

**JACKSON ENERGY** COOPERATIVE A Touchstone Energy Cooperative K

> 115 Jackson Energy Lane McKee, Kentucky 40447 Telephone (606) 364-1000 © Fax (606 364-1007

MAR 1 1 2013 PUBLIC SERVICE COMMISSION

March 7, 2013

Jeff Derouen, Executive Director Kentucky Public Service Commission 211 Sower Blvd. PO Box 615 Frankfort, KY 40602-0615

Re: Response to First Data Request Case 2013-00004

Mr. Derouen:

Please find enclosed the original and 5 copies of Jackson Energy Cooperatives' response to your inquiry dated February 22, 2013.

Please inform me if any further information is required.

Sincerely,

hill

Clayton O. Oswald Attorney for Jackson Energy Cooperative

#### STATE OF KENTUCKY)

#### COUNTY OF JACKSON)

I, Clayton O. Oswald, state that I am the Attorney at Jackson Energy Cooperative, that I have personal knowledge of the matters set forth in this application and attached exhibits, and that the statements and calculations contained in each are true as I verily believe.

This <u>7</u> day of <u>Mar. 1</u> 2013.

Clayton O. Oswald

SUBSCRIBED AND SWORN to before me by Clayton O. Oswald this \_\_\_\_\_\_ day of \_\_\_\_\_\_, 2013.

Notary Public, KY State at Large

My Commission Expires: 10/6/14

#### STATE OF KENTUCKY)

#### COUNTY OF JACKSON)

I, Ricky C. Caudill, state that I am the Planning Engineer at Jackson Energy Cooperative, that I have personal knowledge of the matters set forth in this application and attached exhibits, and that the statements and calculations contained in each are true as I verily believe.

This the day of March 2013.

Ricky C. Caudill

SUBSCRIBED AND SWORN to before me by Ricky C Caudill this \_\_\_\_\_\_ day of \_\_\_\_\_\_, 2013.

Corrice Reid # 470311 Notary Public, KY State at Large

My Commission Expires:  $\eta - 30 - 16$ 

MAR 1 1 2013

RECEMED

PUBLIC SERVICE

1. Provide a copy of the current Schedule NM-Net Metering tariff ("Net COMMISSION Metering Tariff") indicating the proposed revisions by italicized inserts or underscoring and striking over the proposed deletions.

# Response by: <u>Ricky C Caudill</u>

See Exhibit A

2. Explain why the terms "inspect" and "inspection" were changed throughout the Net Metering Tariff to "examine" and examination."

# Response by: <u>Ricky C Caudill</u>

The words "inspect" and "inspection" were changed to "examine" and "examination" to avoid confusion. Jackson Energy did not want the consumer to confuse our review of the consumer's net metering installation with an inspection by a state electrical inspector. The reason is because Jackson Energy does not have the same authority on the consumer's side of the meter as the state electrical inspector. Jackson Energy does not want to imply that our review of the consumer's net metering installation is the same as a state electrical inspector reviewing the net metering installation.

3. Provide a detailed explanation of Jackson Energy's rationale to require a potential net metering customer to have \$500,000 of liability insurance for a Level 1 system installed by a licensed installer, including, but not limited to, the following: (1) A discussion of the need to require a set amount of insurance coverage for potential net metering customers; (2) A discussion of how Jackson Energy arrived at the \$500,000 coverage requirement, including whether Jackson Energy considered the insurance premium costs and its impact on net metering participation; and (3) How Jackson Energy defines the term "licensed installer."

# Response by: Clayton O Oswald

The net metering tariff currently filed by Jackson Energy Cooperative with the PSC simply states that the Member (customer) shall maintain general liability insurance coverage for both Level 1 and Level 2 facilities, and that proof of such coverage would be provided to Jackson Energy upon request. No requirements as to the amount of liability insurance that must be procured are stated in the tariff. In an effort to provide uniformity and certainty to its members when an inquiry is made by a member as to net metering, Jackson Energy wishes to state a certain amount of liability insurance that will be required for net metering installations.

In formulating the revised proposed tariff that specified minimum liability insurance limits that would be required for net metering, Jackson Energy sought to balance the desire of the Member to not incur undue costs with the interests of other Members who may suffer damages to their property in the event of a problem with a Member's installation. Such problems could potentially damage electrical appliances of other members or even cause fires or electrocutions. Requiring such liability insurance does not result in any direct benefit to Jackson Energy Cooperative, but rather provides protection to the member utilizing the net metering tariff and to his or her neighbors. The sum of \$500,000 in minimum liability for a Level 1 installation seems a fair balance of the costs of insurance against the lesser respective risks for this type of installation as compared to a Level 2 system.

In considering this issue, Jackson Energy relied upon a recent experience with a member in which procuring the additional required liability insurance resulted in an increased premium of \$50.00 per year. It is generally believed that such additional liability insurance is not cost prohibitive.

Jackson Energy considers a "licensed installer" to be an individual who is a licensed electrician, electrical engineer, certified by the North American Board of Certified Energy Practitioners or has significant experience with installing electrical facilities in net metering installations. The installer must meet and comply with any and all state and local laws. Furthermore, the installer must be insured against liability.

4. Provide a detailed explanation of Jackson Energy's rationale to require a potential net metering customer to have \$1,000,000 of liability insurance for a Level 1 system installed by non-licensed installer, including, but not limited to, the following: (1) A discussion of the need to require a set amount of insurance coverage for potential net metering customers' (2) A discussion of how Jackson Energy arrived at the \$1,000,000 coverage requirement, including whether Jackson Energy considered the insurance premium costs and its impact on net metering participation; (3) Why this level of coverage is greater than the proposed coverage requirement a Level 1 system installed by licensed installer; and (4) How Jackson energy defines the term "non-licensed installer."

# Response by: Clayton O Oswald

See answer to question number 3. The proposed tariff would require a greater amount of liability insurance for a Level 1 system installed by a non-licensed installer because of the greater likelihood that the Member's system may fail. A

licensed installer will have greater education, training and experience in installing electrical facilities, thus reducing the chance that the facilities will be improperly installed, which could then result in an incident that would lead to liability to the Member for personal injury or property damage. Jackson Energy considers a non-licensed installer to be any individual who does not meet the definition of "licensed installer" stated in the answer to question number 3. A licensed installer will carry liability insurance, so if there is resulting personal injury or property damage from an installation, the installer may be partly liable. This would reduce the Member's liability accordingly, thus justifying requiring less liability coverage for the member when a licensed installer performed the work.

5. Provide a detailed explanation of Jackson Energy's rationale to require a potential net metering customer to have \$1,000,000 of liability insurance for a Level 2 system including, but not limited to, the following: (1) A discussion of the need to require a set amount of insurance coverage for potential net metering customers; (2) A discussion of how Jackson Energy arrived at the \$1,000,000 coverage requirement, including whether Jackson Energy considered the insurance premium costs and its impact on net metering participation; (3) Why this level of coverage is greater than the proposed coverage requirement for a Level 1 system installed by a licensed installer; and (4) Why there was no distinction in terms of coverage for a Level 2 system installed by a licensed installer, as was proposed for the Level 1 system.

# Response by: Clayton O Oswald

See answer to question number 3. As described in Jackson Energy's current net metering tariff, a Level 1 system is inverter based and is certified by a nationally recognized testing laboratory to meet the requirements of UL 1741. Level 2 systems are not inverter based and/or do not meet the requirements of UL 1741. Inverter based systems are considered safer than non-inverter based systems, because they contain safety features such as anti-islanding protection, so that in the event of a power failure with Jackson Energy, the system does not continue to dump voltage onto the grid, possibly causing damage to neighboring property or electrifying lines that a worker may otherwise reasonably assume are not electrified.

Systems that comply with UL 1741 are also considered safer than non-qualifying systems, because UL 1741 requires that the system comply with more stringent requirements which make the system safer and less likely to cause damages for which liability insurance offers protection.

In sum, Level 2 systems create a greater risk of harm than Level 1 systems, so Jackson Energy proposes that a greater amount of liability insurance be required.

