April 1, 2026

Nancy Dippell, Secretary
Missouri Public Service Commission
200 Madison St. Suite 100
PO Box 360
Jefferson City, MO 65120

Ms. Dippell,

Enclosed is a copy of the standard information regarding net metering, interconnection requirements, and solar rebates that are made available to our customers on our website, www.libertyutilities.com.

I am also enclosing a copy of the 2025 Net Metering statistics.

If you have any questions, or if I can be of further service, please contact me at (417) 768-9933.



Chris Schafer
Senior Manager, Construction Planning
The Empire District Electric Company

Empire District Electric Net Metering Summary (Missouri)

	Year 2010[1 & 2]	Year 2012 [1]	Year 2013 [1 & 2]	Year 2014[2]	Year 2015 [2]	Year 2016 [2]	Year 2017 [2]	Year 2018 [2]	Year 2019 [2]	Year 2020 [2]	Year 2021 [2]	Year 2022 [2]	Year 2023 [2]	Year 2024 [2]	Year 2025 [2]
Total KwH received at CP/NM Avoided Cost Rates 1 & 2	17,698	6,793	3,018	4,614	81,345	1,472,086	2,120,423	1,674,147	3,207,997	2,093,177	5,222,537	4,504,635	8,310,947	8,680,205	8,687,234
Total KW (Rated) Connected NM Generation	132.7	201	287	341	3,433	13,116	17,169	25,188	34,707	39,378	45,565	55,101	67,018	73,304	117,730
# NM Customers Current	15	27	32	41	280	935	1,280	1,829	2,587	2,938	3,245	3,858	4,789	5,445	5,709

[1] Includes KwHrs generated from 1/1/11 - 7/9/11 at NM Rate and 7/10/11 - 1/12/13 at CP Rate (based on "billing cycle" netting).

[2] Includes KwHrs generated from 1/12/13 forward at NM Rate (based on "billing cycle" netting).

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AVAILABILITY:

Electric service is available under this schedule at points on the Company's existing distribution facilities located within its service area for customers operating renewable fuel source generators.

Applicable to Customer-Generators with a Company approved interconnection agreement. This schedule is not applicable where the Customer's electrical generating system exceeds 100 kW.

The net metering service shall be available to Customer-Generators on a first-come, first-serve basis until the total rated generating capacity of net metering systems equals 5% of the Company's single-hour peak load during the previous year. Resale electric service will not be supplied under this schedule.

DEFINITIONS:

Customer-Generator:

The owner or operator of a qualified electric energy generation unit that meets all of the following criteria:

a. Is powered by a renewable energy resource;
b. Has an electrical generating system with a capacity of not more than one hundred fifty kilowatts;
c. Is located on a premises owned, operated, leased, or otherwise controlled by the Customer-Generator;
d. Is interconnected and operated in parallel phase and synchronization with the Company;
e. Is intended primarily to offset part or all of the Customer-Generator's own electrical energy requirements;
f. Meets all applicable safety, performance, interconnection, and reliability standards established by the National Electrical Code, the National Electrical Safety Code, the Institute of Electrical and Electronic Engineers and any local governing authorities; and
g. Contains a mechanism that automatically disables the unit and interrupts the flow of electricity back onto the Company's electricity lines in the event that the service to the Customer-Generator is interrupted.

Renewable Energy Resources:

Electrical energy produced from wind, solar thermal sources, hydroelectric sources, photovoltaic cells and panels, fuel cells using hydrogen produced by ones of the above-named electrical energy sources, and other sources of energy that become available, and are certified as renewable by the Missouri Department of Natural Resources or the Missouri Department of Economic Development's Division of Energy.

CHARACTER OF SERVICE:

Alternating current, 60 cycles, at the voltage and phase of the Company's established secondary distribution system serving the Customer-Generator's premise.

BILLING AND PAYMENT:

The Company shall render a bill for net consumption at approximately 30-day intervals based on the Company's regular tariff schedules as on file with the Missouri Public Service Commission. Net consumption is defined as the kWh supplied by the Company to the Customer-Generator minus kWh supplied by the Customer-Generator and returned to the Company's grid during the billing month. Any net consumption shall be valued monthly as follows

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RIDER NM

BILLING AND PAYMENT (continued):

To the extent the net consumption is positive (i.e. Customer-Generator took more kWh from the Company during the month than Customer-Generator produced), the eligible Customer-Generator will be billed in accordance with the Customer-Generator's otherwise applicable standard rate for Customer Charges, Demand Charges, and Energy Charges (for the net consumption).

To the extent the net consumption is negative (i.e. Customer-Generator produced more kWh during the month than the Company supplied), the Customer-Generator will be credited in accordance with the Company's bi-annually calculated avoided fuel cost of the net energy (kWh) delivered to the Company. With the exception of the Energy Charge, all other applicable standard rate charges shall apply.

PURCHASED RATE:

Summer Season, per kWh	$	0.0331
Winter Season, per kWh	$	0.0330

The Summer Season will be the four months of June through September, and the Winter Season will be the eight months of October through May.

To the extent the net consumption is zero (i.e. Customer-Generator produced the same kWh during the month as supplied by the Company), the Customer-Generator will be Minimum billed in accordance with the eligible Customer-Generator's otherwise applicable standard rate.

TERMS AND CONDITIONS:

1. The Company will supply, own and maintain all necessary meters and associated equipment utilized for billing. If the Company's metering equipment at the Customer Generator's premise does not have the capability of measuring both the net energy produced and the net energy consumed, the Customer shall reimburse the Company for the cost to purchase and install sufficient metering. In addition, and for purposes of monitoring Customer generation and load, the Company may install at its expense, load research metering. The Customer shall supply, at no expense to the Company, a suitable location for meters and associated equipment used for billing and for load research. Such equipment shall be accessible at all times to Company personnel.
2. The Company shall have the right to require the Customer, at certain times and as electric operating conditions warrant, to limit the production of electrical energy from the generating facility to an amount no greater than the load at the Customer's facility of which the generating facility is a part.
3. The Customer shall furnish, install, operate and maintain in good order and repair without cost to the Company such relays, locks and seals, breakers, automatic synchronizers, disconnecting devices, and other control and protective devices as required by the NEC, NESC, IEEE or UL as being required as suitable for the operation of the generator in parallel with the Company's system.
4. The disconnect switch shall be under the exclusive control of the Company. The manual switch must have the capability to be locked out by Company personnel to isolate the Company's facilities in the event of an electrical outage on the Company's transmission and distribution facilities serving the Customer. This isolating devise shall also serve as a means of isolation for the Customer's equipment during any customer maintenance activities, routine outages or emergencies. The Company shall give notice to the Customer before a manual switch is locked or an isolating device is used, if possible; and otherwise shall give notice as soon as practicable after locking or isolating the Customer's facilities.
5. The Customer may be required to reimburse the Company for any equipment or facilities required solely as a result of the installation by the Customer of generation in parallel with the Company's Service. This requirement is limited to equipment or facilities installed by the Company in excess of those required of the Company by the NEC, NESC, IEEE or UL.
6. The Customer shall notify the Company prior to the initial energizing and start-up testing of the Customer-owned generator, and the Company shall have the right to have a representative present at said test.

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NET METERING RIDER
RIDER NM

TERMS AND CONDITIONS (continued):

7. If harmonics, voltage fluctuations, or other disruptive problems on the utility's system are directly attributable to the operation of the Customer's system, such program(s) shall be corrected at the Customer's expense.
8. No Customer's generating system shall damage the Company's system or equipment or present an undue hazard to Company personnel.
9. The Company requires an Interconnection Application/Agreement for net metering (see copy below) for conditions related to technical and safety aspects of parallel generation.
10. Service under this schedule is subject to the Company's Rules and Regulations on file with the Missouri Public Service Commission and any subsequently approved and in effect during the term of this service.

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ER-2019-0374; EN-2021-0038;
YE-2021-0041

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RIDER NM

INTERCONNECTION APPLICATION /AGREEMENT FOR NET METERING SYSTEMS WITH CAPACITY OF ONE HUNDRED KILOWATTS (150 kW) OR LESS

The Empire District Electric Company
602 South Joplin Avenue
Joplin, Missouri, 64802

For Customers Applying for Interconnection:

If you are interested in applying for interconnection to The Empire District Electric Company's (Empire) electrical system, you should first contact Empire and ask for information related to interconnection of parallel generation equipment to Empire's system and you should understand this information before proceeding with this Application.

If you wish to apply for interconnection to Empire's electrical system, please complete sections A, B, C and D, and attach the plans and specifications, including, but not limited to, describing the net metering, parallel generation, and interconnection facilities (hereinafter collectively referred to as the "Customer-Generator's System") and submit them to Empire at the address above. Empire will provide notice of approval or denial within thirty (30) days of receipt by Empire for Customer-Generators of ten kilowatts (10 kW) or less and within ninety (90) days of receipt by Empire for Customer-Generators of greater than ten kilowatts (10 kW). If this Application is denied, you will be provided with the reason(s) for the denial. If this Application is approved and signed by both you and Empire, it shall become a binding contract and shall govern your relationship with Empire.

For Customers Who Have Received Approval of Customer-Generator System Plans and Specifications:

After receiving approval of your Application, it will be necessary to construct the Customer-Generator System in compliance with the plans and specifications described in the Application, complete sections E and F of this Application, and forward this Application to Empire for review and completion of section G at the address above. Prior to the interconnection of the qualified generation unit to Empire's system, the Customer-Generator will furnish Empire a certification from a qualified professional electrician or engineer that the installation meets the plans and specification described in the application. If a local Authority Having Jurisdiction (AHJ) requires permits or certifications for construction or operation of the qualified generation unit, a customer generator must show the permit number and approval certification to Empire prior to interconnection. If the application for interconnection is approved by Empire and the Customer-Generator does not complete the interconnection within one (1) year after receipt of notice of the approval, the approval shall expire and the Customer-Generator shall be responsible for filing a new application.

Within 21 days of when the customer-generator completes submission of all required post construction documentation, including sections E & F, other supporting documentation and local AHJ inspection approval (if applicable) to the electric utility, the electric utility will make any inspection of the customer-generators interconnection equipment or system it deems necessary and notify the customer generator:

1. That the net meter has been set and parallel operation by customer-generator is permitted; or
2. That the inspection identified no deficiencies and the net meter installation is pending; or
3. That the inspection identified no deficiencies and the timeframe anticipated for the electric utility to complete all required system or service upgrades and install the meter; or
4. Of all deficiencies identified during the inspection that need to be corrected by the customer-generator before parallel operation will be permitted; or
5. Of any other issue(s), requirement(s), or condition(s), impacting the installation of the net meter or the parallel operation of the system.

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Missouri Public
Service Commission
ER-2019-0374; EN-2021-0038;
YE-2021-0041

NET METERING RIDER
RIDER NM

For Customers Who Are Installing Solar Systems:

Customer-Generators who are Missouri electric utility retail account holders will receive a solar rebate, if available, based on the capacity stated in the application, or the installed capacity of the Customer-Generator System if it is lower, if the following requirements are met:

a. Empire must have confirmed the Customer-Generator's System is operational; and
b. Sections H and I of this Application must be completed.

The amount of the rebate will be based on the system capacity measured in direct current. The rebate will be based on the schedule below up to a maximum of 25,000 watts (25kW) for residential customers, and up to a maximum of 150,000 watts (150 kW) for non-residential customers. In order to receive a rebate of $0.25 per watt, all solar rebate applications must be received and completed prior to August 6, 2023 and operational before December 31, 2023.

$2.00 per watt for systems operational on or before June 30, 2014;
$1.50 per watt for systems operational between July 1, 2014 and June 30, 2015;
$1.00 per watt for systems operational between July 1, 2015 and June 30, 2016;
$0.50 per watt for systems operational between July 1, 2016 and June 30, 2019;
$0.25 per watt for systems operational between July 1, 2019 and December 31, 2023;
$0.00 per watt for systems operational after December 31, 2023.

For Customers Who Are Assuming Ownership or Operational Control of an Existing Customer-Generator System:

If no changes are being made to the existing Customer-Generator System, complete sections A, D and F of this Application/Agreement and forward to Empire at the address above. Empire will review the new Application/Agreement and shall approve such, within fifteen (15) days of receipt by Empire if the new Customer-Generator has satisfactorily completed Application/Agreement, and no changes are being proposed to the existing Customer-Generator System. There are no fees or charges for the Customer-Generator who is assuming ownership or operational control of an existing Customer-Generator System if no modifications are being proposed to that System.

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NET METERING RIDER
RIDER NM

A. Customer-Generator's Information

Name on Empire's Electric Account: _____
Service/Street Address: _____
City: _____ State: _____ Zip Code: _____
Mailing Address (if different from above): _____
City: _____ State: _____ Zip Code: _____
Email address (if available): _____
Electric Account Holder Contact Person: _____
Daytime Phone: _____ Fax: _____ E-Mail: _____
Emergency Contact Phone: _____
Empire Account No. (from Utility Bill): _____
If account has multiple meters, provide the meter number to which generation will be connected: _____
Empire's Account No. (from Utility Bill): Shall be inserted at the top of each page.

B. Customer-Generator's System Information

Manufacturer Name Plate Power Rating: _____kW AC ☐ DC ☐ (check box)
Voltage: _____Volts
System Type: Wind ☐ Fuel Cell ☐ Solar Thermal ☐ Photovoltaic ☐ Hydroelectric ☐ Other ☐ (If other describe on line below)

_____

Inverter/Interconnection Equipment Manufacturer: _____
Inverter/Interconnection Equipment Model No.: _____
Outdoor Manual/Utility Accessible & Lockable Disconnect Switch Distance from Meter: _____
Certify that the disconnect switch will be located adjacent to the Customer-Generator's electric service meter or explain where and why an alternative location of disconnect switch is being requested:

_____

Existing Electrical Service Capacity: _____Amperes Voltage: _____Volts
Service Character: Single Phase _____ Three Phase _____
Total capacity of existing Customer-Generator System (if applicable): _____kW

System Plans, Specifications, and Wiring Diagram must be attached for a valid application.

C. Installation Information / Hardware and Installation Compliance

Company Installing System: _____
Contact Person of Company Installing System: _____ Phone Number: _____
Contractor's License No. (if applicable): _____
Approximate Installation Date: _____
Mailing Address: _____
City: _____ State: _____ Zip Code: _____
Daytime Phone: _____ Fax: _____ E-Mail: _____
Person or Agency Who Will Inspect/Certify Installation: _____

The Customer-Generator's proposed System hardware complies with all applicable National Electric Safety Code (NESC), National Electric Code (NEC), Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), requirements for electrical equipment and their installation. As applicable to System type, these requirements include, but are not limited to, UL 1703, UL 1741, and IEEE 1547. The proposed installation complies with all applicable local electrical codes and all reasonable safety requirements of Empire. The proposed System has a lockable, visible AC disconnect device, accessible at all times to Empire personnel and switch is located adjacent to the Customer-Generator's electric service meter (except in cases where the Company has approved an alternate location). The System is only required to include one lockable, visible disconnect device, accessible to Empire. If the interconnection equipment is equipped with a visible, lockable, and accessible disconnect, no redundant device is needed to meet this requirement. The Customer-Generator's proposed System has functioning controls to prevent voltage flicker, DC injection, overvoltage, undervoltage, overfrequency, underfrequency, and overcurrent, and to provide for System synchronization to Empire's electrical system. The proposed System does have an anti-islanding function that prevents the generator from continuing to supply power when Empire's electrical system is not energized or operating normally.

