the metering and the 34 kV to 4 kV transformer. A 7,500 KVA 34.5 kV Y grounded to 4.16 kV delta transformer with 5.84 % impedance (per provided transformer data sheet) was shown at the end of the 2,100 foot line section and a 200 foot section of line was assumed from the transformer to the generator. Information used in modeling the generation equipment and the transformer was taken from INEZ's <u>Application for Interconnection with the American Electric Power Distribution System</u> and additional transformer data sheet supplied by INEZ.

### **Analysis**

### System conditions of concern are:

- A) System load flows under both light and peak load conditions.
- B) Generator fault contribution during parallel operations.
- C) System voltage levels at light and maximum load conditions.
- D) Coordination with existing devices for fault conditions.

### **System Load Flows**

The following effects were analyzed:

Light Load: Back feed on the Dewey Station was - 2,965 KVA.

For light load condition an estimated load of 4,204 KVA was used and applied to the system. Under these assumptions, the generator produces more power than the circuit's native load and a back feed of 2,965 KVA would be placed on the Dewey station.

As a worst case condition, it was assumed that the recloser on pole 38830838A40155 (this is the first device past INEZ's tap) was interrupted - this resulted in a peak back feed of 6,500 kVA or basically all of INEZ's generation into the station. This condition did not result in any adverse system concerns on either the distribution or transmission line.

**Peak Load:** No back feed on the station. INEZ's 6,800 KVA generation was absorbed by the circuit.

For peak load condition an estimated load of 22,427 KVA was used and applied to the system. Under these assumptions, the generator output was absorbed completely by the circuit.

#### **Generator Fault contribution**

The present three phase bolted (LLL) and line to ground (LG) faults at INEZ's metering are 1,770 amps and 2,141 amps respectfully. At full load generation, these values increase to 2,434 amps LLL and 2,856 amps LG. At the substation the faults increase from 2,794 to 3,379 amps LLL and 3,131 to 3,673 amps LG. The increased fault currents and load require the replacement of several protective devices which will have fault interruption ratings below the available fault current or full load current ratings that are insufficient to carry the load when INEZ's generation is connected to the Kentucky Power T&D system. These devices are listed in the Facilities section at the end of this report.

### **System Voltage Levels**

The generator had virtually no effect on the voltage at the station. At INEZ's metering the voltage rose roughly 2 volts from 124 V to 126V at light load with the station voltage at 125 V.

No voltage concerns were noted on the circuit.

### **Coordination with existing devices**

Presently the tap feeding INEZ is protected by 3-30 amp T fuses, these fuses will no longer be adequate to serve the load and must be replaced with a Viper recloser. An additional Viper recloser with voltage sensing on both the source and load side must be placed at INEZ's metering point to provide coordination with the upstream recloser.

The introduction of the generator increases available fault current from below 1500 amps to above 1500 amps for roughly 10,500 feet of three phase line and 7,200 feet of single phase line. This affects 52 existing transformers and a capacitor bank and will require current limiting fuses to be installed at each location.

Increased fault currents did not affect interrupting capabilities of the upstream or downstream reclosers currently on the circuit, so no changes to those devices were required.

### **System Protection**

INEZ's responsibilities include providing adequate protection to Kentucky Power facilities due to events arising from the operation of the generation in parallel under all Kentucky Power distribution system operating conditions. INEZ is responsible for protecting their own facilities under all Kentucky Power distribution system operating conditions whether the generation is connected to Kentucky Power facilities or not, including but not limited to conditions noted below:

- 1) Abnormal voltage or frequency
- 2) Loss of a single phase of supply
- 3) Equipment failure
- 4) Distribution system faults
- 5) Lightning
- 6) Excessive harmonic voltages
- 7) Excessive negative sequence voltages
- 8) Separation from supply
- 9) Loss of synchronization

IEEE Standard 1547-2003 "Standard for Interconnecting Distributed Resources with Electric Power Systems" provide the interconnection technical requirements for system protection for which INEZ is responsible.

The interconnection system hardware and software used by a Distributed Resource to meet the technical requirements do not have to be located at the Point of Common Coupling. However, the technical requirements shall be met at the Point of Common Coupling.

### **Testing**

INEZ shall test the distributed generation facilities to verify that all the requirements for IEEE 1547 are met. The proposed test plan and independent third party verification shall be agreed upon by Kentucky Power prior to the start of testing. The results shall be submitted to Kentucky Power in a format as indicated in the attached AEP Guide for Testing and Reporting per IEEE 1547.1. If the test results show non-compliance, INEZ must remedy the issue, retest, and submit the new results to Kentucky Power prior to operating the generation in a connected state.

### **Summary**

The contents of this impact study apply only to the unit described in the interconnection application submitted by INEZ for a DG interconnection on Kentucky Power's Dewy/Inez 34 kV distribution circuit near Debord, KY.

The cost of any damage resulting from a system condition caused by the installation and/or operation of the generation will be borne by INEZ.

Abnormal Utility events will be addressed on an individual basis through the AEP system operator. Corrective action shall be based on the judgment of the AEP system operator. Possible corrective action can include but is not limited to DG isolation from the Utility.

This review has been limited to items which may affect the Kentucky Power system or to suggestions which may improve operations. INEZ must take all necessary steps to assure compliance with all laws, ordinances, building codes and other applicable regulations. Approval of this connection by Kentucky Power, when granted, is not an endorsement of a particular design nor does it assure fitness to accomplish an intended function.