As the data request notes, Jackson Energy's proposed tariff does not differentiate between a Level 2 system installed by a licensed versus a non-licensed installer. No differentiation was made with Level 2 systems, because it was believed that the \$1,000,000 liability insurance requirement was sufficient for most possible losses that may occur, while balancing this requirement against the goal of reducing the complexity of the program for Jackson Energy's members and not requiring unduly high levels of insurance that may not be easily obtainable by members.

6. Provide a history of any liability insurance claim associated with any Jackson Energy customer arising from a net-metered electric generating system, including a description of the claim, the amount of the original claim, and the settlement amount, if known.

# Response by: <u>Ricky C Caudill</u>

Jackson Energy has not had an insurance claim involving net metering.

7. Is Jackson Energy aware of any electric utility in Kentucky that currently requires a set level of insurance coverage for net metering? If yes, provide the name of the electric utility and the amount of coverage required by that utility.

# Response by: Clayton O Oswald

Jackson Energy is not aware of any electric utility in Kentucky that currently requires a set level of insurance coverage for net metering. Jackson Energy was a party to PSC Case 2008-00169 when the net metering guidelines were formed. Jackson Energy's current net metering tariff is the same as the guidelines. Those guidelines did not set a specific requirement for liability insurance, and to Jackson Energy's knowledge, no Kentucky utility has yet to modify the net metering tariff beyond the parameters of the guidelines.

# 8. How many net metering customers does Jackson energy currently have?

# Response by: <u>Ricky C Caudill</u>

Jackson Energy has three net metered consumers.

9. Has Jackson Energy required a minimum level of insurance coverage for any of its past or current net metering customers? If yes, provide the number of customers and the amount of insurance coverage that each customer was required to carry.

# Response by: Clayton O Oswald

Jackson Energy currently has three members who are on the net metering tariff. The first member was connected in 2007 and had \$300,000 in liability insurance coverage. The two subsequent members obtained \$1,000,000 in liability coverage.

10. Has Jackson Energy required a set level of insurance coverage as part of its past Net Metering Tariff? If yes, provide the amount of coverage required, a discussion of how that amount was determined, and the time period that the Net Metering Tariff was in effect.

# Response by: Ricky C Caudill

Jackson Energy's first net metering consumer was connected in 2007 when net metering was limited to 15 KW and solar only. The consumer used a licensed installer. This consumer had \$300,000 of insurance. Jackson Energy did not set this amount.

Then in 2008 SB83 was passed which expanded net metering to 30 KW and added other renewable sources.

Jackson Energy's second net metering consumer was connected in 2011. The consumer used a licensed installer. The consumer already had one million dollars of liability insurance.

Jackson Energy's third net metering consumer was connected in 2012. The consumer installed his system. Jackson Energy required this consumer to have one million dollars of insurance.

11. Did Jackson Energy conduct any research concerning requirements for minimum levels of insurance coverage against loss arising out of the use of a net metered facility in other states? If yes, provide a discussion of that research and the findings resulting therefrom.

Response by: <u>Clayton O Oswald</u>

Jackson Energy did conduct some research regarding requirements for minimum levels of liability insurance coverage in other states. Being a borrower of the Rural Utilities Service, Jackson Energy first reviewed the applicable regulation, 7 CFR Part 1730, which only states that borrowers may require liability insurance as part of its net metering and/or interconnection guidelines.

Jackson Energy also reviewed the requirements of other states. Based upon this review, it was learned that states have vastly different requirements, ranging from New York, which appears to require no liability insurance to Florida, which requires \$2,000,000 in liability insurance for systems that produce greater than 100kw. As to surrounding states, Indiana appears to require \$100,000 in insurance; Ohio does not state an amount; West Virginia requires \$100,000 on systems that generate less than 50kw, but \$1,000,000 for systems that produce greater than 1mw, and then requires up to \$4,000,000 per occurrence.

This research led Jackson Energy to conclude that reasonable insurance requirements that are for the benefit of its members would be advisable.

# 12. Provide an explanation of a net metered facility that is certified to meet the requirements of Underwriters Laboratories Standard 1741.

#### Response by: Ricky C Caudill

An installation meeting the UL 1741 standard is inverter based and has antiislanding capability. This definition was included in the discussion between the Commission staff, the electric utility representatives and the intervenors leading up to PSC Case 2008-00169. Jackson Energy's definition is based on those discussions.

# Exhibit A

# JACKSON ENERGY COOPERATIVE CORPORATION

# SCHEDULE NM-NET METERING

# AVAILABILITY OF NET METERING SERVICE

Net Metering is available to eligible member-generators in Jackson Energy Cooperative's service territory, upon request, and on a first-come, first-served basis up to a cumulative capacity of one percent (1%) of the Jackson Energy Cooperative's single hour peak load during the previous year. If the cumulative generating capacity of net metering systems reaches 1% of a supplier's single hour peak load during the previous year, upon Commission approval, Jackson Energy Cooperative's obligation to offer net metering to a new member-generator may be limited. An eligible member-generator shall mean a retail electric member of Jackson Energy Cooperative with a generating facility that:

- 1) Generates electricity using solar energy, wind energy, biomass or biogas energy, or hydro energy;
- 2) Has a rated capacity of not greater than thirty (30) kilowatts;
- 3) Is located on the member's premises;
- 4) Is owned and operated by the member;
- 5) Is connected in parallel with Jackson Energy Cooperative's electric distribution system; and
- 6) Has the primary purpose of supplying all or part of the member's own electricity requirements.

At its sole discretion, Jackson Energy Cooperative may provide Net Metering to other membergenerators not meeting all the conditions listed above on a case-by-case basis.

# **METERING**

Jackson Energy Cooperative shall provide net metering services, without any cost to the Member for metering equipment, through a standard kilowatt-hour metering system capable of measuring the flow of electricity in two (2) directions. This provision does not relieve Member of his or her responsibility to pay metering costs embedded in the Jackson Energy Cooperative's Commission-approved base rates. Net metered electricity shall be measured in accordance with standard metering practices established by Jackson Energy Cooperative using metering

ISSUED BY AUTHORITY OF AN ORDER C	OF THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	——————————————————————————————————————
Date of Issue: <u>April 3, 2009</u>	<i>December 14, 2012</i> Date Effective:
<u>April 8, 2009 January 18, 2013</u>	
ISSUED BY	President & CEO

FOR ENTIRE SERVICE AREA P.S.C. No. 5 *1<sup>st</sup> Revised Sheet No. 171* Original Sheet No. 171 Cancelling P.S.C. No. 5-4

# JACKSON ENERGY COOPERATIVE CORPORATION

equipment capable of measuring and recording energy flows, on a kWh basis, from Jackson Energy Cooperative to the member-generator and from the member-generator to Jackson Energy Cooperative, with each directional energy flow recorded independently. If time-of-day or time-of-use metering is used, the electricity fed back to the electric grid by the member-generator shall be metered and accounted for at the specific time it is fed back to the electric grid in accordance with the time-of-day and time-of-use billing agreement currently in place.

Any additional meter, meters, or distribution upgrades needed to monitor the flow in each direction shall be installed at the Member's expense.

# BILLING AND PAYMENT

For charges collected on the basis of metered registration, Jackson Energy Cooperative shall, for each monthly billing period, determine the net meter registration of the member-generator by comparing the directional energy flow in each direction. If the net meter registration shows that the deliveries of energy in kWh from the member-generator to Jackson Energy Cooperative exceed the deliveries of energy in kWh from Jackson Energy Cooperative to the membergenerator, the net meter registration in kWh will be carried forward to the next monthly billing period as a Net Metering Credit, expressed in kWh. If the member-generators carried over a Net Metering Credit from one of more prior months, the net meter registration from the current month shall be added to the Net Metering Credit that exists from prior months.

If the net metering registration shows that deliveries of energy in kWh from Jackson Energy Cooperative to the member-generator exceed the deliveries of energy in kWh from the membergenerator to Jackson Energy Cooperative, the member-generator shall pay Jackson Energy Cooperative for the net amount of energy delivered by Jackson Energy Cooperative after application of any Net Metering Credit carried forward from previous months at the current rate applicable to its type or class of electric service.

The member shall be responsible for payment of any applicable member charge or other applicable charges.