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Missouri Public
Service Commission
ER-2019-0374; EN-2021-0038;
YE-2021-0041

NET METERING RIDER
RIDER NM

If the proposed System is designed to provide uninterruptible power to critical loads, either through energy storage or back–up generation, the proposed System includes a parallel blocking scheme for this backup source that prevents any backflow of power to Empire's electrical system when the electrical system is not energized or not operating normally.

Signed (Installer): _____ Date: _____
Name (Print): _____

D. Additional Terms and Conditions

In addition to abiding by Empire's other applicable rules and regulations, the Customer-Generator understands and agrees to the following specific terms and conditions:

1) Operation / Disconnection

If it appears to Empire, at any time, in the reasonable exercise of its judgment, that operation of the Customer-Generator 's System is adversely affecting safety, power quality or reliability of Empire's electrical system, Empire may immediately disconnect and lock-out the Customer-Generator's System from Empire's electrical system. The Customer-Generator shall permit Empire's employees and inspector's reasonable access to inspect, test, and examine the Customer-Generator's System.

2) Liability

Liability insurance is not required for Customer-Generators of ten kilowatts (10 kW) or less. For generators greater than ten kilowatts (10 kW), the Customer Generator agrees to carry no less than one hundred thousand dollars ($100,000) of liability insurance that provides for coverage of all risk of liability for personal injuries (including death) and damage to property arising out of or caused by the operation of the Customer-Generator's System. Insurance may be in the form of an existing policy or an endorsement on an existing policy. Customer-Generators, including those whose systems are ten kilowatts (10 kW) or less, may have legal liabilities not covered under their existing insurance policy in the event the Customer-Generator's negligence or other wrongful conduct causes personal injury (including death), damage to property, or other actions and claims.

3) Metering and Distribution Costs

A Customer-Generator's facility shall be equipped with sufficient metering equipment that can measure the net amount of electrical energy produced or consumed by the Customer-Generator. If the Customer-Generator's existing meter equipment does not meet these requirements or if it is necessary for Empire to install additional distribution equipment to accommodate the Customer-Generator's facility, the Customer-Generator shall reimburse Empire for the costs to purchase and install the necessary additional equipment. At the request of the Customer-Generator, such costs may be initially paid for by Empire, and any amount up to the total costs and a reasonable interest charge may be recovered from the Customer-Generator over the course of up to twelve (12) billing cycles. Any subsequent meter testing, maintenance, or meter equipment change necessitated by the Customer-Generator shall be paid for by the Customer-Generator.

4) Ownership of Renewable Energy Credits or Renewable Energy Certificates (RECs)

RECs created through the generation of electricity by the Customer-Owner are owned by the Customer-Generator; however, if the Customer-Generator receives a solar rebate, the Customer-Generator transfers to Empire all right, title, and interest in and to the RECs associated with the new or expanded solar electric system that qualified the Customer-Generator for the solar rebate for a period of ten (10) years from the date the electric utility confirms the solar electric system is installed and operational.

5) Energy Pricing and Billing

The net electric energy delivered to the Customer-Generator shall be billed in accordance with Empire's Applicable Rate Schedules (Tariff Schedule NM). The value of the net electric energy delivered by the Customer-Generator to Empire shall be credited in accordance with the net metering rate schedule(s) (Tariff Schedule NM). The Customer-Generator shall be responsible for all other bill components charged to similarly situated customers.

Net electrical energy measurement shall be calculated in the following manner:

(a) For a Customer Generator, a retail electric supplier shall measure the net electrical energy produced or consumed during the billing period in accordance with normal metering practices for customers in the same rate class, either by employing a single, bidirectional meter that measures the amount of electrical energy produced and consumed, or by employing multiple meters that separately measure the Customer-Generator's consumption and production of electricity;

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Missouri Public
Service Commission
ER-2019-0374; EN-2021-0038;
YE-2021-0041

(b) If the electricity supplied by the supplier exceeds the electricity generated by the Customer-Generator during a billing period, the Customer-Generator shall be billed for the net electricity supplied by the supplier in accordance with normal practices for customers in the same rate class;

(c) If the electricity generated by the Customer-Generator exceeds the electricity supplied by the supplier during a billing period, the Customer-Generator shall be billed for the appropriate customer charges as specified by the applicable Customer-Generator rate schedule for that billing period and shall be credited an amount for the excess kilowatt-hours generated during the billing period at the net metering rate identified in Empire's tariff filled at the Public Service Commission, with this credit applied to the following billing period; and

(d) Any credits granted by this subsection shall expire without any compensation at the earlier of either twelve (12) months after their issuance, or when the Customer-Generator disconnects service or terminates the net metering relationship with the supplier.

6) Terms and Termination Rights

This Agreement becomes effective when signed by both the Customer-Generator and Empire, and shall continue in effect until terminated. After fulfillment of any applicable initial tariff or rate schedule term, the Customer-Generator may terminate this Agreement at any time by giving Empire at least thirty (30) days prior written notice. In such event, the Customer-Generator shall, no later than the date of termination of Agreement, completely disconnect the Customer-Generator's System from parallel operation with Empire's system. Either party may terminate this Agreement 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 this Agreement, so long as the notice specifies the basis for termination, and there is an opportunity to cure the default. This Agreement may also be terminated at any time by mutual agreement of the Customer-Generator and Empire. This agreement may also be terminated by approval of the Commission, if there is a change in statute that is determined to be applicable to this contract and necessitates its termination.

7) Transfer of Ownership

If operational control of the Customer-Generator's System transfers to any other party than the Customer-Generator, a new Application/Agreement must be completed by the person or persons taking over operational control of the existing Customer-Generator System. Empire shall be notified no less than thirty (30) days before the Customer-Generator anticipates transfer of operational control of the Customer-Generator's System. The person or persons taking over the operational control of Customer-Generator's System must file a new Application/Agreement, and must receive authorization from Empire before the existing Customer-Generator System can remain interconnected with Empire's electrical system. The new Application/Agreement will only need to be completed to the extent necessary to affirm that the new person or persons having operational control of the existing Consumer-Generator System completely understand the provisions of this Application/Agreement and agrees to them. If no changes are being made to the Customer-Generator's System, completing sections A, D and F of this Application/Agreement will satisfy this requirement. If no changes are being proposed to the Customer-Generator System, Empire will assess no charges or fees for this transfer. Empire will review the new Application/Agreement and shall approve such, within fifteen (15) days if the new Customer-Generator has satisfactorily completed the Application/Agreement, and no changes are being proposed to the existing Customer-Generator System. Empire will then complete section G and forward a copy of the completed Application/Agreement back to the new Customer-Generator, thereby notifying the new Customer-Generator that the new Customer-Generator is authorized to operate the existing Customer-Generator System in parallel with Empire's electrical system. If any changes are planned to be made in the existing Customer-Generator System that in any way may degrade or significantly alter that System's output characteristics, then the Customer-Generator shall submit to Empire a new Application/Agreement for the entire Customer-Generator System and all portions of the Application/Agreement must be completed.

8) Dispute Resolution

If any disagreements between the Customer-Generator and Empire arise that cannot be resolved through normal negotiations between them, the disagreements may be brought to the Missouri Public Service Commission by either party, through an informal or formal complaint. Procedures for filing and processing these complaints are described in 4 CSR 240-2.070. The complaint procedures described in 4 CSR 240-2.070 apply only to retail electric power suppliers to the extent that they are regulated by the Missouri Public Service Commission.

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Missouri Public
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ER-2019-0374; EN-2021-0038;
YE-2021-0041

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RIDER NM

9) Testing Requirement

IEEE 1547 requires periodic testing of all interconnection related protective functions. The Customer-Generator must, at least once every year, conduct a test to confirm that the Customer-Generator's net metering unit automatically ceases to energize the output (interconnection equipment output voltage goes to zero) within two (2) seconds of being disconnected from Empire's electrical system. Disconnecting the net metering unit from Empire's electrical system at the visible disconnect switch and measuring the time required for the unit to cease to energize the output shall satisfy this test. The Customer-Generator shall maintain a record of the results of these tests and, upon request by Empire, shall provide a copy of the test results to Empire. If the Customer-Generator is unable to provide a copy of the test results upon request, Empire shall notify the Customer-Generator by mail that Customer-Generator has thirty (30) days from the date the Customer-Generator receives the request to provide to Empire, the results of a test. If the Customer-Generator's equipment ever fails this test, the Customer-Generator shall immediately disconnect the Customer-Generator's System from Empire's system. If the Customer-Generator does not provide results of a test to Empire within thirty (30) days of receiving a request from Empire or the results of the test provided to Empire show that the Customer-Generator's net metering unit is not functioning correctly, Empire may immediately disconnect the Customer-Generator's System from Empire's system. The Customer-Generator's System shall not be reconnected to Empire's electrical system by the Customer-Generator until the Customer-Generator's System is repaired and operating in a normal and safe manner.

I have read, understand, and accept the provisions of Section D, subsections 1 through 9 of this Application/Agreement.

Printed Name (Customer-Generator): _____
Signed (Customer-Generator): _____ Date: _____
Note: Must be name and signature of Empire Account Holder

E. Electrical Inspection

If a local Authority Having Jurisdiction (AHJ) governs permitting/inspection of project:
Authority Having Jurisdiction (AHJ): _____
Permit Number: _____

Applicable to all installations:

The Customer-Generator System referenced above satisfies all requirements noted in Section C.
Inspector Name (Print): _____
Inspector Certification: Licensed Engineer in Missouri _____ Licensed Electrician in Missouri _____
License No. _____ Issuing Authority _____

Signed (Inspector): _____ Date: _____

F. Customer-Generator Acknowledgement

I am aware if the Customer-Generator System installed on my premises and I have been given warranty information and/or an operational manual for that system. Also, I have been provided with a copy of Empire's parallel generation tariff or rate schedule (as applicable) and interconnection requirements. I am familiar with the operation of the Customer-Generator System.

I agree to abide by the terms of this Application/Agreement and I agree to operate and maintain the Customer-Generator System in accordance with the manufacturer's recommended practices as well as Empire's interconnection standards. If, at any time and for any reason, I believe that the Customer-Generator System is operating in an unusual manner that may result in any disturbances on Empire's electrical system, I shall disconnect the Customer-Generator System and not reconnect it to Empire's electrical system until the Customer-Generator System is operating normally after repair or inspection. Further, I agree to notify Empire no less than thirty (30) days prior to modification of the components or design of the Customer-Generator System that in any way may degrade or significantly alter that System's output characteristics. I acknowledge that any such modifications will require submission of a new Application/Agreement to Empire.

I agree not to operate the Customer-Generator System in parallel with Empire's electrical system until this Application/Agreement has been approved by Empire.
System Installation Date: _____
Printed Name (Customer-Generator): _____
Signed (Customer-Generator): _____ Date: _____

G. Utility Application Approval (*completed by* The Empire District Electric Company)

Empire does not, by approval of this Application/Agreement, assume any responsibility or liability for damage to property or physical injury due to malfunction of the Customer-Generator's System or the Customer-Generator's negligence.

This Application is approved by Empire on this _____ day of _____ (month). _____ (year).
Empire Representative Name (Print): _____
Signed Empire Representative: _____

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Missouri Public
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ER-2019-0374; EN-2021-0038;
YE-2021-0041

THE EMPIRE DISTRICT ELECTRIC COMPANY d.b.a. LIBERTY

P.S.C. Mo. No. 6 Sec. 4 1st Revised Sheet No. 16d

Canceling P.S.C. Mo. No. 6 Sec. 4 Original Sheet No. 16d

For ALL TERRITORY

NET METERING RIDER
RIDER NM

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THE EMPIRE DISTRICT ELECTRIC COMPANY d.b.a. LIBERTY

P.S.C. Mo. No. 6 Sec. 4 1st Revised Sheet No. 16e

Canceling P.S.C. Mo. No. 6 Sec. 4 Original Sheet No. 16e

For ALL TERRITORY

NET METERING RIDER
RIDER NM

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FILED - Missouri Public Service Commission - 08/06/2023 - ET-2023-0197 - JE-2024-0002

NET METERING RIDER
RIDER NM

Disclaimer: Possible Future Rules and/or Rate Changes
Affecting Your Photovoltaic ("PV") System

1. Your PV system is subject to the Commission's current rates, rules, and regulations. The Missouri Public Service Commission ("Commission") may alter its rules and regulations and/or change rates in the future. If this occurs, your PV system is subject to those changes, and you will be responsible for paying any future increases to electricity rates, charges, or service fees from the Company.

2. The Company's electricity rates, charges, and service fees are determined by the Commission and are subject to change based upon the decisions of the Commission. These future adjustments may positively or negatively impact any potential savings or the value of your PV system.

3. Any future electricity rate projections which may be presented to you are not produced, analyzed, or approved by the Company or the Commission. They are based on projections formulated by external third parties not affiliated with the Company or the Commission.

The undersigned warrants, certifies, and represents that the information provided in this form is true and correct to the best of my knowledge; and the installation meets all Missouri Net Metering requirements.

Print Name of Applicant	Print Installer's Name
Applicant's Signature	Installer's Signature
If Applicant is a Business, Print Title/Authority of Person Signing on behalf of Applicant	
Date	Date

MUST BE MAILED TO EMPIRE VIA U.S. POSTAL SERVICE, FEDEX OR UPS, OR EMAIL THE NET METERING DEPARTMENT

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Back

Solar Experts Contact Form

Interested in Joining our Subscription Waiting List?

Complete the brief solar interest form below. A solar specialist from Liberty will contact you for a free solar consultation.

*** Required fields**

Solar Experts Contact Form

First Name*

Last Name*

Service Address*

Service City*

Service State*

Email*

Verify Email*

Primary Phone*

Existing Customer*

Yes

Commodity*

Electric

How did you hear about our Solar Subscription Program?