Any additional Kentucky Power work to mitigate power quality issues not foreseen by this study but associated with the interconnection will be at the sole cost and expense of INEZ.

Kentucky Power will require communication to INEZ's generation in order to monitor connection status, real power output, reactive power output and voltage as indicated in IEEE 1547 section 4.1.6.

### **Facilities**

The proposed generation interconnection will require the following improvements:

### Generation driven:

Replace 3 – 30 amp T fuses with a Viper recloser and control.

Install a new Viper recloser and control at metering point with source and load side voltage sensing.

Add current limiting fuses for one capacitor bank and 52 transformers.

Replace metering equipment with larger capacity and SCADA compliant device.

Install telecommunications equipment required for SCADA.

Total cost estimated at \$205,379.

### Loading:

No line loading improvements are needed at 6,800 kVA beyond those noted above.

### Attachments:

INEZ's - Application for Interconnection with the American Electric Power Distribution System.

Customer Guide to interconnection of Distributed Resources to the American Electric Power (AEP) Distribution System

AEP Guide for Testing and Reporting per IEEE 1547.1

### EXHIBIT C

### Cogeneration and/or Small Power Production Application

Customer's Name: Inez Pawer			
Service Address: 900 Middle forth Wolfe CrewRd			
City: Debord State: KY Zip Code: 41224			
Account Number:			
Telephone Number: 606. 298. 5007 E-mail Address: May block & bellsouth. Net			
Contact Person (if different than Customer): Lee Bazzle			
Address: 450 Sedgewick Rd			
City: Sunverv: 14 State: SC Zip Code: 29483			
Telephone Number: 843, 817. 8383 E-mail Address: leebazzle @gncil. con			

This application is for electric service under the Kentucky Power Company ("Company") Tariff COGEN/SPP II (Cogeneration and/or Small Power Production – Over 100 KW) for the above customer ("Customer"). Under Section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA), the Customer qualifies for Tariff COGEN/SPP II. The generating facility is located on the Customer's premises (located at the same address as Customer's account) and will operate in parallel with the Company's transmission and distribution systems. The Customer must complete an interconnection application and receive approval to interconnect in order to qualify for Tariff COGEN/SPP II. An Interconnection Agreement must be secured and the Customer's equipment must be inspected before the generator may deliver energy to the Company and take electric service under Tariff COGEN/SPP II.

The Customer-generator facility qualifies for Tariff COGEN/SPP II as it is a waste type generator, which is one of those qualifying facilities identified in PURPA. The Customer has provided the Company with a copy of its Federal Energy Regulatory Commission certification as a Qualifying Cogeneration Facility or Qualifying Small Power Production Facility under Section 210 of PURPA. The total rated generating capacity of the Customer-generator to be used and billed under Tariff COGEN/SPP II is 500 kW.

The Customer has selected Option  $\lambda$  under this schedule:

- Option 1 The Customer does not sell any energy to the Company, and purchases from the Company its net load requirements, as determined by appropriate meters located at one delivery point.
- Option 2 The Customer sells to the Company the energy and average on-peak capacity produced by the Customer's qualifying COGEN/SPP facilities in excess of the Customer's total load, and purchases from the Company its net load requirements, as determined by appropriate meters located at one delivery point.
- Option 3 The Customer sells to the Company the total energy and average on-peak capacity produced by the Customer's qualifying COGEN/SPP facilities, while simultaneously purchasing from the Company its total load requirements, as determined by appropriate meters located at one delivery point.

### Cogeneration and/or Small Power Production Application

The Customer has selected the following Metering and Compensation Option  $\underline{4}$  under this schedule:

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Standard Meter – All kWh

- a. 3.24 cents per kWh for all kWh delivered to the Company; and
- b. \$3.11 per kW per month, times the lowest of:
  - i. Monthly contract capacity; or
  - ii. Current month metered average capacity (kWh delivered to the Company in a the billing month divided by 730); or
  - iii. Lowest average capacity metered during the previous two months if less than monthly contract capacity
- 2. Time of Day ("T.O.D.") Meter
  - a. 3.86 cents per on-peak kWh delivered to the Company and 2.79 cents per off-peak kWh delivered to the Company
  - b. \$7.47 per kW per month, times the lowest of:
    - i. On-peak contract capacity; or
    - ii. Current month on-peak metered average capacity (kWh delivered to the Company in a the billing month divided by 305); or
    - iii. Lowest on-peak average capacity metered during the previous two months if less than monthly contract capacity

The Customer acknowledges that it has read the Company's Tariff COGEN/SPP II and agrees to all terms and conditions contained therein. Specifically, the Customer understands and agrees that a meter, which is capable of registering the flow of electricity in each direction, must be in service at the facility. The Customer further accepts responsibility for interconnection costs and the Local Facilities Charge. The Customer and the Company shall execute a separate agreement detailing the charges and terms and conditions of payment of any such interconnection costs or Local Facilities Charge required for the Customer to take service from the Company under the terms of Tariff COGEN/SPP II.

Requested By:	Approved By:
Edward Lee Barth	KENNETH L BOLDERS
Customer Name (Print)	Name (Print)
ENTRI	Kenuth & bodies
Authorized Signature	Company Signature
8/23/19	1/31/20
Date	Date '
	Rejected By:
	110,00100 251
	Name (Print)

# Cogeneration and/or Small Power Production Application

Company Signature	
Reason for Rejection	
Date	