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OF KENTUCKY IN CASE NO. 2008-00169 DATED January 8, 2009 Date of Issue: <u>April 3, 2009</u> December 14, 2012 Date Effective: <u>April 8, 2009January 18, 2013</u> ISSUED BY \_\_\_\_\_ President & CEO At no time shall Jackson Energy Cooperative be required to convert the Net Billing Credit to cash. If a member-generator closes his account, no cash refund for residual Net Metering Credits shall be paid.

Net Metering Credits are not transferable between members or locations.

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 172 Original Sheet No. 172 Cancelling P.S.C. No. 54

# JACKSON ENERGY COOPERATIVE CORPORATION

# APPLICATION AND APPROVAL PROCESS

The Member shall submit an Application for Interconnection and Net Metering ("Application") and receive approval from Jackson Energy Cooperative prior to connecting the generator facility to Jackson Energy Cooperative's system.

Applications will be submitted by the Member and reviewed and processed by Jackson Energy Cooperative according to either Level 1 or Level 2 processes defined in this tariff.

Jackson Energy Cooperative may reject an Application for violations of any code, standard, or regulation related to reliability or safety; however, Jackson Energy Cooperative will work with the Member to resolve those issues to the extent practicable.

Members may contact Jackson Energy Cooperative to check on status of an Application or with questions prior to submitting an Application. Contact information is provided on the Application form and is listed on Jackson Energy Cooperative's website.

# LEVEL 1 AND LEVEL 2 DEFINITIONS

# LEVEL 1

A Level 1 Application shall be used if the generating facility is inverter-based and is certified by a nationally recognized testing laboratory to meet the requirements of Underwriters Laboratories Standard 1741 "Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources" (UL 1741).

Jackson Energy Cooperative will approve the Level 1 Application if the generating facility also meets all of the following conditions:

ISSUED BY AUTHORITY OF AN ORDER OF TH	IE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	——————————————————————————————————————
Date of Issue: April-3, 2009	<i>———December 14, 2012</i> Date Effective:
<u>April 8, 2009 January 18, 2013</u>	
ISSUED BY	President & CEO

1) For interconnection to a radial distribution circuit, the aggregated generation on the circuit, including the proposed generating facility, will not exceed 15% of the Line Section's most recent annual one hour peak load. A line section is the smallest part of the primary distribution system the generating facility could remain connected to after operation of any sectionalizing devices.

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 173 Original Sheet No. 173 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

- 2) If the proposed generating facility is to be interconnected on a single-phase shared secondary, the aggregate generation capacity, including the proposed generating facility, will not exceed the smaller of 20 kVA or the nameplate rating of the transformer.
- 3) If the proposed generating facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.
- 4) If the generating facility is to be connected to three-phase, three wire primary Jackson Energy Cooperative distribution lines, the generator shall appear as a phase-to-phase connection at the primary Jackson Energy Cooperative distribution line.
- 5) If the generating facility is to be connected to three-phase, four wire primary Jackson Energy Cooperative distribution lines, the generator shall appear to the primary Jackson Energy Cooperative distribution line as an effectively grounded source.
- 6) The interconnection will not be on an area or spot network.
- 7) Jackson Energy Cooperative does not identify any violations of any applicable provisions of IEEE 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems."
- 8) No construction of facilities by Jackson Energy Cooperative on its own system will be required to accommodate the generating facility.

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OFKENTUCKY IN CASE NO. 2008-00169DATED January 8, 2009Date of Issue: April 3, 2009December 14, 2012 Date Effective:April 8, 2009January 18, 2013President & CEO

If the generating facility does not meet all of the above listed criteria, Jackson Energy Cooperative, in its sole discretion, may either: 1) approve the generating facility under the Level 1 Application if Jackson Energy Cooperative determines that the generating facility can be safely and reliably connected to Jackson Energy Cooperative's system; or 2) deny the Application as submitted under the Level 1 Application.

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 174 Original Sheet No. 174 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

Jackson Energy Cooperative shall notify the member within 20 business days whether the Application is approved or denied, based on the criteria provided in this section.

If the Application lacks complete information, Jackson Energy Cooperative shall notify the Member that additional information is required, including a list of such additional information. The time between notification and receipt of required additional information will add to the time to process the Application.

When approved, Jackson Energy Cooperative will indicate by signing the approval line on the Level 1 Application Form and returning it to the Member. The approval will be subject to successful completion of an initial installation inspection examination and and/or witness test if required by Jackson Energy Cooperative. Jackson Energy Cooperative's approval section of the Application will indicate if an inspection examination and and/or witness test are required. If so, the Member shall notify Jackson Energy Cooperative within 3 business days of completion of the generating facility installation and schedule an inspection examination and and/or witness test with Jackson Energy Cooperative to occur within 10 business days of completion of the generator facility installation or as otherwise agreed to by Jackson Energy Cooperative and the Member. The Member may not operate the generating facility until successful completion of such inspectionexamination and and/or witness test, unless Jackson Energy Cooperative expressly permits operational testing not to exceed two hours. If the installation fails the inspectionexamination or witness test due to non-compliance with any provision in the Application and Jackson Energy Cooperative approval, the Member shall not operate the generating facility until any and all non-compliance issues are corrected and reinspectedexamined by Jackson Energy Cooperative.

ISSUED BY AUTHORITY OF AN ORDER OF	THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	DATED
Date of Issue: April 3, 2009	<i>————December 14, 2012</i> Date Effective:
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

If the Application is denied, Jackson Energy Cooperative will supply the Member with reasons for denial. The Member may resubmit under Level 2 if appropriate.

# LEVEL 2

A Level 2 Application is required under any of the following:

- 1) The generating facility is not inverter based;
- 2) The generating facility uses equipment that is not certified by a nationally recognized testing laboratory to meet the requirements of UL 1741; or

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 175 Original Sheet No. 175 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

3) The generating facility does not meet one or more of the additional conditions under Level 1.

Jackson Energy Cooperative will approve the Level 2 Application if the generating facility meets Jackson Energy Cooperative's technical interconnection requirements, which are based on IEEE 1547.

Jackson Energy Cooperative will process the Level 2 Application within 30 business days of receipt of a complete Application. Within that time Jackson Energy Cooperative will respond in one of the following ways:

- 1) The Application is approved and Jackson Energy Cooperative will provide the Member with an Interconnection Agreement to sign.
- 2) If construction or other changes to Jackson Energy Cooperative's distribution system are required, the cost will be the responsibility of the Member. Jackson Energy Cooperative will give notice to the Member and offer to meet to discuss estimated costs and construction timeframe. Should the Member agree to pay for costs and proceed, Jackson Energy Cooperative will provide the Member with an Interconnection Agreement to sign within a reasonable time.

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OFKENTUCKY IN CASE NO. 2008-00169DATED January 8, 2009Date of Issue: April 3, 2009December 14, 2012 Date Effective:April 8, 2009 January 18, 2013President & CEO

3) The Application is denied. Jackson Energy Cooperative will supply the Member with reasons for denial and offer to meet to discuss possible changes that would result in Jackson Energy Cooperative approval. Member may resubmit Application with changes.

If the Application lacks complete information, Jackson Energy Cooperative shall notify the Member that additional information is required, including a list of such additional information. The time between notification and receipt of required additional information will add to the 30-business-day target to process the Application.

The Interconnection Agreement will contain all the terms and conditions for interconnection consistent with those specified in this tariff, inspectionexamination andand/or witness test requirements, description of and cost of construction or other changes to Jackson Energy Cooperative's distribution system required to accommodate the generating facility, and detailed documentation of the generating facilities which may include single line diagrams, relay settings, and a description of operation.

FOR ENTIRE SERVICE AREA P.S.C. No. 5 *1<sup>st</sup> Revised Sheet No. 176* Original Sheet No. 176 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

The Member may not operate the generating facility until an Interconnection Agreement is signed by the Member and Jackson Energy Cooperative and all necessary conditions stipulated in the agreement are met.

# APPLICATION, EXAMINATION AND PROCESSING FEES

No application fees or other review, study, or *inspectionexamination* or witness test fees may be charged by Jackson Energy Cooperative for Level 1 Applications.