- [ ] Social Media
- [ ] Google
- [ ] Radio
- [ ] Newspaper
- [ ] Other

Message*

I'm not a robot

reCAPTCHA
Privacy - Terms

Submit

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LIBERTY

Requirements For Net Metering



(800) 206 – 2300

The latest revision of this book can be found at
https://central.libertyutilities.com/all/residential/new-service/service-standards.html

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TABLE OF CONTENTS

1.0 INTRODUCTION 5
2.0 DEFINITIONS 6
3.0 NET METERING 7
3.1 INTRODUCTION 7
3.2 INTERCONNECTION PROCESS 7
3.3 APPLY FOR INTERCONNECTION 8
3.4 INTERCONNECTION APPLICATION REVIEW/STUDY 8
3.5 TECHNICAL AND PERFORMANCE STANDARDS 8
3.5.1 MAIN DISCONNECT TO COMPLY WITH STANDARDS FOR NEW SERVICE 9
3.5.2 VOLTAGE PLACARDING ON COMMERICAL 3PH. DISCONNECTS 9
3.5.3 21 DAY LOCK OUT FOR SYSTEMS OPERATING WITHOUT FINAL UTILITY APPROVAL 9
3.5.4 PIERCING TYPE CONNECTORS ARE NOT ALLOWED 9
3.5.5 REMOVING METER OR CUTTTING METER SEAL 9
3.5.6 GENERAL REQUIREMENT 9
3.5.6.1 VOLTAGE REGULATION 9
3.5.6.2 INTEGRATION OF GROUNDING WITH LIBERTY DISTRIBUTION SYSTEM 9
3.5.6.3 SYNCHRONIZATION 9
3.5.6.4 INADVERTENT ENERGIZATION OF LIBERTY DISTRIBUTION SYSTEM 9
3.5.6.5 ISOLATION DEVICE 9
3.5.7 RESPONSE TO ABNORMAL CONDITIONS ON THE LIBERTY DISTRIBUTION SYSTEM 10
3.5.7.1 FAULTS (SHORT CIRCUITS) 10
3.5.7.2 RECLOSING COORDINATION 10
3.5.7.3 VOLTAGE 10
3.5.7.4 FREQUENCY 11
3.5.7.5 AUTOMATIC RECONNECTION 11
3.5.8 POWER QUALITY 11
3.5.8.1 LIMITATION OF DC INJECTION 11
3.5.8.2 LIMITATION OF VOLTAGE FLICKER 11
3.5.8.3 HARMONICS 12
3.5.9 UNINTENTIONAL ISLANDING 12
3.6 INTERCONNECTION TEST SPECIFICATIONS 12
3.6.1 DESIGN TEST 13
3.6.1.1 RESPONSE TO ABNORMAL VOLTAGE AND FREQUENCY 13
3.6.1.2 SYNCHRONIZATION 13
3.6.1.3 INTERCONNECT INTEGRITY TEST 13
3.6.1.3.1 PROTECTION FROM ELECTROMAGNETIC INTERFERENCE (EMI) 13
3.6.1.3.2 SURGE WITHSTAND PERFORMANCE 13
3.6.1.3.3 PARALLELLING DEVICE 14
3.6.1.4 UNINTENTIONAL ISLANDING 14

3.6.1.5 LIMITATION OF DC INJECTION 14
3.6.1.6 HARMONICS 14
3.6.2 PRODUCTION TESTS 14
3.6.3 INTERCONNECTION INSTALLATION EVALUATION 14
3.6.3.1 GROUNDING INTEGRATION WITH LIBERTY 14
3.6.3.2 ISOLATION DEVICE 14
3.6.3.3 LIBERTY FAULTS 14
3.6.3.4 LIBERTY RECLOSING COORDINATION 14
3.6.4 COMMISSIONING TEST 15
3.6.5 PERIODIC INTERCONNECTION TESTS 15
3.7 INTERCONNECTION AGREEMENT COMPLETION 20
3.8 RATE SCHEDULES 23
3.8.1 MISSOURI – NET METERING RIDER (RIDER NM) – INCLUDING APPLICATION. 23
3.8.2 KANSAS – NET METERING RIDER (RIDER NM) – INCLUDING APPLICATION. 23
3.8.3 OKLAHOMA 23
3.8.4 ARKANSAS 23

TABLE OF FIGURES

Figure 1: Renewable Generator with Battery Storage for Non Critical/Essential Load Systems 16
Figure 2: Renewable Generator w/o Batteries – Direct Through Inverter Into Main Panel 17
Figure 3: Renewable Generator w/o Batteries – Direct Through Inverter Into Main Panel 18
Figure 3A: Renewable Generator for Systems Utilizing Critical/Essential Load and Battery Backup 19
Figure 4: Residential: Switch Location Placard 24
Figure 5: Commercial & Industrial: Switch Location Placard 25
Figure 6: Battery Backup Location Placard 26
Figure 7: Remote Meter and Switch Location Placard 27

1.0 INTRODUCTION

Liberty constantly strives to maintain a high standard of service to all Customers. This booklet has been prepared for use by Customers, architects, engineers, electrical contractors and local inspecting authorities so they may receive full benefit from our service. Copies are available at Liberty's Corporate office, service centers, and web site. All holders of "Requirements For Net Metering" booklets are encouraged to submit comments to aid in future revisions. Please submit comments as follows:

1. Give section, paragraph and page number to which the comment pertains.
2. Submit comments in writing; giving details, sketches, drawings, and all supporting pertinent information.
3. Mail via USPS to:

LIBERTY
Energy Services/Net Metering
P. O. BOX 127
602 South Joplin Avenue
Joplin, MO 64802

The impression generally prevails that compliance with the National Electrical Code (NEC), or the various electrical ordinances guarantees to the Customer a wiring installation complete and adequate for the full use of electric service now and in the future. This is not necessarily the case. The NEC and these guidelines are designed to provide the minimum requirements considered necessary for safety. **(The 2008 NEC, Article 90.1 B itself states, "Compliance therewith and proper maintenance will result in an installation essentially free from hazard, but not necessarily efficient, convenient or adequate for good service for future expansion of electrical use.")** Careful design and installation often results in a wiring system that exceeds NEC requirements.

LIBERTY, as a utility, must meet the requirements of the National Electrical Safety Code (NESC), which sometimes differ from the National Electrical Code (NEC).

The Company shall have the right to disconnect or refuse service to any installation which violates local, municipal, NEC or NESC regulations. The Company shall also have the right to disconnect or refuse service for installations that are hazardous to the public, or negatively impacts service to other Customers, or Company facilities.

Except for the installation and maintenance of its own property, Liberty does not install or repair wiring or equipment beyond the point of delivery. Therefore, Liberty is not responsible for the voltage levels beyond the point of delivery and does not assume any responsibility for Customer facilities beyond the point of delivery. Your cooperation will be greatly appreciated and will enable you to receive prompt and satisfactory service.

2.0 DEFINITIONS

Backfeed	When electric power flows in the opposite direction from it's usual flow.
Company	Liberty.
Customer-Generator*	The owner or operator of a qualified electric energy generation unit which: (a) Is powered by a renewable energy resource; (b) Has an electrical generating system with a capacity of not more that 100kW; (c) Is located on a premises owned, operated, leased, or otherwise controlled by the Customer-Generator; (d) Is interconnected and operates in parallel phase and synchronization with a retail electric supplier and has been approved by said retail electric supplier; (e) Is intended primarily to offset part or all of the Customer-Generator's electrical energy requirements; (f) Meets applicable safety, performance, interconnection, and reliability standards established by the National Electrical Code, the National Electrical Safety Code, the Institute of Electrical and Electronics Engineers, Underwriters Laboratories, the Federal Energy Regulatory Commission, and any local governing authorities; and (g) Contains a mechanism that automatically disables the unit and interrupts the flow of electricity back onto the supplier's electricity lines in the event that service to that Customer-Generator is interrupted.
Generator	A machine that converts mechanical energy into electrical energy.
Net Metering	Using metering equipment sufficient to measure the difference between the electrical energy supplied to a Customer-Generator by a retail electric supplier and the electrical energy supplied by the Customer-Generator to the retail electric supplier over the applicable billing period.
Rate Schedule	A schedule of rates, services, and rules approved by the Commission.
Utility-Interactive Inverter	An inverter intended for use in parallel with an electric utility to supply common loads that may deliver power to the utility.

Many of the terms included may have slight variations in the intended specific meaning within the respective state jurisdictions. Terms as defined within the approved tariff will take precedence in the event of any conflict or confusion in meaning.

3.0 NET METERING

3.1 INTRODUCTION

The summary shown below establishes a ready source of basic reference material for currently approved Rate Schedules and Rate Schedule Riders in the states where the Company provides electric service. The respective Commissions for the service areas in the four states provide periodic review of these resulting in revisions and changes to the applicable Schedules or Riders. It is the responsibility of the Customer or Customer-Generator system(s) owner to be in compliance with the approved state's Rate Schedules, Riders, or applicable Regulations which are in effect at the time of the application, installation and revisions. This would include any changes that may occur throughout the useful life of the equipment. This summary is intended as one aid to provide information and assistance in applying for, and the submittal of the minimum documentation to comply with the installing and interconnecting process for a qualified non-utility,renewable fuel sourced electric generation (or distributed electric generation) system(s). Other considerations are manufacturer's recommendations, Codes, ordinances and Company safety or equipment requirements which may apply. Please consult with a Company representative if the facility is over the power limits shown in this document.

Please note that on an existing Point of Service that the application for a qualified non-utility renewable fuel sourced electric generation (or distributed electric generation) system(s) which is to be inter-connected through a point of common coupling shall be reviewed by the Company as described in Section 3.6.3 and 3.6.4. As a result of the review process, additional equipment or re-arrangement of all or a portion of the already existing service interface equipment may have to be reconfigured or changed. This may result in additional equipment & labor costs to the Customer (applicant) in order to comply with current safety standards, codes, or laws in effect at the time of the review process. **Please note should there arise any discrepancies or differences between Section 3.0 and an approved Rate Schedule, Tariff, Rider, or approved "Rules and Regulations", whether implied or otherwise, the appropriate Schedule, Tariff, Rider, or "Rules and Regulations" shall take precedence and will govern any action taken.**

3.2 INTERCONNECTION PROCESS

The Company supplies electrical service to Customers located within the four States of Missouri, Kansas, Oklahoma and Arkansas. Each state currently has applicable approved rate schedules, riders, rules and regulations or laws that address utility grid inter-connection for the Company's service area. The applicable governing bodies for the respective states are: Missouri – The Missouri Public Service Commission; Kansas – The State of Kansas Corporation Commission; Oklahoma – Oklahoma Corporation Commission; Arkansas – Arkansas Public Service Commission. Please ensure that you are familiar with and utilize the correct application documents and specific processes defined by the appropriate state agency where your system's installation is located. The Company can assist you if need guidance in this process.

This process applies to new installations and modifications to existing interconnected installations. A "generic" process is shown in Diagram 1. A completed Application shall consists of submitting the appropriate sections of the application with all fields completed, any or all technical material including manufacturers specifications describing or defining the specific equipment to be installed, and an interconnection wiring diagram or drawing that clearly conveys the appropriate physical locations of the proposed system devices and the necessary electrical details to convey the electrical energy flow path from the proposed Customer-Generator's system source back to the utility's metering location for the premise. **The diagram must clearly show the routing and connection(s) of all conductors, i.e. line one, line two, neutral and ground) in the path form the grid-tie inverter to the load panel and include references to the Company's Point of Service.** Additional wiring detail and grounding from the renewable energy source, i.e. photovoltaic panels to the inverter would also be very helpful. Any application fees would need to be submitted also, should they apply within your state. Please mail the completed application packet via the USPS to the following address:

LIBERTY
Energy Services/Net Metering
P. O. BOX 127
602 South Joplin Avenue
Joplin, MO 64802

Once the application is received by the Company, there is usually a defined period of time by the state within which Liberty is obligated to respond. The obligated response time period can vary depending on your state's requirements. The Company will act to initiate the review process as rapidly as possible so as to meet the time restrictions. Any delays that are the responsibility of the applicant or persons acting on their behalf in performing acts such as securing necessary right-of-ways, governmental permits/inspections or meeting zoning requirements will not be counted in the Company's mandated time to respond.

3.3 APPLY FOR INTERCONNECTION

The applicant must submit to the Company the "Interconnection Application/Agreement for Net Metering Systems/Facilities with a capacity of 100 kW or less". The Application/Agreement will contain technical specifications or references to safety related codes that assist in the safe installation and subsequent operation of a Net Metering system. **The Company encourages the Customer to submit these technical specifications to the Company before investing in any equipment.** This will ensure that the Company's engineering department can approve the proposed equipment and it's installation.

The Customer must submit a separate application for each Net Metering system whether or not it is at the current location or another location. The appropriate state application form(s) may be found at https://central.libertyutilities.com/all/residential/new-service/service-standards.html

3.4 INTERCONNECTION APPLICATION REVIEW/STUDY

The Company's engineering department will perform a review of the application materials to determine the impact of the proposed equipment on the Company's system. The Company's engineering department may suggest modifications that are required to allow for safe and reliable interconnection of the Customer's proposed system to Company's utility grid. In addition, a review of the existing Company service and Customer's metering will be conducted to determine if modifications will be required to accommodate the proposed interconnection facility. Additional materials may be requested if the application is deemed incomplete or deficient in documentation.

Written conditional approval or denial with reasons for the decision will be provided within 30 days for generation systems of 10 kW or less and within 90 days for systems greater than 10 kW. An estimate of any interconnection costs will be provided in the same time period. These interconnection cost estimates are related to the installation of the physical facilities which are necessary to permit interconnected operation of the Customer's system with the Company's utility grid and shall only include those corresponding costs, which would not have been normally been incurred by the Company to provide service to the Customer. These costs may be the result of one or more of the following:

a. additional tests and analyses of the effects of the operation of the proposed interconnected system on the Company's utility grid,

b. additional metering equipment, and/or

c. any necessary controls or switches.

Upon receipt of the written conditional approval, the applying Customer shall construct or install the system as submitted within the application as well as any stated modifications within the written response to the application. Any conditionally approved items will be addressed and submitted in writing by the applicant to Company describing how the items will be corrected. This is necessary before any final approval of the application will be made by the Company. Once the Customer's system is in place, the applicant shall provide to the Company the signed Application/Agreement with all items on the Electrical Inspection form completed which will indicate that the necessary electrical inspection has been performed by a qualified person.

3.5 TECHNICAL AND PERFORMANCE STANDARDS

This section will list and explain the functional interconnection requirements that are considered under IEEE 1547 (IEEE Standard for Interconnecting Distributed Resources With Electric Power Systems) as they apply to Customer-Generator net metering interconnection with the LU power system. **Net metering interconnection equipment, such as power inverters, must be IEEE 1547 compliant as certified by UL 1741 testing in order to be approved by Liberty for Net Metering installations. In addition, measurements for operational compliance with any or all of these requirements may be**

taken at any time by Liberty in order to verify that a Customer-Generator's net metering interconnection system is performing according to the testing requirements of UL 1741. Measurements for these requirements would normally be taken at the Customer-Generator metering point in practice but may also be required at the metering point of a neighboring Customer, in the case where two or more Customers share a service connection from the same transformer.

3.5.1 MAIN DISCONNECT TO COMPLY WITH STANDARDS FOR NEW SERVICE

All interconnected renewable energy resources shall use a readily accessible main disconnecting means to comply with our normal standards for service upgrades.

3.5.2 VOLTAGE PLACARDING ON COMMERICAL 3PH. DISCONNECTS

All interconnected renewable energy resources shall use placarding indicating the voltage at the disconnecting means.

3.5.3 21 DAY LOCK OUT FOR SYSTEMS OPERATING WITHOUT FINAL UTILITY APPROVAL

All interconnected renewable energy resources shall be in the off position (minus testing), until final approval has been granted from the utility.

3.5.4 *PIERCING TYPE CONNECTORS ARE NOT ALLOWED*

All interconnected renewable energy resources shall be interconnected with an approved protection device or lug type connectors (Polaris/Burndy type).

3.5.5 REMOVING METER OR CUTTTING METER SEAL

It's unlawful and considered tampering to cut the meter lock or pull the meter, call 800-206-2300 for a temporary disconnect.

3.5.6 GENERAL REQUIREMENT

3.5.6.1 *VOLTAGE REGULATION*

The Customer-Generator's inverter / interconnection equipment shall not actively regulate the voltage at the point of interconnection, neither shall it cause the service voltage of any neighboring Liberty Customers to move outside of the nominal voltage +/- 5% range.

3.5.6.2 *INTEGRATION OF GROUNDING WITH LIBERTY DISTRIBUTION SYSTEM*

The Customer-Generator's equipment grounding scheme shall not cause over-voltages that exceed the rating of the interconnected Liberty power system equipment, or the power system equipment of any neighboring Liberty Customers. In addition, the Customer-Generator's equipment grounding scheme shall not disrupt the coordination of the ground fault protection for any neighboring Liberty Customers.

3.5.6.3 *SYNCHRONIZATION*

The Customer-Generator's inverter / interconnection equipment shall parallel with the Liberty power system without causing a voltage fluctuation of greater than +/-5% of the prevailing power system voltage level, when measured at the point of common coupling with any neighboring Liberty Customers and shall also meet the voltage flicker requirements outlined under the "power quality" section of this document.

3.5.6.4 *INADVERTENT ENERGIZATION OF LIBERTY DISTRIBUTION SYSTEM*

The Customer-Generator's inverter / interconnected equipment shall not energize any part of the Liberty power system when that part of the Liberty power system is de-energized.

3.5.6.5 *ISOLATION DEVICE*

A readily accessible, lockable disconnect shall be installed between the Customer-Generator's inverter / interconnection equipment and the Liberty power system. The disconnect shall be knife blade style. If this location is ahead of the main protective device

for the Customer's service, the disconnect will be service rated and incorporate the use of Class R type fuse(s), sized to the requirement of the Customer-Generator's inverter / interconnection equipment. The location for the isolation device shall be positioned at the meter socket location to allow Liberty service personnel to isolate and lock-out the Customer-Generator's inverter / interconnection equipment, when necessary, without removing service to normal, non-emergency Customer loads. The isolation device make and model number chosen by the Customer.

3.5.7 RESPONSE TO ABNORMAL CONDITIONS ON THE LIBERTY DISTRIBUTION SYSTEM

3.5.7.1 *FAULTS (SHORT CIRCUITS)*

The Customer-Generator's inverter / interconnection equipment shall cease to energize the Liberty power system in the event that a detectable fault (short circuit) occurs on the Customer-load side (lower-voltage side) of the Liberty distribution transformer to which it is connected.

3.5.7.2 *RECLOSING COORDINATION*

The Customer-Generator's inverter / interconnection equipment shall cease to energize the Liberty power system circuit to which it is connected prior to any reclosure of that circuit by Liberty. Liberty power system circuits will reclose manually or automatically in the event that the circuit opens and becomes de-energized.

3.5.7.3 *VOLTAGE*

The protection functions of the Customer-Generator's inverter / interconnection equipment shall detect the effective (rms) or fundamental frequency value of each phase-to-neutral voltage. When any voltage is in a range given in Table 2 (below), the Customer-Generator's inverter / interconnection equipment shall cease to energize the Liberty power system within the clearing time as indicated. Clearing time is the time between the start of the abnormal voltage condition and the interconnection equipment ceasing to energize the Liberty power system. The measurements for the voltage are applied at the point of the interconnection equipment in practice, and the times represent maximum clearing times for interconnected equipment with peak capacity of 30 kW or less.

Voltage Range (% of base voltage)	Clearing time (seconds)
$V < 50$	0.16
$50 \leq V < 88$	2.00
$110 < V < 120$	1.00
$V \geq 120$	0.16

Table 2 – Interconnection system response to abnormal voltages

3.5.7.4 *FREQUENCY*

When the Liberty system frequency is in a range given in Table 3 (below), the Customer-Generator's inverter / interconnection equipment shall cease to energize the part of the Liberty power system to which it is connected. Clearing time is the time between the start of the abnormal frequency condition and the interconnection equipment ceasing to energize the Liberty power system. The measurements for frequency are applied at the point of the interconnection equipment in practice, and the times represent maximum clearing times for interconnected equipment with peak capacity of 30 kW or less.

Frequency Range (Hz)	Clearing time (seconds)
> 60.5	0.16
< 59.3	0.16

Table 3 – Interconnection system response to abnormal frequencies

3.5.7.5 *AUTOMATIC RECONNECTION*

After an Liberty power system disturbance, no Customer-Generator inverter / interconnection equipment reconnection shall take place until the Liberty power system voltage is within the range of 87% to 106% of nominal, and frequency is in the range of 59.3-Hz to 60.5-Hz. The interconnection equipment shall include an adjustable delay (or a fixed delay of five minutes) that may delay reconnection for up to five minutes after the Liberty power system steady-state voltage and frequency are restored to the ranges previously identified.

3.5.8 POWER QUALITY

3.5.8.1 *LIMITATION OF DC INJECTION*

The Customer-Generator's inverter / interconnection equipment shall not inject DC current greater than 0.5% of the full rated output current when measured at the AC terminals of the interconnection equipment.

3.5.8.2 *LIMITATION OF VOLTAGE FLICKER*

The Customer-Generator's inverter / interconnection equipment shall not cause objectionable flicker for any neighboring Customers served from the Liberty power system. "Objectionable flicker" will be measured against the Liberty flicker curve limitations for the normal electric distribution system, which limit voltage fluctuations to neighboring Liberty Customers of 2.5% to 3.3% to no more than one event per hour, and voltage fluctuations of 1.75% to 2.5% to no more than 60 events per hour.

3.5.8.3 *HARMONICS*

When the Customer-Generator's inverter / interconnection equipment is serving balanced linear loads, harmonic current injection into the Liberty power system when measured at the Customer meter shall not exceed the limits stated below in Table 4. The harmonic current injections shall be exclusive of any harmonic contents due to harmonic voltage distortion already present in the Liberty power system when the Customer-Generator's inverter / interconnection equipment is disconnected.

Individual Odd Harmonic Order (h)**	h < 11	11 ≤ h < 17	17 ≤ h < 23	23 ≤ h < 35	35 ≤ h	Total Demand Distortion (TDD)
Percent (%)	4.0	2.0	1.5	0.6	0.3	5.0

Table 4 – Maximum harmonic current distortion in percent of current (I)*

* I = the greater of either the Customer's metered current integrated demand (15 or 30 minutes) when the inverter / interconnection equipment is disconnected, or the inverter / interconnection equipment rated current capacity.

** Even harmonics are limited to 25% of the odd harmonic limits above.

3.5.9 UNINTENTIONAL ISLANDING

For an unintended island in which the Customer-Generator's inverter interconnection equipment energizes a portion of the Liberty power system through the Customer metering, the interconnection equipment shall detect the island and cease to energize the Liberty power system within two seconds of the formation of an island.

3.6 INTERCONNECTION TEST SPECIFICATIONS

Section 3.6.1 and 3.6.2 outline the testing criteria that are required in order for a specific inverter / interconnection system design and product to be UL 1741 certified at the design and manufacturing levels of industry. **UL 1741 certification of the Customer-Generator's inverter / interconnection equipment is required in order for Liberty to approve a net metering installation. In addition, Liberty reserves the right to test the Customer-Generator's inverter / interconnection system for compliance with any or all of these requirements at any time in order to verify that the equipment is performing according to the testing requirements of UL 1741.**

Section 3.6.3 refers to the design of the Customer-Generator's inverter / interconnection system as it is presented in the Customer application and documentation provided in the application process. The interconnection system design will be reviewed by Liberty during the application process according to the requirements of section 3.6.3. The field installation of the Customer-Generator's inverter / interconnection system will be reviewed according to the requirements of section 3.6.3 and section 3.6.4 at the time of site visit for testing and commissioning, and verification will be made that it is installed according to the design specified in the application. The commissioning tests of section 3.6.4 will then be performed on site by Liberty personnel. Section 3.6.5 describes the required maintenance of the Customer-Generator's inverter / interconnection system.

3.6.1 DESIGN TEST

This design test shall be performed as applicable to the specific interconnection system technology. The test shall be performed on a representative sample, either in the factory, at a testing laboratory, or on equipment in the field. This test applies to a packaged interconnection system using embedded components or to an interconnection system that uses an assembly of discrete components. The design test shall be conducted on the same sample in the sequence of Table 5.

Required Order	Design Test Title
1	Response to Abnormal Voltage and Frequency
2	Synchronization
3	Interconnect Integrity
6	Unintentional Islanding
7	Limitation of DC Injection
8	Harmonics

Table 5 Sequence for Conducting Design Test

3.6.1.1 *RESPONSE TO ABNORMAL VOLTAGE AND FREQUENCY*

This test shall demonstrate that the Customer-Generator's inverter / interconnection equipment ceases to energize the Liberty System when the voltage or frequency exceeds the limits as specified in Section 3.5.2. Interconnection systems provided with field adjustable set points shall also be tested at the minimum, midpoint and maximum of the adjustable set point ranges. These tests shall be conducted using either the simulated utility or secondary injection method.

3.6.1.2 *SYNCHRONIZATION*

Test results conforming to requirements as listed below are accepted as indicating compliance with the requirements of Section 3.5.1.3. This test shall demonstrate that at the moment of the paralleling-device closure, all three parameters in Table 6 are within the stated ranges. This test shall also demonstrate that if any of the parameters are outside of the ranges stated in the table, the paralleling-device shall not close.

Frequency Difference (Δf, Hz)	Voltage Difference (Δ V, %)	Phase Angle Difference (ΔΦ , °)
0.3	10	20
0.2	5	15
0.1	3	10

Table 6 Synchronization Parameter Limits for Synchronous Interconnection to LU.

3.6.1.3 ***INTERCONNECT INTEGRITY TEST***

3.6.1.3.1 PROTECTION FROM ELECTROMAGNETIC INTERFERENCE (EMI)

The interconnection system shall be tested in accordance with ANSI/IEEE C37.90.2 to confirm that the interconnection system shall have the capability to withstand electromagnetic interference (EMI) environments as described in ANSI/IEEE C37.90.2. The influence of EMI shall not result in a change in state or mis-operation of the interconnection system.

3.6.1.3.2 SURGE WITHSTAND PERFORMANCE

The interconnection system shall be tested to ensure that it shall have the capability to withstand voltage and current surges in accordance with the environments defined in IEEE/ANSI C62.41.2 or IEEE C37.90.1 as applicable in all normal operating modes in accordance with IEEE/ANSI C62.45 for equipment rated less than 1000V to confirm that the surge withstand capability is met by using the selected test level(s) from IEEE/ANSI C62.41.2.

3.6.1.3.3 PARALLELLING DEVICE

A dielectric test across the open-circuited paralleling device shall be conducted to confirm it will withstand 220% of the interconnection system rated voltage.

3.6.1.4 *UNINTENTIONAL ISLANDING*

A test or field verification shall be conducted to confirm that Section 3.5.4 is met regardless of the selected method of detecting isolation.

3.6.1.5 *LIMITATION OF DC INJECTION*

The Customer-Generator's inverter / interconnection equipment shall be tested to confirm that it does not inject DC current greater than prescribed limits that are listed in Section 3.5.3.1.

3.6.1.6 *HARMONICS*

The intent of the harmonics interconnection test is to assess that under a controlled set of conditions the Customer-Generator's inverter / interconnection equipment meets the harmonic limits specified in Section 3.5.3.3.

The Customer-Generator's inverter / interconnection equipment shall be operated in parallel with a predominantly inductive voltage source with a short circuit current capacity I_{SC} of not less than 20 times the Customer-Generator's inverter / interconnection equipment's rated output current at fundamental frequency. The voltage and frequency output of the voltage source shall correspond to the rated voltage and frequency of the Customer-Generator's inverter / interconnection equipment. The unloaded voltage waveform produced by the Liberty or simulated utility voltage source shall have a total harmonic distortion (THD) less than 2.5 %.

The Customer-Generator's inverter / interconnection equipment shall be operated at an output test load current, I_L, of 33%, 66% and at a level as close to 100% of rated output current as practical. Use total rated-current distortion (TRD) in place of TDD. TRD is the total rms value of the sum of the current harmonics created by the Customer-Generator's inverter / interconnection equipment operating into a linear balanced load divided by the greater of the test load current (I_L) demand or the rated current capacity of the Customer-Generator's inverter / interconnection equipment (I_{rated}). The individual harmonic distortion and TRD of the DR output current shall be measured for the first 40 harmonics. The harmonic current injections shall be exclusive of any harmonic currents due to harmonic voltage distortion present in the LU system without the Customer-Generator's inverter / interconnection equipment connected. The test results shall not exceed the values in Section 3.5.3.3 Table 3.

3.6.2 PRODUCTION TESTS

The inverter / interconnection equipment shall be subjected to requirements of Section 3.5.2 and Section 3.5.1.3. Inverter / interconnection devices with adjustable setpoints shall be tested at a single set of setpoints as specified by the manufacturer. This test may be conducted as a factory test or may be performed as part of a commissioning test.

3.6.3 INTERCONNECTION INSTALLATION EVALUATION

3.6.3.1 *GROUNDING INTEGRATION WITH LIBERTY*

System design verification shall be made to ensure that the requirements of Section 3.5.1.2 have been met.

3.6.3.2 *ISOLATION DEVICE*

System design verification shall be made to ensure that the requirements of Section 3.5.1.5 have been met.

3.6.3.3 *LIBERTY FAULTS*

A system design verification shall be made to ensure that the requirements of Section 3.5.2.1 have been met.

3.6.3.4 *LIBERTY RECLOSING COORDINATION*

System design verification shall be made to verify the interconnection system is coordinated with Liberty reclosing practices in accordance with Section 3.5.2.2.

3.6.4 COMMISSIONING TEST

A visual inspection shall be made in order to ensure that the grounding coordination requirement of section 3.5.1.2 has been implemented. A visual inspection shall be made to confirm the presence of the isolation device. Initial commissioning tests shall be performed on the installed Customer-Generator's inverter / interconnection equipment as necessary prior to the initial parallel operation of the Customer-Generator's inverter / interconnection equipment. The following tests are required:

- Operability test on the isolation device.
- Response to loss and re-energization of the utility source, specifically according to the requirements of section 3.5.2.5, section 3.5.2.2, and section 3.5.1.4.
- Any other tests of Section 3.5 that LU deems necessary in order to validate that the functional installation of the Customer-Generator interconnection system is actually performing according to the testing requirements of UL 1741.

Liberty reserves the right to repeat the applicable tests of Section 3.5 when functional software or firmware changes have been made on the interconnection system or any hardware component of the interconnection system has been modified in the field, or replaced or repaired with parts different from the tested configuration. Liberty also reserves the right to repeat the applicable tests if protection settings have been changed after factory testing or protection functions have been adjusted after the initial commissioning process.

3.6.5 PERIODIC INTERCONNECTION TESTS

All interconnection-related protective functions and associated batteries shall be periodically tested at intervals specified by the manufacturer, system integrator, or the authority who has jurisdiction over the Customer-Generator's inverter / interconnection. Periodic test reports or a log for inspection shall be maintained. These records may be requested by Liberty at any time in order to verify that the inverter / interconnection equipment is being properly maintained.