Jackson Energy Cooperative requires each Member to submit with each Level 2 Application a non-refundable application, inspectionexamination andand/or processing fee of up to \$100 for Level 2 Applications. In the event Jackson Energy Cooperative determines an impact study is necessary with respect to a Level 2 Application, the Member shall be responsible for any reasonable costs

up to \$1,000 for the initial impact study. Jackson Energy Cooperative shall provide documentation of the actual cost of the impact study. Any other studies requested by the Member shall be at the Member's sole expense.

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OF KENTUCKY IN CASE NO. 2008-00169 DATED January 8, 2009 Date of Issue: <u>April 3, 2009</u> December 14, 2012 Date Effective: <u>April 8, 2009, January 18, 2013</u> ISSUED BY \_\_\_\_\_\_ President & CEO

# TERMS AND CONDITIONS FOR INTERCONNECTION

To interconnect to Jackson Energy Cooperative's distribution system, the Member's generating facility shall comply with the following terms and conditions:

- 1) Jackson Energy Cooperative shall provide the Member net metering services, without charge for standard metering equipment, through a standard kilowatt-hour metering system capable of measuring the flow of electricity in two (2) directions. If the Member requests any additional meter or meters or distribution upgrades are needed to monitor the flow in each direction, such installations shall be at the Member's expense.
- 2) The Member shall install, operate, and maintain, at Member's sole cost and expense, any control, protective, or other equipment on the Member's system required by Jackson Energy Cooperative's technical interconnection requirements based on IEEE 1547, the NEC, accredited testing laboratories such as Underwriters Laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the generating facility in parallel

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 177 Original Sheet No. 177 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

with Jackson Energy Cooperative's electric system. Member shall bear full responsibility for the installation, maintenance and safe operation of the generating facility. Upon reasonable request from Jackson Energy Cooperative, the Member shall demonstrate generating facility compliance.

3) The generating facility shall comply with, and the Member shall represent and warrant its compliance with: (a) any applicable safety and power quality standards established by IEEE and accredited testing laboratories such as Underwriters Laboratories; (b) the NEC as may be revised from time to time; (c) Jackson Energy Cooperative's rules, regulations, and Service Regulations as contained in Jackson Energy Cooperative's Retail Electric Tariff as may be revised from time to time to time with the approval of the Kentucky Public Service Commission (Commission); (d) the rules and regulations of the Commission, as such rules and regulations may be revised from time to time to time to time by the Commission; and (e) all other applicable local, state, and federal codes and laws, as the same may be in effect

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OFKENTUCKY IN CASE NO. 2008-00169DATED January 8, 2009Date of Issue: April 3, 2009December 14, 2012 Date Effective:April 8, 2009 January 18, 2013President & CEO

from time to time. Where required by law, Member shall pass an electrical inspection of the generating facility by a local authority having jurisdiction over the installation.

- 4) Any changes or additions to Jackson Energy Cooperative's system required to accommodate the generating facility shall be considered excess facilities. Member shall agree to pay Jackson Energy Cooperative for actual costs incurred for all such excess facilities prior to construction.
- 5) Member shall operate the generating facility in such a manner as not to cause undue fluctuations in voltage, intermittent load characteristics or otherwise interfere with the operation of Jackson Energy Cooperative's electric system. At all times when the generating facility is being operated in parallel with Jackson Energy Cooperative's electric system, Member shall operate the generating facility in such a manner that no adverse impacts will be produced thereby to the service quality rendered by Jackson Energy Cooperative to any of its other members or to any electric system interconnected with Jackson

FOR ENTIRE SERVICE AREA P.S.C. No. 5 *1<sup>st</sup> Revised Sheet No. 178* Original Sheet No. 178 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

Energy Cooperative's electric system. Member shall agree that the interconnection and operation of the generating facility is secondary to, and shall not interfere with, Jackson Energy Cooperative's ability to meet its primary responsibility of furnishing reasonably adequate service to its members.

6) The Member shall be responsible for protecting, at Member's sole cost and expense, the generating facility from any condition or disturbance on Jackson Energy Cooperative'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, except that Jackson Energy Cooperative shall be responsible for repair of damage

ISSUED BY AUTHORITY OF AN ORDER O	F THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	DATED January 8, 2009
Date of Issue: April 3, 2009	——————————————————————————————————————
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

caused to the generating facility resulting solely from the negligence or willful misconduct on the part of Jackson Energy Cooperative.

7) After initial installation, Jackson Energy Cooperative shall have the right to inspectexamine andand/or/or witness commissioning tests, as specified in the Level 1 or Level 2 Application and approval process. Following the initial testing andand/or inspectionexamination of the generating facility and upon reasonable advance notice to the Member, Jackson Energy Cooperative shall have access at reasonable times to the generating facility to perform reasonable on-site inspectionexaminations to verify that the installation, maintenance, and operation of the generating facility comply with the requirements of this tariff.

8) For Level 1 and 2 generating facilities, an eligible Member shall furnish and install on the Member's side of the point of common coupling a safety disconnect switch which shall be capable of fully disconnecting the Member's energy generating equipment from Jackson Energy Cooperative's electric service under the full rated conditions of the Member's generating facility. The external disconnect switch (EDS) shall be located adjacent to Jackson Energy Cooperative's meters or the location of the EDS shall be noted by placing a sticker on the meter, and shall be of the visible break type in a metal enclosure which can be secured by a padlock. If the EDS is not located directly adjacent to the meter, the Member shall be responsible for ensuring that the location of

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 179 Original Sheet No. 179 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

the EDS is properly and legibly identified for so long as the generating facility is operational. The disconnect switch shall be accessible to Jackson Energy Cooperative personnel at all times. Jackson Energy Cooperative may waive the requirement for an EDS for a generating facility at its sole discretion, and on a case-by-case basis, upon review of the generating facility operating parameters and if permitted under Jackson Energy Cooperative's safety and operating protocols.

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OF KENTUCKY IN CASE NO. 2008-00169 DATED January 8, 2009 Date of Issue: <u>April 3, 2009</u> December 14, 2012 Date Effective: <u>April 8, 2009</u> January 18, 2013 ISSUED BY President & CEO

- 9) Jackson Energy Cooperative shall have the right and authority at Jackson Energy Cooperative's sole discretion to isolate the generating facility or require the Member to discontinue operation of the generating facility if Jackson Energy Cooperative believes that: (a) continued interconnection and parallel operation of the generating facility with Jackson Energy Cooperative's electric system may create or contribute to a system emergency on either Jackson Energy Cooperative's or the Member's electric system; (b) the generating facility is not in compliance with the requirements of this tariff, and the noncompliance adversely affects the safety, reliability, or power quality of Jackson Energy Cooperative's electric system; or (c) the generating facility interferes with the operation of Jackson Energy Cooperative's electric system. In non-emergency situations, Jackson Energy Cooperative shall give the Member notice of noncompliance including a description of the specific noncompliance condition and allow the Member a reasonable time to cure the noncompliance prior to isolating the generating facilities. In emergency situations, when the Jackson Energy Cooperative is unable to immediately isolate or cause the Member to isolate only the generating facility, the Jackson Energy Cooperative may isolate the Member's entire facility.
- 10) The Member shall agree that, without the prior written permission from Jackson Energy Cooperative, no changes shall be made to the generating facility as initially approved. Increases in generating facility capacity will require a new "Application for Interconnection and Net Metering" which will be evaluated on the same basis as any other new application. Repair and

FOR ENTIRE SERVICE AREA P.S.C. No. 5 *1<sup>st</sup> Revised Sheet No. 180* Original Sheet No. 180 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

replacement of existing generating facility components with like components that meet UL 1741 certification requirements for Level 1 facilities and not resulting in increases in generating facility capacity is allowed without approval.