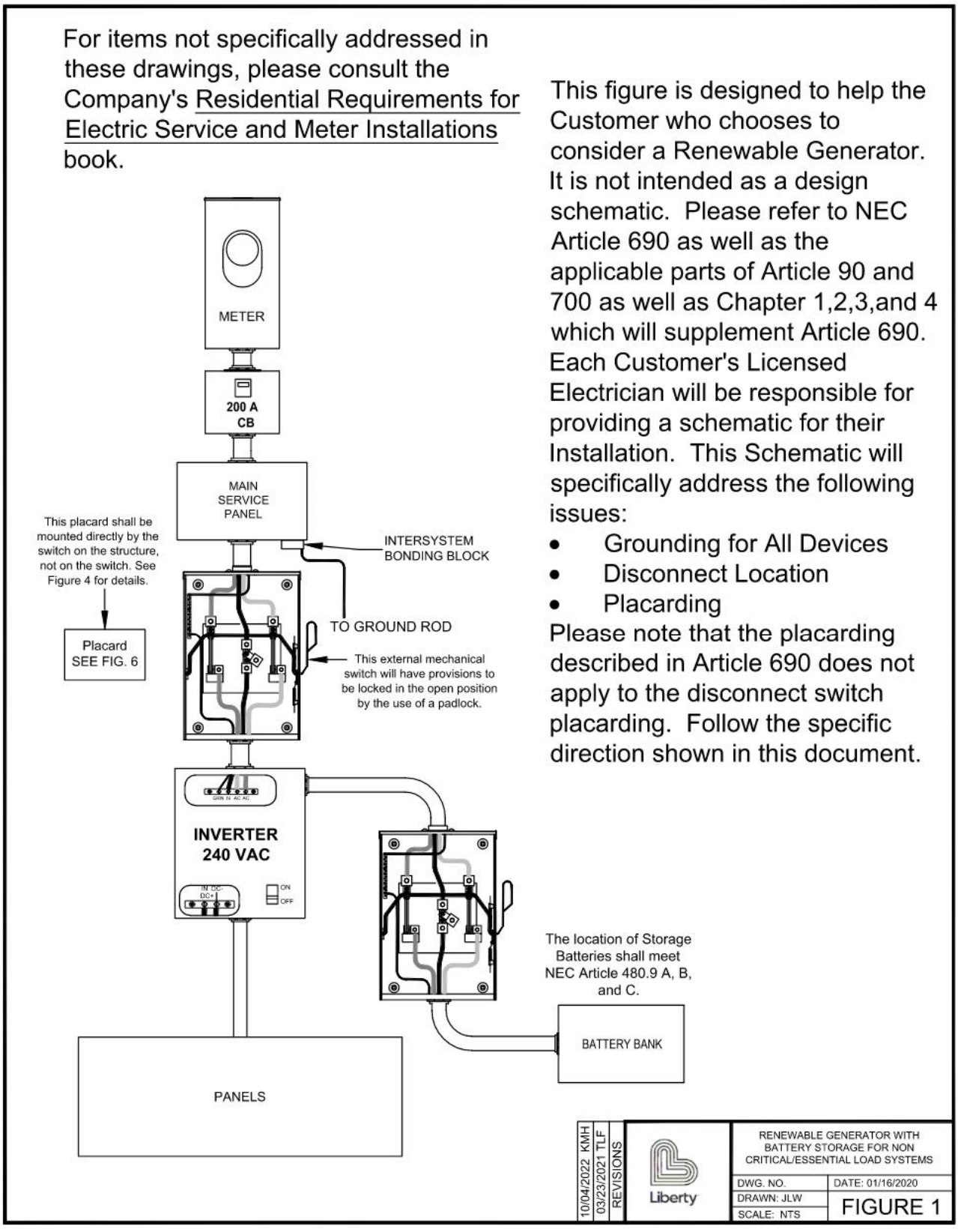


Figure 1: Renewable Generator with Battery Storage for Non Critical/Essential Load Systems

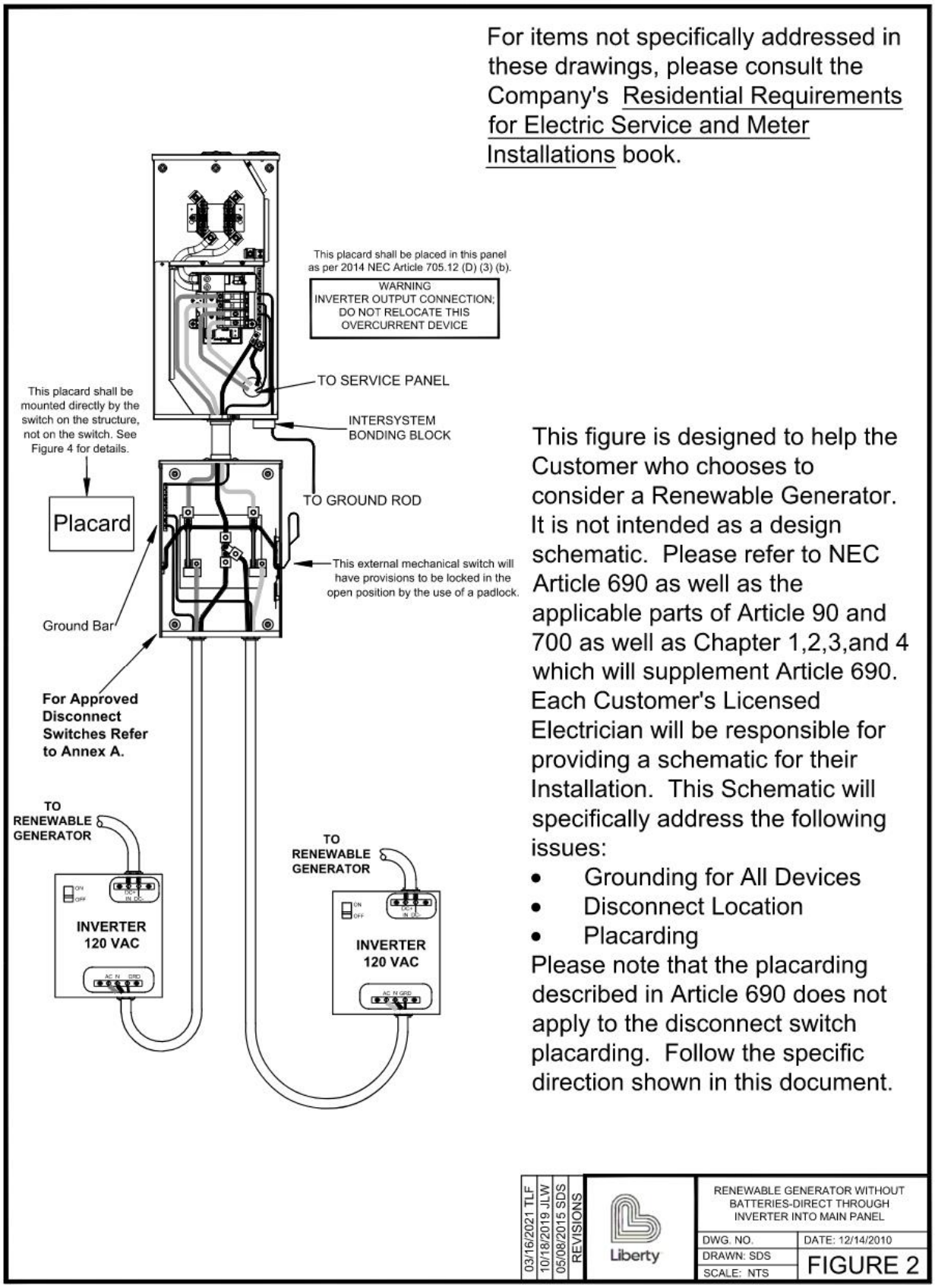


Figure 2: Renewable Generator w/o Batteries – Direct Through Inverter Into Main Panel

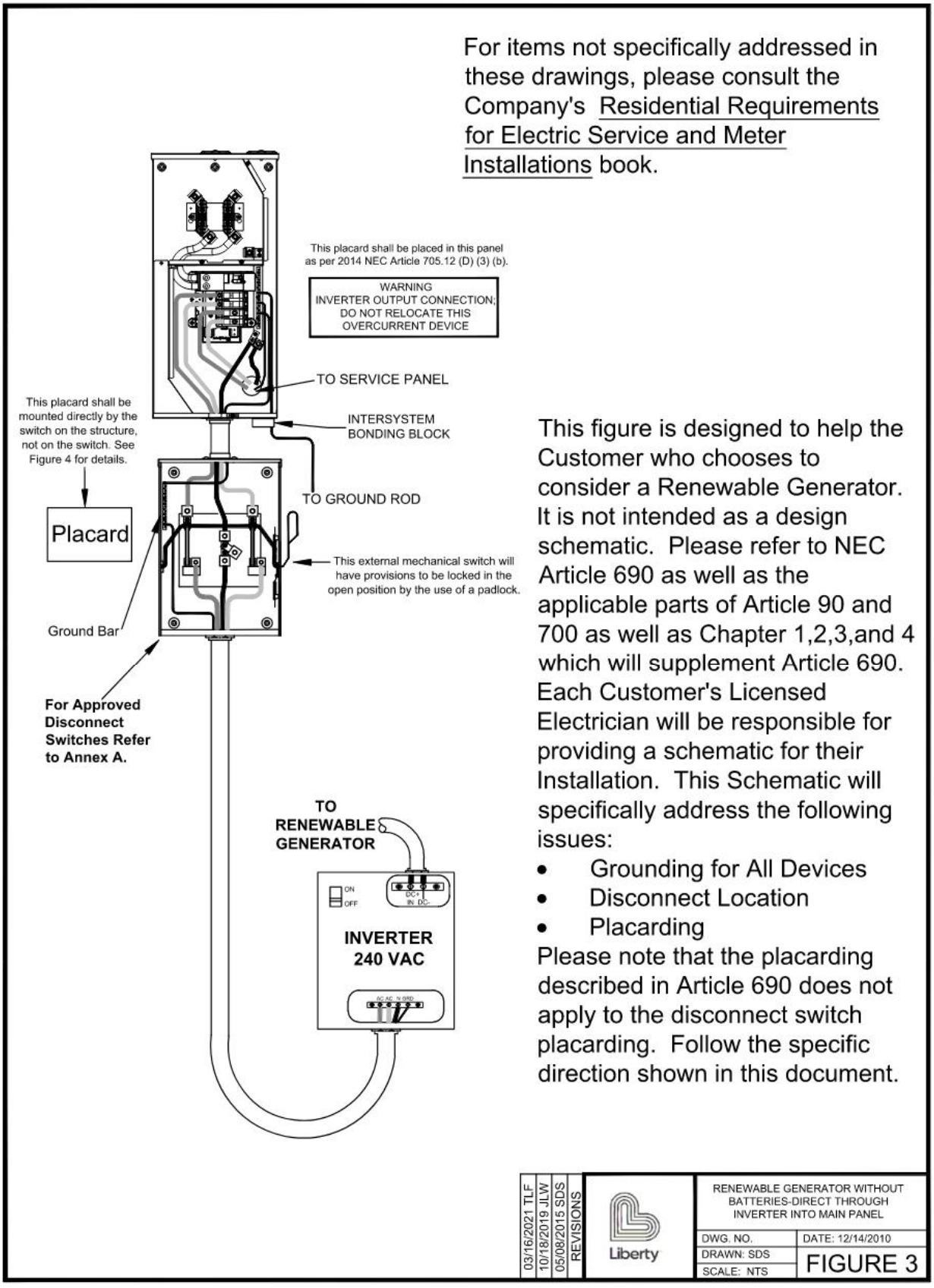


Figure 3: Renewable Generator w/o Batteries – Direct Through Inverter Into Main Panel

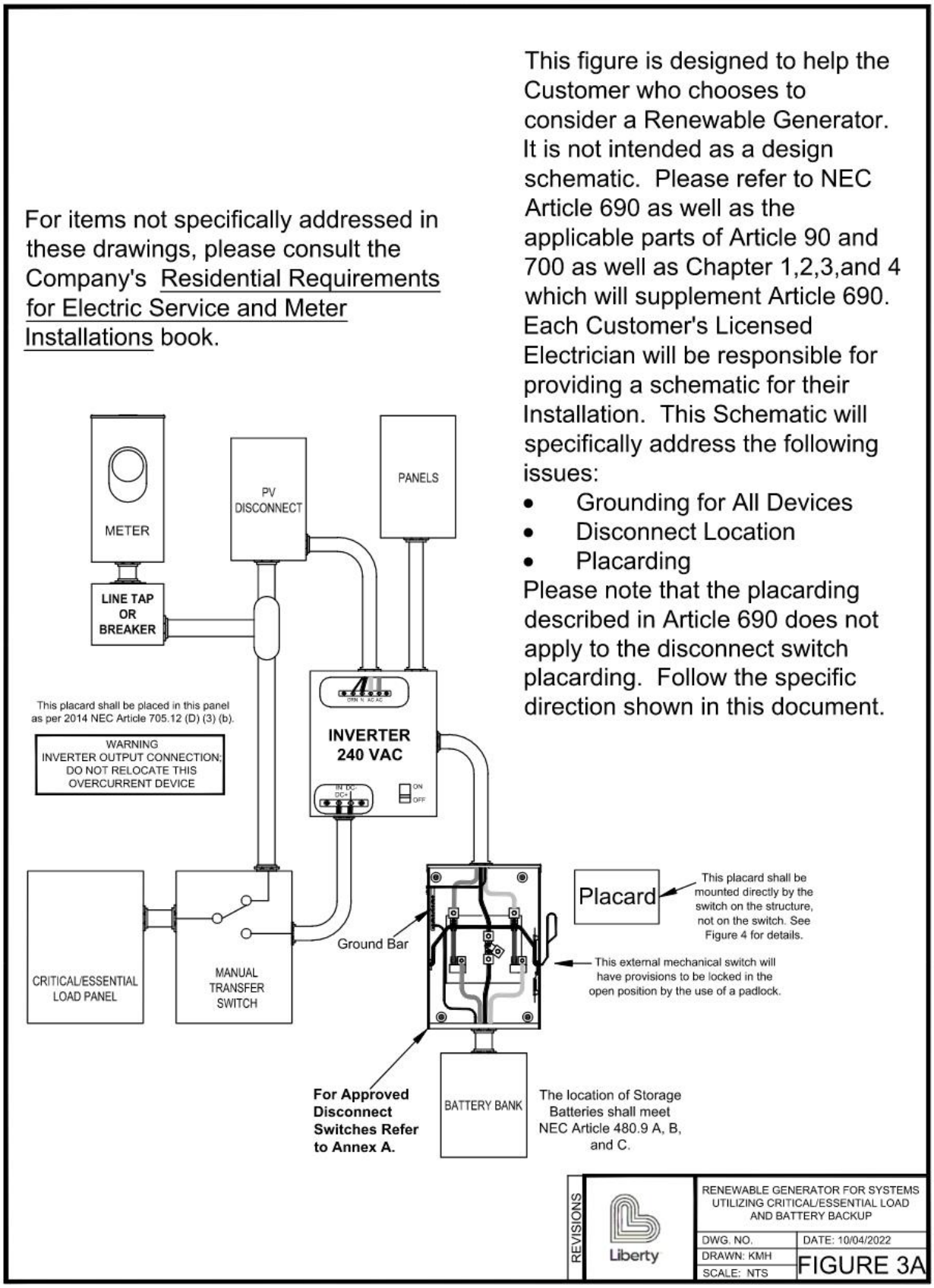


Figure 3A: Renewable Generator for Systems Utilizing Critical/Essential Load and Battery Backup

3.7 INTERCONNECTION AGREEMENT COMPLETION

A date for conducting any necessary equipment modifications to accomplish the interconnection will be set. Often the same time can be utilized to witness the final mandatory commissioning test of the interconnection facilities which is to demonstrate the system's response to a loss of utility service event. Once the installation is complete, a satisfactory witness of the mandatory commissioning test is completed, and payment of any previously explained costs are made, the formal application/agreement phase will be considered complete. The application/agreement requires that all applicable periodic testing along with the required documentation which is completed by the Customer/Producer be maintained on site. Also the Company shall be notified of any proposed alterations or modifications to the current system or transfer of operational control of the current interconnected system.

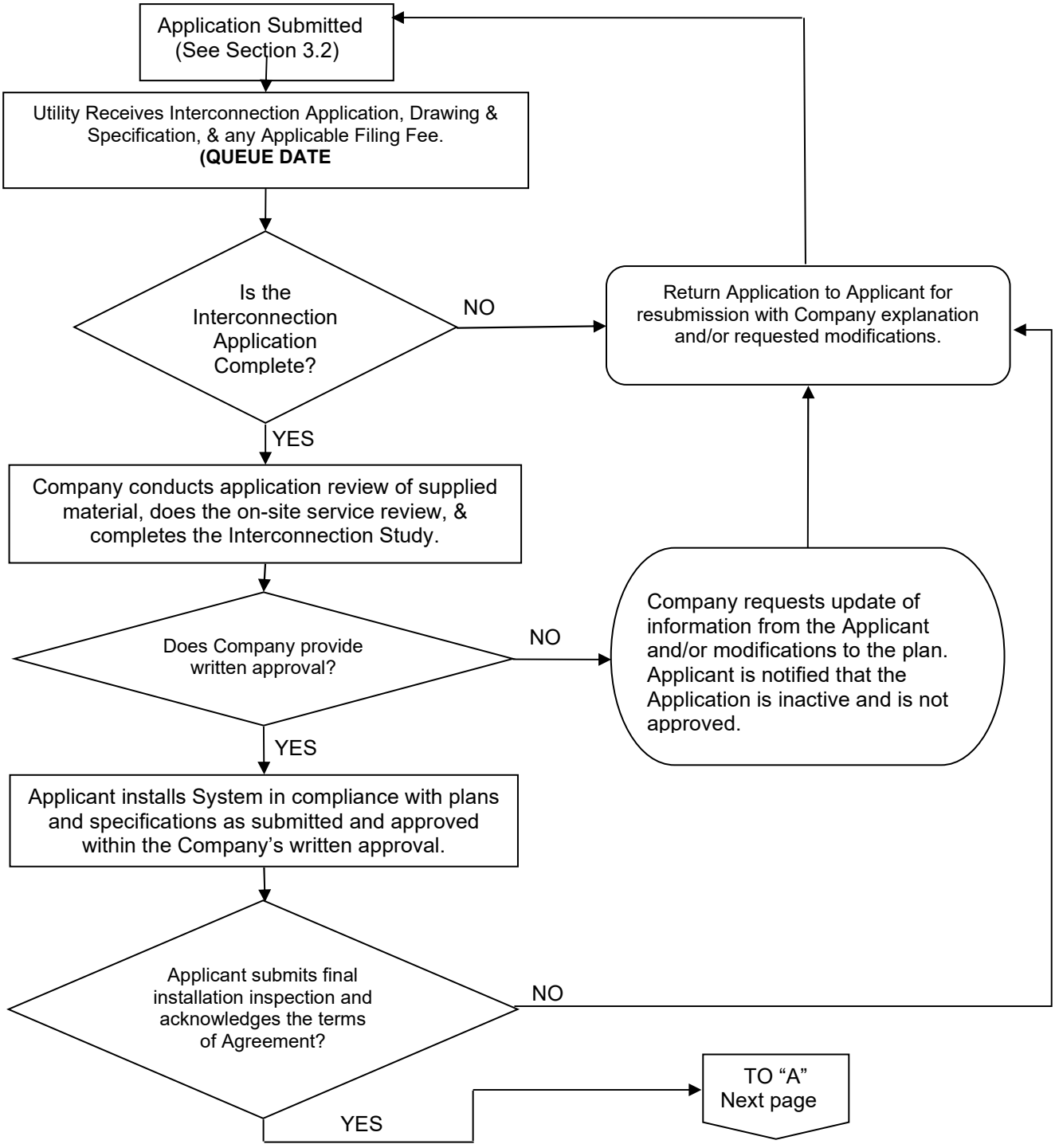


Diagram 1 Generic Interconnection Process

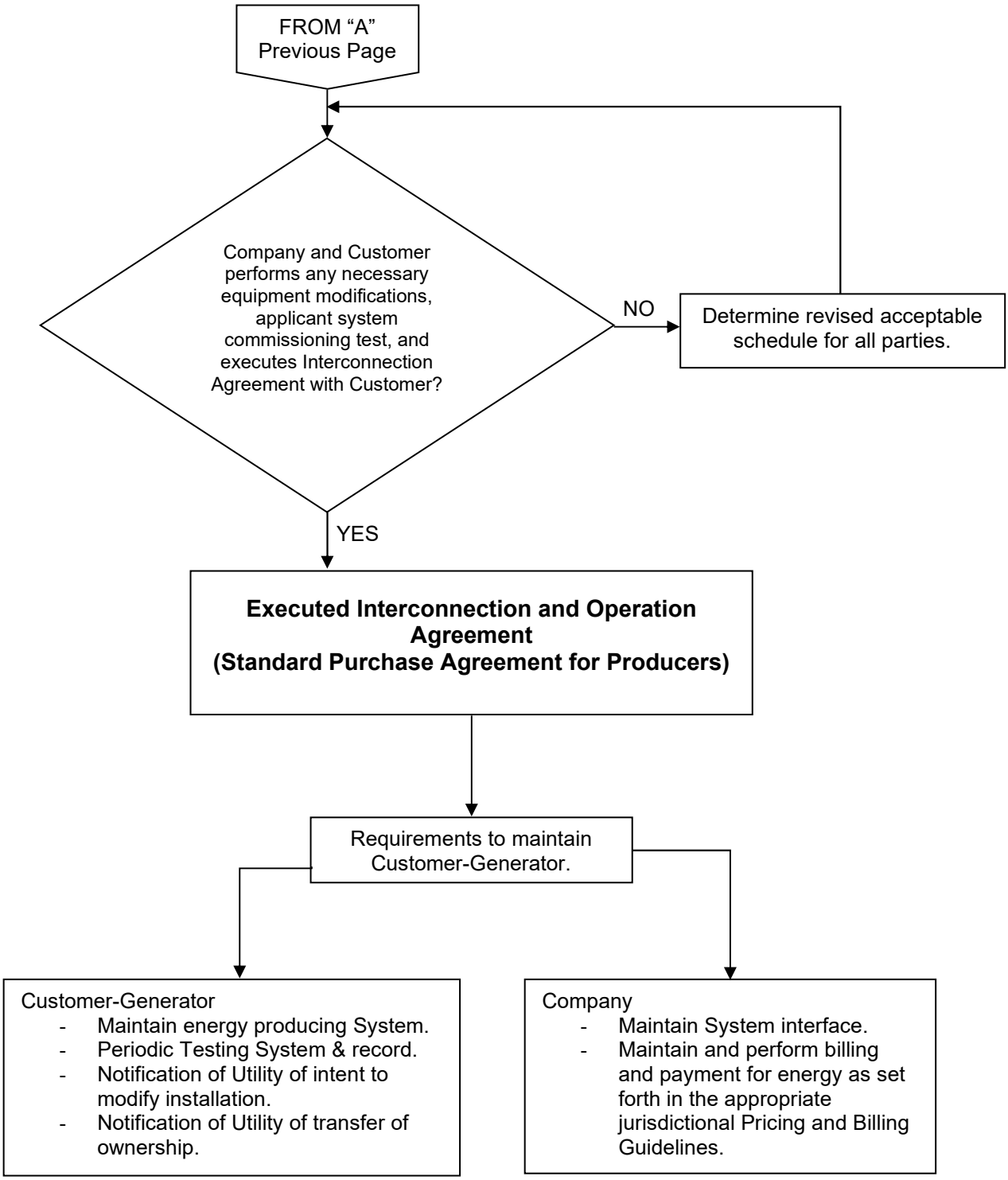


Diagram 1 (Continued) Generic Interconnection Process

3.8 RATE SCHEDULES

3.8.1 MISSOURI – NET METERING RIDER (RIDER NM) – INCLUDING APPLICATION.

https://central.libertyutilities.com/all/residential/new-service/service-standards.html

3.8.2 KANSAS – NET METERING RIDER (RIDER NM) – INCLUDING APPLICATION.

https://central.libertyutilities.com/all/residential/new-service/service-standards.html

3.8.3 OKLAHOMA

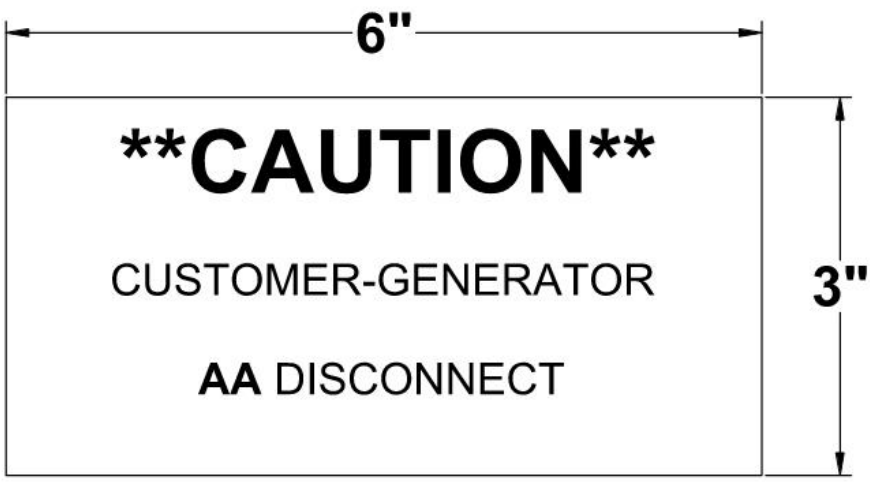
- Optional Net Energy Billing Purchase Rate (Schedule NEB)
- Standard Non-Firm Purchase Rate Schedule (Schedule NFP)
- Standard Firm Purchase Rate Schedule (Schedule FP)
- Standard Terms and Conditions of Purchase from Producers of 100kW or Less. (Section 4; Purchase Agreement)

Please contact your Liberty Representative.

3.8.4 ARKANSAS

- :Net Metering (Part III, Rate Schedule 22) https://central.libertyutilities.com/all/residential/new-service/service-standards.html
- Standard Interconnection Agreement for Net Metering Facilities– Application. (APSC. Net Metering Rules, Appendix A)

Please contact your Liberty Representative.



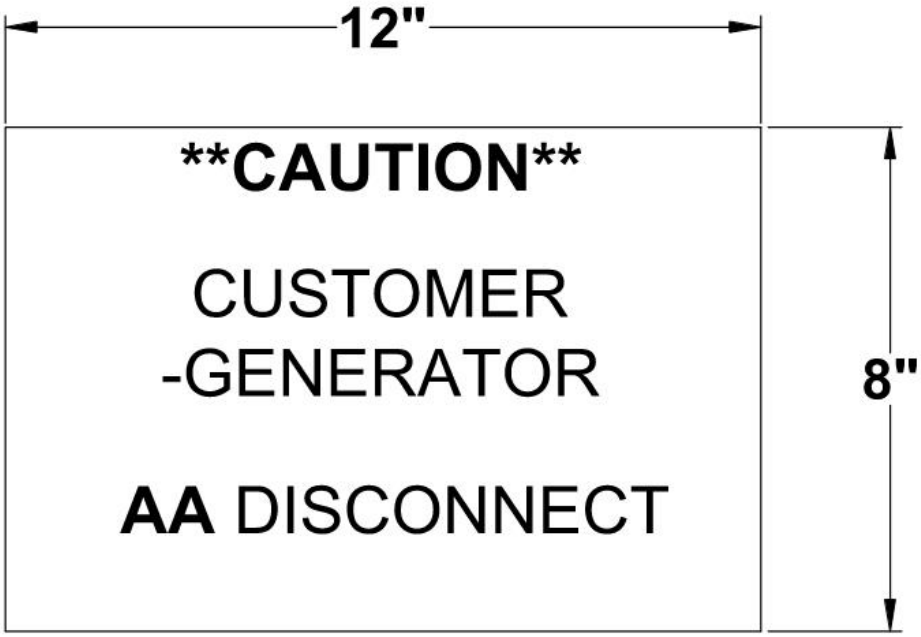
NOTES

1. The sign material shall be an etched laminated plastic. The surface shall be black and the substrate shall be white. This is so specified to have the letters appear as white when they are etched into the plastic.
2. The lettering for the "CAUTION" shall be ½ " tall.
3. All lettering shall be ¼" tall.
4. This placard shall be screwed or bolted externally to the structure as close as practicable to the disconnect. Gluing is not acceptable.
5. The Renewable Energy Type is illustrated by the series of "A"s in the placard diagram above. One of the following abbreviations will be used to describe the source.

PV	Photovoltaic
WG	Wind Generator
HY	Hydroelectric
FC	Fuel Cell

REVISIONS	Liberty	RESIDENTIAL: SWITCH LOCATION PLACARD	
03/16/2021 TLF		DWG. NO.	DATE: 12/14/2010
10/18/2019 JLW		DRAWN: SDS	FIGURE 4
05/08/2015 SDS		SCALE: NTS	

Figure 4: Residential: Switch Location Placard



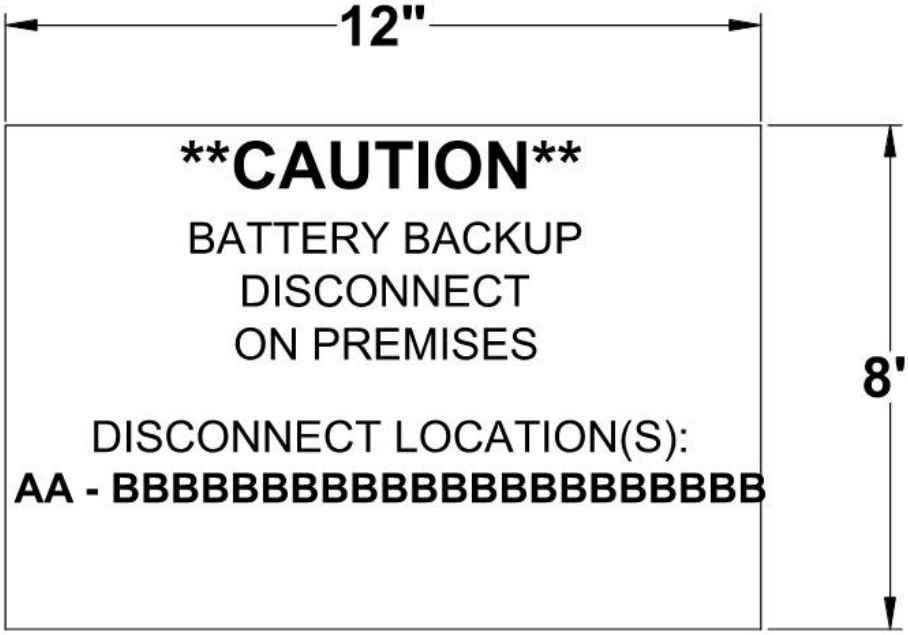
NOTES

1. The sign material shall be an etched laminated plastic. The surface shall be black and the substrate shall be white. This is so specified to have the letters appear as white when they are etched into the plastic.
2. All lettering shall be ¾" tall.
3. This placard shall be screwed or bolted externally to the structure as close as practicable to the disconnect. Gluing is not acceptable.
4. The Renewable Energy Type is illustrated by the series of "A"s in the placard diagram above. One of the following abbreviations will be used to describe the source.