ISSUED BY AUTHORITY OF AN ORDER OF	F THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	
Date of Issue: April 3, 2009	<i>December 14, 2012</i> Date Effective:
<u>April 8, 2009 January 18, 2013</u>	
ISSUED BY	President & CEO

11) To the extent permitted by law, the Member shall protect, indemnify, and hold harmless the Jackson Energy Cooperative and its directors, officers, employees, agents, representatives and contractors against and from all loss, claims, actions or suits, including costs and attorney's fees, for or on account of any injury or death of persons or damage to property caused by the Member or the Member's employees, agents, representatives and contractors in tampering with, repairing, maintaining, or operating the Member's generating facility or any related equipment or any facilities owned by Jackson Energy *C*eooperative except where such injury, death or damage was caused or contributed to by the fault or negligence of the Jackson Energy Cooperative or its employees, agents, representatives, or contractors.

The liability of the Jackson Energy Cooperative to the Member for injury to person and property shall be governed by the tariff(s) for the class of service under which the Member is taking service.

- 12) The Member shall maintain general liability insurance coverage (through a standard homeowner's, commercial, or other policy) for both Level 1 and Level 2 generating facilities. A Level 1 system, installed by a licensed installer, requires \$500,000 of liability insurance. A Level 1 system, installed by a non-licensed installer, requires \$1,000,000 of liability insurance. A Level 2 system requires \$1,000,000 of liability insurance. A Level 2 system requires \$1,000,000 of liability insurance. The Member shall, upon request, provide Jackson Energy cooperative with proof of such insurance at the time that application is made for net metering.
- 13) By entering into an Interconnection Agreement, or by inspectionexamination, if any, or by non-rejection, or by approval, or in any other way, Jackson Energy Cooperative does not give any warranty, express or implied, as to the adequacy, safety, compliance with applicable codes or requirements, or as to any other characteristics, of the generating facility equipment, controls, and protective relays and equipment.

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 181 Original Sheet No. 181 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OFKENTUCKY IN CASE NO. 2008-00169DATED January 8, 2009Date of Issue: April 3, 2009December 14, 2012 Date Effective:April 8, 2009.January 18, 2013President & CEO

- 14) A Member's generating facility is transferable to other persons or service locations only after notification to the Jackson Energy Cooperative has been made and verification that the installation is in compliance with this tariff. Upon written notification that an approved generating facility is being transferred to another person, member, or location, the-Jackson Energy Cooperative will verify that the installation is in compliance with this tariff and provide written notification to the member(s) within 20 business days. If the installation is no longer in compliance with this tariff, the-Jackson Energy Cooperative will notify the Member in writing and list what must be done to place the facility in compliance.
- 15) The Member shall retain any and all Renewable Energy Credits (RECs) that may be generated by their generating facility.

# EFFECTIVE TERM AND TERMINATION RIGHTS

This Agreement becomes effective when executed by both parties and shall continue in effect until terminated. This Agreement may be terminated as follows: (a) Member may terminate this Agreement at any time by giving Jackson Energy Cooperative at least sixty (60) days' written notice; (b) Jackson Energy Cooperative may terminate upon failure by the Member to continue ongoing operation of the generating facility; (c) either party may terminate by giving the other party at least thirty (30) days' prior written notice that the other party is in default of any of the terms and conditions of the Agreement or the Rules or any rate schedule, tariff, regulation, contract, or policy of Jackson Energy Cooperative, so long as the notice specifies the basis for terminate by giving the Member at least thirty (30) days' notice in the event that there is a material change in an applicable law, regulation or statute affecting this Agreement or which renders the system out of compliance with the new law or statute.

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 182 Original Sheet No. 182 Cancelling P.S.C. No. 5 4

ISSUED BY AUTHORITY OF AN ORDER O	F THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	
Date of Issue: April 3, 2009	<i>—————December 14, 2012</i> Date Effective:
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

#### JACKSON ENERGY COOPERATIVE CORPORATION

# LEVEL 1

# Application for Interconnection and Net Metering

Use this application form only for a generating facility that is inverter based and certified by a nationally recognized testing laboratory to meet the requirements of UL1741.

Submit this Application to:

Jack	son Energy Cooperative, 115 Jackson Energy Lane, McKee, KY 40447
If you have questions re	egarding this Application or its status, contact the Cooperative at:
	Phone: 1-606-364-1000, Fax: 1-606-364-10135
Member Name:	Account Number:
Member Address:	
Member Phone No.:	Member E-Mail Address:
Project Contact Person:	
Phone No.:	E-Mail Address (Optional):
	ontact information for other contractors, installers, or engineering firms and installation of the generating facilities:
Energy Source: Sc	olar Wind Hydro Biogas Biomass
Inverter Manufacturer a	and Model #:
Inverter Power Rating:	Inverter Voltage Rating:
Power Rating of Energ	y Source (i.e., solar panels, wind turbine):
Is Battery Storage Usec	d: No Yes If Yes, Battery Power Rating: FOR ENTIRE SERVICE A P.S.C.
	1 <sup>st</sup> Revised Sheet No Original Sheet No
	DRITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION
	SE NO. 2008-00169 DATED January 8, 2009 <u>2009</u> December 14, 2012 Date Effective
April 8, 2009 January	<u>, 18, 2013</u>
ISSUED BY	President & CEO

#### JACKSON ENERGY COOPERATIVE CORPORATION

Attach documentation showing that inverter is certified by a nationally recognized testing laboratory to meet the requirements of UL 1741.

Attach site drawing or sketch showing location of Cooperative's meter, energy source, Cooperative accessible disconnect switch and inverter.

Attach single line drawing showing all electrical equipment from the Cooperative's metering location to the energy source including switches, fuses, breakers, panels, transformers, inverters, energy source, wire size, equipment ratings, and transformer connections.

Expected Start-up Date: \_\_\_\_\_

FOR ENTIRE SERVICE AREA P.S.C. No. 5 ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OF KENTUCKY IN CASE NO. 2008-00169 DATED January 8, 2009 Date of Issue: <u>April 3, 2009</u> December 14, 2012 Date Effective: <u>April 8, 2009January 18, 2013</u> ISSUED BY \_\_\_\_\_ President & CEO

1<sup>st</sup> Revised Sheet No. 184 Original Sheet No. 184 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

#### TERMS AND CONDITIONS:

- Jackson Energy Cooperative shall provide the Member net metering services, without charge for standard metering equipment, through a standard kilowatt-hour metering system capable of measuring the flow of electricity in two (2) directions. If the Member requests any additional meter or meters or distribution upgrades are needed to monitor the flow in each direction, such installations shall be at the Member's expense.
- 2) The Member shall install, operate, and maintain, at Member's sole cost and expense, any control, protective, or other equipment on the Member's system required by Jackson Energy Cooperative's technical interconnection requirements based on IEEE 1547, the NEC, accredited testing laboratories such as Underwriters Laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the generating facility in parallel with Jackson Energy Cooperative's electric system. The Member shall bear full responsibility for the installation, maintenance and safe operation of the generating facility. Upon reasonable request from Jackson Energy Cooperative, the Member shall demonstrate generating facility compliance.
- 3) The generating facility shall comply with, and the Member shall represent and warrant its compliance with: (a) any applicable safety and power quality standards established by IEEE and accredited testing laboratories such as Underwriters Laboratories; (b) the NEC as may be revised from time to time; (c) Jackson Energy Cooperative's rules, regulations, and Service Regulations as contained in Jackson Energy Cooperative's Retail Electric Tariff as may be revised from time to time with the approval of the Kentucky Public Service Commission (Commission); (d) the rules and regulations of the Commission, as such rules and regulations may be revised from time to time by the Commission; and (e) all other applicable local, state, and federal codes and laws, as the same may be in effect from time to time. Where required by law, Member shall pass an electrical inspection of the generating facility by a local authority having jurisdiction over the installation.
- 4) Any changes or additions to Jackson Energy Cooperative's system required to accommodate the generating facility shall be considered excess facilities. Member shall agree to pay Jackson Energy Cooperative for actual costs incurred for all such excess facilities prior to construction.