PV	Photovoltaic
WG	Wind Generator
HY	Hydroelectric
FC	Fuel Cell

REVISIONS	Liberty	COMMERCIAL & INDUSTRIAL: SWITCH LOCATION PLACARD	
10/04/2022 KMH		DWG. NO.	DATE: 12/14/2010
03/16/2021 TLF		DRAWN: SDS	FIGURE 5
10/18/2019 JLW		SCALE: NTS	
05/08/2015 SDS			

Figure 5: Commercial & Industrial: Switch Location Placard



NOTES

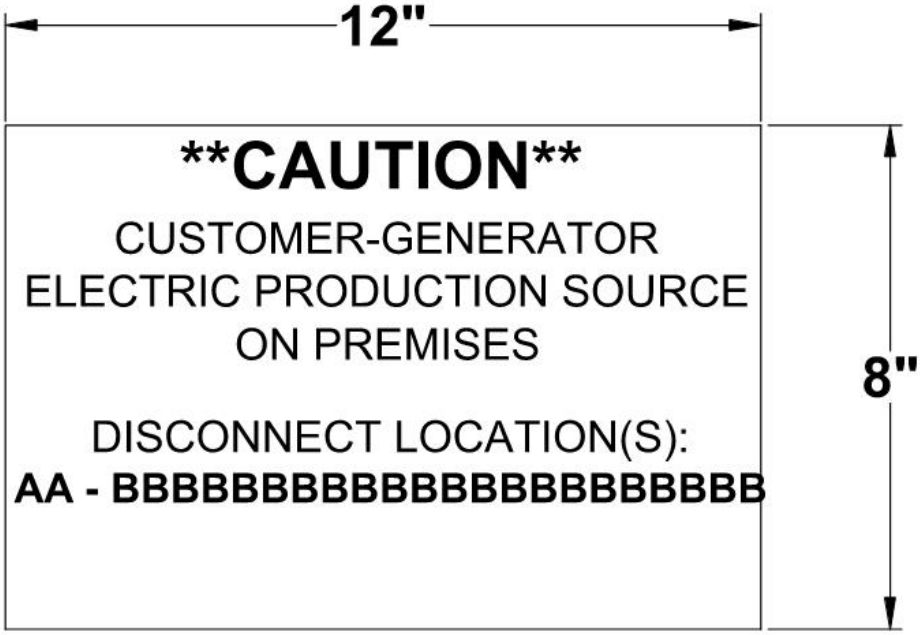
1. The sign material shall be an etched laminated plastic. The surface shall be black and the substrate shall be white. This is so specified to have the letters appear as white when they are etched into the plastic.
2. The lettering for the "CAUTION" shall be ¾" tall.
3. All other lettering shall be ½" tall.
4. This placard shall be screwed or bolted externally to the structure at the meter location. If this service is provided by a Padmount Transformer and the meter is at this point, the placard will be provided to Liberty for application to the secondary sided of the transformer door set.
5. The Renewable Energy Type is illustrated by the series of "A"s in the placard diagram above. One of the following abbreviations will be used to describe the source. List all that apply.

PV	Photovoltaic
WG	Wind Generator
HY	Hydroelectric
FC	Fuel Cell
BB	Battery Backup

6. The location is illustrated by the series of "B"s in the placard diagram above.
   For example: FIRST FLOOR SE CORNER

REVISIONS	Liberty	COMMERCIAL& INDUSTRIAL BATTERY BACKUP LOCATION PLACARD	
		DWG. NO.	DATE: 10/12/2022
		DRAWN: KMH	FIGURE 6
		SCALE: NTS	

Figure 6: Battery Backup Location Placard



NOTES

1. The sign material shall be an etched laminated plastic. The surface shall be black and the substrate shall be white. This is so specified to have the letters appear as white when they are etched into the plastic.
2. The lettering for the "CAUTION" shall be ¾" tall.
3. All other lettering shall be ½" tall.
4. This placard shall be screwed or bolted externally to the structure at the meter location. If this service is provided by a Padmount Transformer and the meter is at this point, the placard will be provided to Liberty for application to the secondary sided of the transformer door set.
5. The Renewable Energy Type is illustrated by the series of "A"s in the placard diagram above. One of the following abbreviations will be used to describe the source. List all that apply.

PV	Photovoltaic
WG	Wind Generator
HY	Hydroelectric
FC	Fuel Cell
BB	Battery Backup

6. The location is illustrated by the series of "B"s in the placard diagram above.
   For example: FIRST FLOOR SE CORNER

REVISIONS	
10/04/2022	KMH
03/16/2021	TLF
10/18/2019	JLW
05/08/2015	SDS

Liberty

COMMERCIAL& INDUSTRIAL
REMOTE METER AND SWITCH LOCATION
PLACARD

DWG. NO.	DATE: 12/14/2010
DRAWN: SDS	FIGURE 7
SCALE: NTS	

Figure 7: Remote Meter and Switch Location Placard

LIBERTY UTILITIES/THE EMPIRE DISTRICT ELECTRIC COMPANY
APPLICATION /AGREEMENT FOR PARALLEL GENERATION SYSTEMS
WITH GENERATING CAPACITY OF OVER 100KW

AVAILABILITY:

Electric service is available at points on the Liberty Utilities/The Empire District Electric Company (The Company) the Company's existing distribution facilities located within its service area for customers operating renewable fuel source generators.

.

The parallel generation service shall be available to Customer-Generators on a first-come, first-serve basis until the total rated generating capacity of net metering systems equals 5% of the Company's single-hour peak load during the previous year. Resale electric service will not be supplied under this schedule.

DEFINITIONS:

Customer-Generator:

The owner or operator of a qualified electric energy generation unit that meets all of the following criteria:

a. Is powered by a renewable energy resource.
b. Has an electrical generating system with a capacity of more than one hundred kilowatts
c. Is located on a premises owned, operated, leased, or otherwise controlled by the Customer-Generator.
d. Is interconnected and operated in parallel phase and synchronization with the Company.
e. Is intended primarily to offset part or all of the Customer-Generator's own electrical energy requirements.
f. Meets all applicable safety, performance, interconnection, and reliability standards established by the National Electrical Code, the National Electrical Safety Code, the Institute of Electrical and Electronic Engineers and any local governing authorities; and
g. Contains a mechanism that automatically disables the unit and interrupts the flow of electricity back onto the Company's electricity lines if the service to the Customer-Generator is interrupted.

Renewable Energy Resources:

Electrical energy produced from wind, solar thermal sources, hydroelectric sources, photovoltaic cells and panels, fuel cells using hydrogen produced by ones of the above-named electrical energy sources, and other sources of energy that become available, and are certified as renewable by the Missouri Department of Natural Resources or the Missouri Department of Economic Development's Division of Energy.

CHARACTER OF SERVICE:

Alternating current, 60 cycles, at the voltage and phase of the Company's established secondary distribution system serving the Customer-Generator's premise.

BILLING AND PAYMENT:

The Company shall render a bill for net consumption at approximately 30-day intervals based on the Company's regular tariff schedules as on file with the Missouri Public Service Commission. Net consumption is defined as the kWh supplied by the Company to the Customer-Generator minus kWh supplied by the Customer-Generator and returned to the Company's grid during the billing month. Any net consumption shall be valued monthly as follows

BILLING AND PAYMENT (continued):

To the extent the net consumption is positive (i.e. Customer-Generator took more kWh from the Company during the month than Customer-Generator produced), the eligible Customer-Generator will be billed in accordance with the Customer-Generator's otherwise applicable standard rate for Customer Charges, Demand Charges, and Energy Charges (for the net consumption).

To the extent the net consumption is negative (i.e. Customer-Generator produced more kWh during the month than the Company supplied), the Customer-Generator will be credited in accordance with the Company's bi-annually calculated avoided fuel cost of the net energy (kWh) delivered to the Company. With the exception of the Energy Charge, all other applicable standard rate charges shall apply.

PURCHASED RATE:

During the term of this agreement the Customer will receive the Company's periodically updated avoided cost for any excess generated kWh. The avoided cost is published within the Company's Schedule CP as filed with the Missouri Public Service Commission.

The Summer Season will be the four months of June through September, and the Winter Season will be the eight months of October through May.

To the extent the net consumption is zero (i.e. Customer-Generator produced the same kWh during the month as supplied by the Company), the Customer-Generator will be Minimum billed in accordance with the eligible Customer-Generator's otherwise applicable standard rate.

TERMS AND CONDITIONS:

1. The Company will supply, own and maintain all necessary meters and associated equipment utilized for billing. If the Company's metering equipment at the Customer Generator's premise does not have the capability of measuring both the net energy produced and the net energy consumed, the Customer shall reimburse the Company for the cost to purchase and install sufficient metering. In addition, and for purposes of monitoring Customer generation and load, the Company may install at its expense, load research metering. The Customer shall supply, at no expense to the Company, a suitable location for meters and associated equipment used for billing and for load research. Such equipment shall be accessible at all times to Company personnel.
2. The Company shall have the right to require the Customer, at certain times and as electric operating conditions warrant, to limit the production of electrical energy from the generating facility to an amount no greater than the load at the Customer's facility of which the generating facility is a part.
3. The Customer shall furnish, install, operate and maintain in good order and repair without cost to the Company such relays, locks and seals, breakers, automatic synchronizers, disconnecting devices, and other control and protective devices as required by the NEC, NESC, IEEE or UL as being required as suitable for the operation of the generator in parallel with the Company's system.
4. The disconnect switch shall be under the exclusive control of the Company. The manual switch must have the capability to be locked out by Company personnel to isolate the Company's facilities in the event of an electrical outage on the Company's transmission and distribution facilities serving the Customer. This isolating devise shall also serve as a means of isolation for the Customer's equipment during any customer maintenance activities, routine outages or emergencies. The Company shall give notice to the Customer before a manual switch is locked or an isolating device is used, if possible; and otherwise shall give notice as soon as practicable after locking or isolating the Customer's facilities.
5. The Customer may be required to reimburse the Company for any equipment or facilities required solely as a result of the installation by the Customer of generation in parallel with the Company's Service. This requirement is limited to equipment or facilities installed by the Company in excess of those required of the Company by the NEC, NESC, IEEE or UL.

The Customer shall notify the Company prior to the initial energizing and start-up testing of the Customer-owned generator, and the Company shall have the right to have a representative present at said test.

TERMS AND CONDITIONS (continued):

1. If harmonics, voltage fluctuations, or other disruptive problems on the utility's system are directly attributable to the operation of the Customer's system, such program(s) shall be corrected at the Customer's expense.
2. No Customer's generating system shall damage the Company's system or equipment or present an undue hazard to Company personnel.
3. The Company requires an Interconnection Application/Agreement (see copy below) for conditions related to technical and safety aspects of parallel generation.
4. Service is subject to the Company's Rules and Regulations on file with the Missouri Public Service Commission and any subsequently approved and in effect during the term of this service.

INTERCONNECTION APPLICATION /AGREEMENT FOR SYSTEMS WITH CAPACITY OF OVER ONE HUNDRED KILOWATTS (100 kW)

The Liberty Utilities/The Company District Electric Company
602 South Joplin Avenue
Joplin, Missouri, 64802

For Customers Applying for Interconnection:

If you are interested in applying for interconnection to The Company's electrical system, you should first contact The Company and ask for information related to interconnection of parallel generation equipment to The Company's system and you should understand this information before proceeding with this Application.

If you wish to apply for interconnection to The Company's electrical system, please complete sections A, B, C and D, and attach the plans and specifications, including, but not limited to, describing the net metering, parallel generation, and interconnection facilities (hereinafter collectively referred to as the "Customer-Generator's System") and submit them to The Company at the address above. The Company will provide notice of approval or denial within thirty (30) days of receipt by The Company for Customer-Generators of ten kilowatts (10 kW) or less and within ninety (90) days of receipt by The Company for Customer-Generators of greater than ten kilowatts (10 kW). If this Application is denied, you will be provided with the reason(s) for the denial. If this Application is approved and signed by both you and The Company, it shall become a binding contract and shall govern your relationship with The Company.

For Customers Who Have Received Approval of Customer-Generator System Plans and Specifications:

After receiving approval of your Application, it will be necessary to construct the Customer-Generator System in compliance with the plans and specifications described in the Application, complete sections E and F of this Application, and forward this Application to The Company for review and completion of section G at the address above. Prior to the interconnection of the qualified generation unit to The Company's system, the Customer-Generator will furnish The Company a certification from a qualified professional electrician or engineer that the installation meets the plans and specification described in the application. If a local Authority Having Jurisdiction (AHJ) requires permits or certifications for construction or operation of the qualified generation unit, a customer generator must show the permit number and approval certification to The Company prior to interconnection. If the application for interconnection is approved by The Company and the Customer-Generator does not complete the interconnection within one (1) year after receipt of notice of the approval, the approval shall expire, and the Customer-Generator shall be responsible for filing a new application.

Within 21 days of when the customer-generator completes submission of all required post construction documentation, including sections E & F, other supporting documentation and local AHJ inspection approval (if applicable) to the electric utility, the electric utility will make any inspection of the customer-generators interconnection equipment or system it deems necessary and notify the customer generator:

1. That the net meter has been set and parallel operation by customer-generator is permitted; or
2. That the inspection identified no deficiencies, and the net meter installation is pending; or
3. That the inspection identified no deficiencies and the timeframe anticipated for the electric utility to complete all required system or service upgrades and install the meter; or
4. Of all deficiencies identified during the inspection that need to be corrected by the customer-generator before parallel operation will be permitted; or
5. Of any other issue(s), requirement(s), or condition(s), impacting the installation of the net meter or the parallel operation of the system.

For Customers Who Are Installing Solar Systems:

Customer-Generators who are Missouri electric utility retail account holders will receive a solar rebate, if available, based on the capacity stated in the application, or the installed capacity of the Customer-Generator System if it is lower, if the following requirements are met: a. b. Empire must have confirmed the Customer-Generator's System is operational; and Sections H and I of this Application must be completed.

The amount of the rebate will be based on the system capacity measured in direct current. The rebate will be based on the schedule below up to a maximum of 25,000 watts (25kW) for residential customers, and up to a maximum of 150,000 watts (150 kW) for non-residential customers. In order to receive a rebate of $0.25 per watt, all solar rebate applications must be received and completed prior to August 6, 2023, and operational before December 31, 2023.

$2.00 per watt for systems operational on or before June 30, 2014.
$1.50 per watt for systems operational between July 1, 2014, and June 30, 2015.
$1.00 per watt for systems operational between July 1, 2015, and June 30, 2016.
$0.50 per watt for systems operational between July 1, 2016, and June 30, 2019.
$0.25 per watt for systems operational between July 1, 2019, and December 31, 2023.
$0.00 per watt for systems operational after December 31, 2023.