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OFKENTUCKY IN CASE NO. 2008-00169DATED January 8, 2009Date of Issue: April 3, 2009December 14, 2012 Date Effective:April 8, 2009.January 18, 2013President & CEO

#### JACKSON ENERGY COOPERATIVE CORPORATION

- 5) The Member shall operate the generating facility in such a manner as not to cause undue fluctuations in voltage, intermittent load characteristics or otherwise interfere with the operation of Jackson Energy Cooperative's electric system. At all times when the generating facility is being operated in parallel with Jackson Energy Cooperative's electric system, the Member shall operate the generating facility in such a manner that no adverse impacts will be produced thereby to the service quality rendered by Jackson Energy Cooperative to any of its other members or to any electric system interconnected with Jackson Energy Cooperative's electric system. The Member shall agree that the interconnection and operation of the generating facility is secondary to, and shall not interfere with, Jackson Energy Cooperative's ability to meet its primary responsibility of furnishing reasonably adequate service to its members.
- 6) The Member shall be responsible for protecting, at Member's sole cost and expense, the generating facility from any condition or disturbance on Jackson Energy Cooperative'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, except that Jackson Energy Cooperative shall be responsible for repair of damage caused to the generating facility resulting solely from the negligence or willful misconduct on the part of Jackson Energy Cooperative.
- 7) After initial installation, Jackson Energy Cooperative shall have the right to inspectexamine and/or witness commissioning tests, as specified in the Level 1 or Level 2 Application and approval process. Following the initial testing and and/or inspectionexamination of the generating facility and upon reasonable advance notice to the Member, Jackson Energy Cooperative shall have access at reasonable times to the generating facility to perform reasonable on-site inspectionexaminations to verify that the installation, maintenance, and operation of the generating facility comply with the requirements of this tariff.
- 8) For Level 1 and 2-generating facilities, an eligible Member shall furnish and install on the Member's side of the point of common coupling a safety disconnect switch which shall be capable of fully disconnecting the Member's energy generating equipment from Jackson Energy Cooperative's electric service under the full rated conditions of the Member's generating facility. The external disconnect switch (EDS) shall be located

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OFKENTUCKY IN CASE NO. 2008-00169DATED January 8, 2009Date of Issue: April 3, 2009December 14, 2012 Date Effective:April 8, 2009.January 18, 2013President & CEO

FOR ENTIRE SERVIC AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 186 Original Sheet No. 186 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

adjacent to Jackson Energy Cooperative's meters or the location of the EDS shall be noted by placing a sticker on the meter, and shall be of the visible break type in a metal enclosure which can be secured by a padlock. If the EDS is not located directly adjacent to the meter, the Member shall be responsible for ensuring that the location of the EDS is properly and legibly identified for so long as the generating facility is operational. The disconnect switch shall be accessible to Jackson Energy Cooperative personnel at all times. Jackson Energy Cooperative may waive the requirement for an EDS for a generating facility at its sole discretion, and on a case-by-case basis, upon review of the generating facility operating parameters and if permitted under Jackson Energy Cooperative's safety and operating protocols.

- 9) Jackson Energy Cooperative shall have the right and authority at Jackson Energy Cooperative's sole discretion to isolate the generating facility or require the Member to discontinue operation of the generating facility if Jackson Energy Cooperative believes that: (a) continued interconnection and parallel operation of the generating facility with Jackson Energy Cooperative's electric system may create or contribute to a system emergency on either Jackson Energy Cooperative's or the Member's electric system; (b) the generating facility is not in compliance with the requirements of this tariff, and the noncompliance adversely affects the safety, reliability, or power quality of Jackson Energy Cooperative's electric system; or (c) the generating facility interferes with the operation of Jackson Energy Cooperative's electric system. In non-emergency situations, Jackson Energy Cooperative shall give the Member notice of noncompliance including a description of the specific noncompliance condition and allow the Member a reasonable time to cure the noncompliance prior to isolating the generating facilities. In emergency situations, when Jackson Energy Cooperative is unable to immediately isolate or cause the Member to isolate only the generating facility, the Jackson Energy Cooperative may isolate the Member's entire facility.
- 10) The Member shall agree that, without the prior written permission from Jackson Energy Cooperative no changes shall be made to the generating facility as initially approved. Increases in generating facility capacity will require a new "Application for Interconnection and Net Metering" which will be evaluated on the same basis as any other new application. Repair and replacement of existing generating facility components with like components that meet UL 1741 certification requirements for Level 1 facilities and not resulting in increases in generating facility capacity is allowed without approval.

ISSUED BY AUTHORITY OF AN ORDER OF	F THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	DATED January 8, 2009
Date of Issue: April 3, 2009	<i>————December 14, 2012</i> Date Effective:
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 187 Original Sheet No. 187 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

11) To the extent permitted by law, the Member shall protect, indemnify, and hold harmless the Jackson Energy Cooperative and its directors, officers, employees, agents, representatives and contractors against and from all loss, claims, actions or suits, including costs and attorney's fees, for or on account of any injury or death of persons or damage to property caused by the Member or the Member's employees, agents, representatives and contractors in tampering with, repairing, maintaining, or operating the Member's generating facility or any related equipment or any facilities owned by the Jackson Energy Cooperative except where such injury, death or damage was caused or contributed to by the fault or negligence of the Jackson Energy Cooperative or its employees, agents, representatives, or contractors.

The liability of Jackson Energy Cooperative to the Member for injury to person and property shall be governed by the tariff(s) for the class of service under which the Member is taking service.

- 12) The Member shall maintain general liability insurance coverage (through a standard homeowner's, commercial, or other policy) for Level 1 and Level 2 generating facility. A Level 1 system installed by licensed installer, requires \$500,000 of liability insurance. A Level 1 system, installed by a non-licensed installer, requires \$1,000,000 of liability insurance. The Member shall, upon request, provide Jackson Energy Cooperative with proof of such insurance at the time that application is made for net metering.
- 13) By entering into an Interconnection Agreement, or by inspectionexamination, if any, or by non-rejection, or by approval, or in any other way, Jackson Energy Cooperative does not give any warranty, express or implied, as to the adequacy, safety, compliance with applicable codes or requirements, or as to any other characteristics, of the generating facility equipment, controls, and protective relays and equipment.
- 14) A Member's generating facility is transferable to other persons or service locations only after notification to the Jackson Energy Cooperative has been made and verification that the installation is in compliance with this tariff. Upon written notification that an approved generating facility is being transferred to another person, member, or location, the Jackson Energy Cooperative will verify that the installation is in compliance with this tariff and provide written

ISSUED BY AUTHORITY OF AN ORDER OF	THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	DATED <del>January 8, 2009</del>
Date of Issue: April 3, 2009	<i>December 14, 2012</i> Date Effective:
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

notification to the member(s) within 20 business days. If the installation is no longer in compliance with this tariff, the Jackson Energy Cooperative will notify the Member in writing and list what must be done to place the facility in compliance.

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 188 Original Sheet No. 188 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

15) The Member shall retain any and all Renewable Energy Credits (RECs) that may be generated by their generating facility.

#### **EFFECTIVE TERM AND TERMINATION RIGHTS**

This Agreement becomes effective when executed by both parties and shall continue in effect until terminated. This Agreement may be terminated as follows: (a) The Member may terminate this Agreement at any time by giving Jackson Energy Cooperative at least sixty (60) days' written notice; (b) Jackson Energy Cooperative may terminate upon failure by the Member to continue ongoing operation of the generating facility; (c) either party may terminate by giving the other party at least thirty (30) days prior written notice that the other party is in default of any of the terms and conditions of the Agreement or the Rules or any rate schedule, tariff, regulation, contract, or policy of Jackson Energy Cooperative so long as the notice specifies the basis for terminate by giving the Member at least thirty (30) days' notice in the event that there is a material change in an applicable law, regulation or statute affecting this Agreement or which renders the system out of compliance with the new law or statute.

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OF KENTUCKY IN CASE NO. 2008-00169 DATED January 8, 2009 Date of Issue: <u>April 3, 2009</u> December 14, 2012 Date Effective: <u>April 8, 2009January 18, 2013</u> ISSUED BY President & CEO

# FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 189 Original Sheet No. 189 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

I hereby certify that, to the best of my knowledge, all of the information provided in this Application is true, and I agree to abide by all the Terms and Conditions included in this Application for Interconnection and Net Metering and Jackson Energy Cooperative's Net Metering Tariff.

Member Signature:	Date:
Title:	
	APPROVAL SECTION ive, Application for Interconnection and Net Metering is
approved subject to the provisions contained in th	
<b>Cooperative</b> on-site inspectionexamination and Waived	and/or witness test:
the Cooperative within 3 business days of schedule an <i>on-site</i> inspectionexamination within 10 business days of completion of agreed to by the Cooperative and the Mer operate the generating facility until such a is successfully completed. Additionally, all other terms and conditions in the Appl	<i>ad/or</i> witness test is required, the Member shall notify f completion of the generating facility installation and <i>n</i> and <i>and/or</i> witness test with the Cooperative to occur the generating facility installation or as otherwise mber. Unless indicated below, the Member may not <i>can on-site</i> inspection <i>examination</i> and <i>and/or</i> witness test the Member may not operate the generating facility until lication have been met. 364-1000 to schedule an inspection <i>examination</i>
	OF THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	
April 8, 2009 January 18, 2013	<i>December 14, 2012</i> Date Effective:
ISSUED BY	President & CEO

<b>Pre-Inspection</b> <i>Examination</i>	operational	testing not	to exceed	two hours:
Not Allowed				

Allowed

If an inspection *examination* and *and/or* witness test is waived, operation of the generating facility may begin when installation is complete, and all other terms and conditions in the Application have been met.

As specified here:

Additions, Changes, or C	larifications to App	plication Information:
	None	As specified here:

Approved by:	Date:	

Printed Name: \_\_\_\_\_\_ Title: \_\_\_\_\_

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 190 Original Sheet No. 190 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

# LEVEL 2

# Application For Interconnection And Net Metering

Use this Application form when generating 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.

Submit this Application along with an application fee of \$100 to:

Jackson Energy Cooperative, 115 Jackson Energy Lane, McKee, KY 40447

If you have questions regarding this Application or its status, contact the Cooperative at:

Phone: 606-364-1000, Fax: 606-364-10135

Member Name: \_\_\_\_\_\_ Account Number: \_\_\_\_\_

Member Address:

Project Contact Person: \_\_\_\_\_

ISSUED BY AUTHORITY OF AN ORDER OF	THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	DATED January 8, 2009
Date of Issue: April 3, 2009	<i>————December 14, 2012</i> Date Effective:
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

Phone No.: \_\_\_\_\_ Email Address (Optional): \_\_\_\_\_

Provide names and contact information for other contractors, installers, or engineering firms involved in the design and installation of the generating facilities:

Total Generating Capacity of Generating Facility:	
Type of Generator: Inverter-Based Synchronous Induction	
Power Source: Solar Wind Hydro Biogas Biomass	

Adequate documentation and information must be submitted with this application to be considered complete. Typically this should include the following:

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Sheet No. 191 Original Sheet No. 191 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

- 1. Single-line diagram of the member's system showing all electrical equipment from the generator to the point of interconnection with the Cooperative's distribution system, including generators, transformers, switchgear, 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 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.

ISSUED BY AUTHORITY OF AN ORDER OF	F THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	
Date of Issue: April 3, 2009	<i>—————December 14, 2012</i> Date Effective:
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

- 7. 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 UL1741.
- 8. For synchronous generators, manufacturer and model number, nameplate ratings, and impedance data (Xd, X'd, & X"d).
- 9. For induction generators, manufacturer and model number, nameplate ratings, and locked rotor current.

Member Signature:

Date: \_\_\_\_\_

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 192 Original Sheet No. 192 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

#### LEVEL 2 INTERCONNECTION AGREEMENT

THIS INTERCONNECTION AGREEMENT (Agreement) is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between \_*Jackson Energy Cooperative Corporation*\_\_\_\_\_(Cooperative), and \_\_\_\_\_(Member). Cooperative and Member are hereinafter sometimes referred to individually as "Party" or collectively as "Parties".

#### WITNESSETH:

WHEREAS, Member is installing, or has installed, generating equipment, controls, and protective relays and equipment (Generating Facility) used to interconnect and operate in parallel with Cooperative's electric system, which Generating Facility is more fully described in Exhibit A, attached hereto and incorporated herein by this Agreement, and as follows:

ISSUED BY AUTHORITY OF AN ORDER OF T	THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	
Date of Issue: April 3, 2009	——————————————————————————————————————
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

Location: \_\_\_\_\_

Generator Size and Type: \_\_\_\_\_

NOW, THEREFORE, in consideration thereof, Member and Cooperative agree as follows:

Cooperative agrees to allow the Member to interconnect and operate the Generating Facility in parallel with the Cooperative's electric system and the Member agrees to abide by Cooperative's Net Metering Tariff and all the Terms and Conditions listed in this Agreement including any additional conditions listed in Exhibit A.

#### TERMS AND CONDITIONS:

 Jackson Energy Cooperative shall provide the Member net metering services, without charge for standard metering equipment, through a standard kilowatt-hour metering system capable of measuring the flow of electricity in two (2) directions. If the Member requests any additional meter or meters or distribution upgrades are needed to monitor the flow in each direction, such installations shall be at the Member's expense.

> FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 193 Original Sheet No. 193 Cancelling P.S.C. No. 5 4

# JACKSON ENERGY COOPERATIVE CORPORATION

- 2) The Member shall install, operate, and maintain, at the Member's sole cost and expense, any control, protective, or other equipment on the Member's system required by Jackson Energy Cooperative's technical interconnection requirements based on IEEE 1547, the NEC, accredited testing laboratories such as Underwriters Laboratories, and the manufacturer's suggested practices for safe, efficient and reliable operation of the generating facility in parallel with Jackson Energy Cooperative's electric system. The Member shall bear full responsibility for the installation, maintenance and safe operation of the generating facility. Upon reasonable request from Jackson Energy Cooperative, the Member shall demonstrate generating facility compliance.
- 3) The generating facility shall comply with, and the Member shall represent and warrant its compliance with: (a) any applicable safety and power quality standards established by IEEE and accredited testing laboratories such as Underwriters Laboratories; (b) the NEC as may be revised

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OF KENTUCKY IN CASE NO. 2008-00169 DATED January 8, 2009 Date of Issue: <u>April 3, 2009</u> December 14, 2012 Date Effective: <u>April 8, 2009 January 18, 2013</u> ISSUED BY\_\_\_\_\_\_ President & CEO from time to time; (c) Jackson Energy Cooperative's rules, regulations, and Service Regulations as contained in Jackson Energy Cooperative's Retail Electric Tariff as may be revised from time to time with the approval of the Kentucky Public Service Commission (Commission); (d) the rules and regulations of the Commission, as such rules and regulations may be revised from time to time by the Commission; and (e) all other applicable local, state, and federal codes and laws, as the same may be in effect from time to time. Where required by law, the Member shall pass an electrical inspection of the generating facility by a local authority having jurisdiction over the installation.

- 4) Any changes or additions to Jackson Energy Cooperative's system required to accommodate the generating facility shall be considered excess facilities. The Member shall agree to pay Jackson Energy Cooperative for actual costs incurred for all such excess facilities prior to construction.
- 5) The Member shall operate the generating facility in such a manner as not to cause undue fluctuations in voltage, intermittent load characteristics or otherwise interfere with the operation of Jackson Energy Cooperative's electric system. At all times when the generating facility is being operated in parallel with Jackson Energy Cooperative's electric system, the Member shall operate the generating facility in such a manner that no adverse impacts will be produced thereby to the service quality rendered by Jackson Energy Cooperative to any of its other members or to any electric system interconnected

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 194 Original Sheet No. 194 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

with Jackson Energy Cooperative's electric system. The Member shall agree that the interconnection and operation of the generating facility is secondary to, and shall not interfere with, Jackson Energy Cooperative's ability to meet its primary responsibility of furnishing reasonably adequate service to its members.

6) The Member shall be responsible for protecting, at the Member's sole cost and expense, the generating facility from any condition or disturbance on Jackson Energy Cooperative'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, except that Jackson Energy Cooperative shall be responsible for repair of damage caused to the generating facility

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OFKENTUCKY IN CASE NO. 2008-00169DATED January 8, 2009Date of Issue: April 3, 2009December 14, 2012 Date Effective:April 8, 2009 January 18, 2013President & CEO

resulting solely from the negligence or willful misconduct on the part of Jackson Energy Cooperative.

- 7) After initial installation, Jackson Energy Cooperative shall have the right to inspectexamine andand/or witness commissioning tests, as specified in the Level 1 or Level 2 Application and approval process. Following the initial testing andand/or inspectionexamination of the generating facility and upon reasonable advance notice to the Member Jackson Energy Cooperative shall have access at reasonable times to the generating facility to perform reasonable on-site inspectionexaminations to verify that the installation, maintenance, and operation of the generating facility comply with the requirements of this tariff.
- 8) For Level 1 and 2 generating facilities, an eligible Member shall furnish and install on the Member's side of the point of common coupling a safety disconnect switch which shall be capable of fully disconnecting the Member's energy generating equipment from Jackson Energy Cooperative's electric service under the full rated conditions of the Member's generating facility. The external disconnect switch (EDS) shall be located adjacent to Jackson Energy Cooperative's meters or the location of the EDS shall be noted by placing a sticker on the meter, and shall be of the visible break type in a metal enclosure which can be secured by a padlock. If the EDS is not located directly adjacent to the meter, the Member shall be responsible for ensuring that the location of the EDS is properly and legibly identified for so long as the generating facility is operational. The disconnect switch shall be accessible to Jackson Energy Cooperative personnel at all times. Jackson Energy Cooperative may waive the requirement for an EDS for a generating facility at its sole discretion, and on a case-by-case basis, upon review of the

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 195 Original Sheet No. 195 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

generating facility operating parameters and if permitted under Jackson Energy Cooperative's safety and operating protocols.

9) Jackson Energy Cooperative shall have the right and authority at Jackson Energy Cooperative's sole discretion to isolate the generating facility or require the Member to discontinue operation of the generating facility if Jackson Energy Cooperative believes that: (a) continued interconnection and parallel operation of the generating facility with Jackson Energy Cooperative's electric

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OFKENTUCKY IN CASE NO. 2008-00169DATED January 8, 2009Date of Issue: April 3, 2009December 14, 2012 Date Effective:April 8, 2009January 18, 2013President & CEO

system may create or contribute to a system emergency on either Jackson Energy Cooperative's or the Member's electric system; (b) the generating facility is not in compliance with the requirements of this tariff, and the noncompliance adversely affects the safety, reliability, or power quality of Jackson Energy Cooperative's electric system; or (c) the generating facility interferes with the operation of Jackson Energy Cooperative's electric system. In non-emergency situations, Jackson Energy Cooperative shall give the Member notice of noncompliance including a description of the specific noncompliance condition and allow the Member a reasonable time to cure the noncompliance prior to isolating the generating facilities. In emergency situations, when the Jackson Energy Cooperative is unable to immediately isolate or cause the Member to isolate only the generating facility, the Jackson Energy Cooperative may isolate the Member's entire facility.

- 10) The Member shall agree that, without the prior written permission from Jackson Energy Cooperative, no changes shall be made to the generating facility as initially approved. Increases in generating facility capacity will require a new "Application for Interconnection and Net Metering" which will be evaluated on the same basis as any other new application. Repair and replacement of existing generating facility components with like components that meet UL 1741 certification requirements for Level 1 facilities and not resulting in increases in generating facility capacity is allowed without approval.
- 11) To the extent permitted by law, the Member shall protect, indemnify, and hold harmless the Jackson Energy Cooperative and its directors, officers, employees, agents, representatives and contractors against and from all loss, claims, actions or suits, including costs and attorney's fees, for or on account of any injury or death of persons

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 196 Original Sheet No. 196 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

or damage to property caused by the Member or the Member's employees, agents, representatives and contractors in tampering with, repairing, maintaining, or operating the Member's generating facility or any related equipment or any facilities owned by the Jackson Energy Cooperative except where such injury, death or damage was caused or contributed to by the fault or negligence of the Jackson Energy Cooperative or its employees, agents, representatives, or contractors.

ISSUED BY AUTHORITY OF AN ORDER OF	THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	DATED January 8, 2009
Date of Issue: April 3, 2009	<i>————December 14, 2012</i> Date Effective:
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

The liability of the Jackson Energy Cooperative to the Member for injury to person and property shall be governed by the tariff(s) for the class of service under which the Member is taking service.

- 12) The Member shall maintain general liability insurance coverage (through a standard homeowner's, commercial, or other policy) for both Level 1 and Level 2 generating facilities. The Member shall, upon request, provide Jackson Energy Cooperative with proof of such insurance at the time that application is made for net metering. *Level 2 systems require \$1,000,000 of liability insurance*.
- 13) By entering into an Interconnection Agreement, or by an on-siteinspectionexamination, if any, or by non-rejection, or by approval, or in any other way, Jackson Energy Cooperative does not give any warranty, express or implied, as to the adequacy, safety, compliance with applicable codes or requirements, or as to any other characteristics, of the generating facility equipment, controls, and protective relays and equipment.
- 14) A Member's generating facility is transferable to other persons or service locations only after notification to Jackson Energy Cooperative has been made and verification that the installation is in compliance with this tariff. Upon written notification that an approved generating facility is being transferred to another person, member, or location, the Jackson Energy Cooperative will verify that the installation is in compliance with this tariff and provide written notification to the member(s) within 20 business days. If the installation is no longer in compliance with this tariff, the Jackson Energy Cooperative will notify the Member in writing and list what must be done to place the facility in compliance.
- 15) The Member shall retain any and all Renewable Energy Credits (RECs) that may be generated by their generating facility.

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 197 Original Sheet No. 197 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

EFFECTIVE TERM AND TERMINATION RIGHTS

ISSUED BY AUTHORITY OF AN ORDER OF	THE PUBLIC SERVICE COMMISSION OF
KENTUCKY IN CASE NO. 2008-00169	——————————————————————————————————————
Date of Issue: April 3, 2009	<i>————December 14, 2012</i> Date Effective:
April 8, 2009 January 18, 2013	
ISSUED BY	President & CEO

This Agreement becomes effective when executed by both parties and shall continue in effect until terminated. This Agreement may be terminated as follows: (a) The Member may terminate this Agreement at any time by giving Jackson Energy Cooperative at least sixty (60) days' written notice; (b) Jackson Energy Cooperative may terminate upon failure by the Member to continue ongoing operation of the generating facility; (c) either party may terminate by giving the other party at least thirty (30) days prior written notice that the other party is in default of any of the terms and conditions of the Agreement or the Rules or any rate schedule, tariff, regulation, contract, or policy of Jackson Energy Cooperative, so long as the notice specifies the basis for terminate by giving the Member at least thirty (30) days' notice in the event that there is a material change in an applicable law, regulation or statute affecting this Agreement or which renders the system out of compliance with the new law or statute.

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

JACKSON ENERGY COOPERATIVE

By: \_\_\_\_\_

Printed Name

Title: \_\_\_\_\_

MEMBER

By: \_\_\_\_\_

Printed Name

Title: \_\_\_\_\_

FOR ENTIRE SERVICE AREA P.S.C. No. 5 1<sup>st</sup> Revised Sheet No. 198 Original Sheet No. 198 Cancelling P.S.C. No. 5 4

#### JACKSON ENERGY COOPERATIVE CORPORATION

ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OF KENTUCKY IN CASE NO. 2008-00169 DATED January 8, 2009 Date of Issue: <u>April 3, 2009</u> December 14, 2012 Date Effective: <u>April 8, 2009January 18, 2013</u> ISSUED BY\_\_\_\_\_\_ President & CEO

#### Exhibit A

Exhibit A will contain additional detailed information about the Generating Facility such as a single line diagram, relay settings, and a description of operation.

When construction of Utility facilities is required, Exhibit A will also contain a description and associated cost.

Exhibit A will also specify requirements for a Utility *on-site* inspection*examination* and*and/or* witness test and when limited operation for testing or full operation may begin.

 ISSUED BY AUTHORITY OF AN ORDER OF THE PUBLIC SERVICE COMMISSION OF

 KENTUCKY IN CASE NO. 2008-00169
 DATED January 8, 2009

 Date of Issue: April 3, 2009
 December 14, 2012 Date Effective:

 April 8, 2009 January 18, 2013
 President & CEO