For Customers Who Are Assuming Ownership or Operational Control of an Existing Customer-Generator System:

If no changes are being made to the existing Customer-Generator System, complete sections A, D and F of this Application/Agreement and forward to Empire at the address above. Empire will review the new Application/Agreement and shall approve such, within fifteen (15) days of receipt by Empire if the new Customer-Generator has satisfactorily completed Application/Agreement, and no changes are being proposed to the existing Customer-Generator System. There are no fees or charges for the Customer-Generator who is assuming ownership or operational control of an existing Customer-Generator System if no modifications are being proposed to that System

A. Customer-Generator's Information

Name on Liberty Utilities/Empire Electric Account: .
Service/Street Address:_____
City:_____State:_____Zip Code:_____
Mailing Address (if different from above): _____
City: _____State: _____Zip Code: _
Email address (if available):_____
Electric Account Holder Contact Person:___
Daytime Phone: _____ Fax: _____ E-Mail: _
Emergency Contact Phone: _____
Liberty Utilities/Empire Account No. (from Utility Bill): ____
If account has multiple meters, provide the meter number to which generation will be connected: ____
Liberty Utilities/Empire's Account No. (from Utility Bill): Shall be inserted at the top of each page.

B. Customer-Generator's System Information

Manufacturer Name Plate Power Rating: _____kW AC DC (check box)
Voltage: _____Volts
System Type: Wind Fuel Cell Solar Thermal Photovoltaic Hydroelectric Other (If other describe on line below)

_____
Inverter/Interconnection Equipment Manufacturer: _____
Inverter/Interconnection Equipment Model No.: _____
Outdoor Manual/Utility Accessible & Lockable Disconnect Switch Distance from Meter:

_____
Certify that the disconnect switch will be located adjacent to the Customer-Generator's electric service meter or explain where and why an alternative location of disconnect switch is being requested:

_____
Existing Electrical Service Capacity: _____Amperes Voltage: _____Volts
Service Character: Single Phase _____ Three Phase _____
Total capacity of existing Customer-Generator System (if applicable): _____kW

System Plans, Specifications, and Wiring Diagram must be <u>attached</u> for a valid application.

C. Installation Information / Hardware and Installation Compliance

Company Installing System:_____
Contact Person of Company Installing System:_____Phone Number: _____
Contractor's License No. (if applicable): _____
Approximate Installation Date: _____
Mailing Address: _____
City: _____State: _____Zip Code: _____
Daytime Phone: _____ Fax: _____ E-Mail: _____
Person or Agency Who Will Inspect/Certify Installation_____

The Customer-Generator's proposed System hardware complies with all applicable National Electric Safety Code (NESC), National Electric Code (NEC), Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), requirements for electrical equipment and their installation. As applicable to System type, these requirements include, but are not limited to, UL 1703, UL 1741, and IEEE 1547. The proposed installation complies with all applicable local electrical codes and all reasonable safety requirements of The Company. The proposed System has a lockable, visible AC disconnect device, accessible at all times to The Company personnel and switch is located adjacent to the Customer-Generator's electric service meter (except in cases where the Company has approved an alternate location). The System is only required to include one lockable, visible disconnect device, accessible to The Company. If the interconnection equipment is equipped with a visible, lockable, and accessible disconnect, no redundant device is needed to meet this requirement. The Customer-Generator's proposed System has functioning controls to prevent voltage flicker, DC injection, overvoltage, undervoltage, overfrequency, underfrequency, and overcurrent, and to provide for System synchronization to The Company's electrical system. The proposed System does have an anti-islanding function that prevents the generator from continuing to supply power when The Company's electrical system is not energized or operating normally.

If the proposed System is designed to provide uninterruptible power to critical loads, either through energy storage or back–up generation, the proposed System includes a parallel blocking scheme for this backup source that prevents any backflow of power to The Company's electrical system when the electrical system is not energized or not operating normally.

Signed (Installer): _____ Date: _____
Name (Print): _____

D. Additional Terms and Conditions

In addition to abiding by The Company's other applicable rules and regulations, the Customer-Generator understands and agrees to the following specific terms and conditions:

1) Operation / Disconnection

If it appears to The Company, at any time, in the reasonable exercise of its judgment, that operation of the Customer-Generator 's System is adversely affecting safety, power quality or reliability of The Company's electrical system, The Company may immediately disconnect and lock-out the Customer-Generator's System from The Company's electrical system. The Customer-Generator shall permit The Company's employees and inspector's reasonable access to inspect, test, and examine the Customer-Generator's System.

2) Liability

Liability insurance is not required for Customer-Generators of ten kilowatts (10 kW) or less. For generators greater than ten kilowatts (10 kW), the Customer Generator agrees to carry no less than one hundred thousand dollars ($100,000) of liability insurance that provides for coverage of all risk of liability for personal injuries (including death) and damage to property arising out of or caused by the operation of the Customer-Generator's System. Insurance may be in the form of an existing policy or an endorsement on an existing policy. Customer-Generators, including those whose systems are ten kilowatts (10 kW) or less, may have legal liabilities not covered under their existing insurance policy in the event the Customer-Generator's negligence or other wrongful conduct causes personal injury (including death), damage to property, or other actions and claims.

3) Metering and Distribution Costs

A Customer-Generator's facility shall be equipped with sufficient metering equipment that can measure the net amount of electrical energy produced or consumed by the Customer-Generator. If the Customer-Generator's existing meter equipment does not meet these requirements or if it is necessary for The Company to install additional distribution equipment to accommodate the Customer-Generator's facility, the Customer-Generator shall reimburse The Company for the costs to purchase and install the necessary additional equipment. At the request of the Customer-Generator, such costs may be initially paid for by The Company, and any amount up to the total costs and a reasonable interest charge may be recovered from the Customer-Generator over the course of up to twelve (12) billing cycles. Any subsequent meter testing, maintenance, or meter equipment change necessitated by the Customer-Generator shall be paid for by the Customer-Generator.

4) Ownership of Renewable Energy Credits or Renewable Energy Certificates (RECs)

RECs created through the generation of electricity by the Customer-Owner are owned by the Customer-Generator; however, if the Customer-Generator receives a solar rebate, the Customer-Generator transfers to The Company all right, title, and interest in and to the RECs associated with the new or expanded solar electric system that qualified the Customer-Generator for the solar rebate for a period of ten (10) years from the date the electric utility confirms the solar electric system is installed and operational.

5) Energy Pricing and Billing

The net electric energy delivered to the Customer-Generator shall be billed in accordance with The Company's Applicable Rate Schedules (Tariff Schedule NM). The value of the net electric energy delivered by the Customer-Generator to The Company shall be credited in accordance with the net metering rate schedule(s) (Tariff Schedule NM). The Customer-Generator shall be responsible for all other bill components charged to similarly situated customers.

Net electrical energy measurement shall be calculated in the following manner:

For a Customer Generator, a retail electric supplier shall measure the net electrical energy produced or consumed during the billing period in accordance with normal metering practices for customers in the same rate class, either by employing a single, bidirectional meter that measures the amount of electrical energy produced and consumed, or by employing multiple meters that separately measure the Customer-Generator's consumption and production of electricity.

(a) If the electricity supplied by the supplier exceeds the electricity generated by the Customer-Generator during a billing period, the Customer-Generator shall be billed for the net electricity supplied by the supplier in accordance with normal practices for customers in the same rate class.
(b) If the electricity generated by the Customer-Generator exceeds the electricity supplied by the supplier during a billing period, the Customer-Generator shall be billed for the appropriate customer charges as specified by the applicable Customer-Generator rate schedule for that billing period and shall be credited an amount for the excess kilowatt-hours generated during the billing period at the net metering rate identified in The Company's tariff filled at the Public Service Commission, with this credit applied to the following billing period; and
(c) Any credits granted by this subsection shall expire without any compensation at the earlier of either twelve (12) months after their issuance, or when the Customer-Generator disconnects service or terminates the net metering relationship with the supplier.

6) Terms and Termination Rights

This Agreement becomes effective when signed by both the Customer-Generator and The Company and shall continue in effect until terminated. After fulfillment of any applicable initial tariff or rate schedule term, the Customer-Generator may terminate this Agreement at any time by giving The Company at least thirty (30) days prior written notice. In such event, the Customer-Generator shall, no later than the date of termination of Agreement, completely disconnect the Customer-Generator's System from parallel operation with The Company's system. Either party may terminate this Agreement 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 this Agreement, so long as the notice specifies the basis for termination, and there is an opportunity to cure the default. This Agreement may also be terminated at any time by mutual agreement of the Customer-Generator and The Company. This agreement may also be terminated by approval of the Commission, if there is a change in statute that is determined to be applicable to this contract and necessitates its termination.

7) Transfer of Ownership

If operational control of the Customer-Generator's System transfers to any other party than the Customer-Generator, a new Application/Agreement must be completed by the person or persons taking over operational control of the existing Customer-Generator System. The Company shall be notified no less than thirty (30) days before the Customer-Generator anticipates transfer of operational control of the Customer-Generator's System. The person or persons taking over the operational control of Customer-Generator's System must file a new Application/Agreement and must receive authorization from The Company before the existing Customer-Generator System can remain interconnected with The Company's electrical system. The new Application/Agreement will only need to be completed to the extent necessary to affirm that the new person or persons having operational control of the existing Consumer-Generator System completely understand the provisions of this Application/Agreement and agrees to them. If no changes are being made to the Customer-Generator's System, completing sections A, D and F of this Application/Agreement will satisfy this requirement. If no changes are being proposed to the Customer-Generator System, The Company will assess no charges or fees for this transfer. The Company will review the new Application/Agreement and shall approve such, within fifteen (15) days if the new Customer-Generator has satisfactorily completed the Application/Agreement, and no changes are being proposed to the existing Customer-Generator System. The Company will then complete section G and forward a copy of the completed Application/Agreement back to the new Customer-Generator, thereby notifying the new Customer-Generator that the new Customer-Generator is authorized to operate the existing Customer-Generator System in parallel with The Company's electrical system. If any changes are planned to be made in the existing Customer-Generator System that in any way may degrade or significantly alter that System's output characteristics, then the Customer-Generator shall submit to The Company a new Application/Agreement for the entire Customer-Generator System and all portions of the Application/Agreement must be completed.

8) Dispute Resolution

If any disagreements between the Customer-Generator and The Company arise that cannot be resolved through normal negotiations between them, the disagreements may be brought to the Missouri Public Service Commission by either party, through an informal or formal complaint. Procedures for filing and processing these complaints are described in 4 CSR 240-2.070. The complaint procedures described in 4 CSR 240-2.070 apply only to retail electric power suppliers to the extent that they are regulated by the Missouri Public Service Commission.

9) Testing Requirement

IEEE 1547 requires periodic testing of all interconnections related protective functions. The Customer-Generator must, at least once every year, conduct a test to confirm that the Customer-Generator's net metering unit automatically ceases to energize the output (interconnection equipment output voltage goes to zero) within two (2) seconds of being disconnected from The Company's electrical system. Disconnecting the net metering unit from The Company's electrical system at the visible disconnect switch and measuring the time required for the unit to cease to energize the output shall satisfy this test. The Customer-Generator shall maintain a record of the results of these tests and, upon request by The Company, shall provide a copy of the test results to The Company. If the Customer-Generator is unable to provide a copy of the test results upon request, The Company shall notify the Customer-Generator by mail that Customer-Generator has thirty (30) days from the date the Customer-Generator receives the request to provide to The Company, the results of a test. If the Customer-Generator's equipment ever fails this test, the Customer-Generator shall immediately disconnect the Customer-Generator's System from The Company's system. If the Customer-Generator does not provide results of a test to The Company within thirty (30) days of receiving a request from The Company or the results of the test provided to The Company show that the Customer-Generator's net metering unit is not functioning correctly, The Company may immediately disconnect the Customer-Generator's System from The Company's system. The Customer-Generator's System shall not be reconnected to The Company's electrical system by the Customer-Generator until the Customer-Generator's System is repaired and operating in a normal and safe manner.

I have read, understand, and accept the provisions of Section D, subsections 1 through 9 of this Application/Agreement.

Printed Name (Customer-Generator): _____
Signed (Customer-Generator): _____ Date:____
Note: Must be name and signature of The Company Account Holder

E. Electrical Inspection
If a local Authority Having Jurisdiction (AHJ) governs permitting/inspection of project:
Authority Having Jurisdiction (AHJ): _
Permit Number: __

Applicable to all installations:
The Customer-Generator System referenced above satisfies all requirements noted in Section C.
Inspector Name (Print):_____
Inspector Certification: Licensed Engineer in Missouri _____ Licensed Electrician in Missouri____
License No_____ Issuing Authority_____ Signed (Inspector) _____
Date: _____

F. Customer-Generator Acknowledgement
I am aware if the Customer-Generator System installed on my premises, and I have been given warranty information and/or an operational manual for that system. Also, I have been provided with a copy of The Company's parallel generation tariff or rate schedule (as applicable) and interconnection requirements. I am familiar with the operation of the Customer-Generator System.

I agree to abide by the terms of this Application/Agreement, and I agree to operate and maintain the Customer-Generator System in accordance with the manufacturer's recommended practices as well as The Company's interconnection standards. If, at any time and for any reason, I believe that the Customer-Generator System is operating in an unusual manner that may result in any disturbances on The Company's electrical system, I shall disconnect the Customer-Generator System and not reconnect it to The Company's electrical system until the Customer-Generator System is operating normally after repair or inspection. Further, I agree to notify The Company no less than thirty (30) days prior to modification of the components or design of the Customer-Generator System that in any way may degrade or significantly alter that System's output characteristics. I acknowledge that any such modifications will require submission of a new Application/Agreement to The Company.

I agree not to operate the Customer-Generator System in parallel with The Company's electrical system until this Application/Agreement has been approved by The Company.
System Installation Date: _____
Printed Name (Customer-Generator): _____
Signed (Customer-Generator): _____ Date: ____

G. Utility Application Approval (*completed by* The Company)
The Company does not, by approval of this Application/Agreement, assume any responsibility or liability for damage to property or physical injury due to malfunction of the Customer-Generator's System or the Customer-Generator's negligence.

This Application is approved by The Company on this _____ day of _____ (month). _____ (year).
The Company Representative Name (Print):_____Signed The Company Representative: _____

MISSOURI SOLAR ELECTRIC REBATE APPLICATION

H. Solar Rebate (For Solar Installations only)

Solar Module Manufacturer:_____ Inverter Rating:_____kW

Solar Module Model No:_____ Number of Modules/Panels:_____

Module Rating:_____DC Watts System rating (sum of solar panels:_____kW

Module Warranty:_____years (circle on spec. sheet) Inverter Warranty:_____years (circle on spec. sheet)

Location of modules:_____Roof _____Ground

Installation type:_____Fixed _____Ballast

Solar electric system must be permanently installed on the applicant's premises for a valid application.

Required documents to receive solar rebate required to be attached OR provided before The Company authorizes the rebate payment:

- Copies of detail receipts/invoices with purchase date circled
- Copies of detail spec. sheets on each component
- Copies of proof of warranty sheet (minimum of 10-year warranty)
- Photo(s) of completed system
- Completed Taxpayer Information Form

1. Your PV system is subject to the Commission's current rates, rules, and regulations. The Missouri Public Service Commission ("Commission") may alter its rules and regulations and/or change rates in the future. If this occurs, your PV system is subject to those changes, and you will be responsible for paying any future increases to electricity rates, charges, or service fees from the Company.

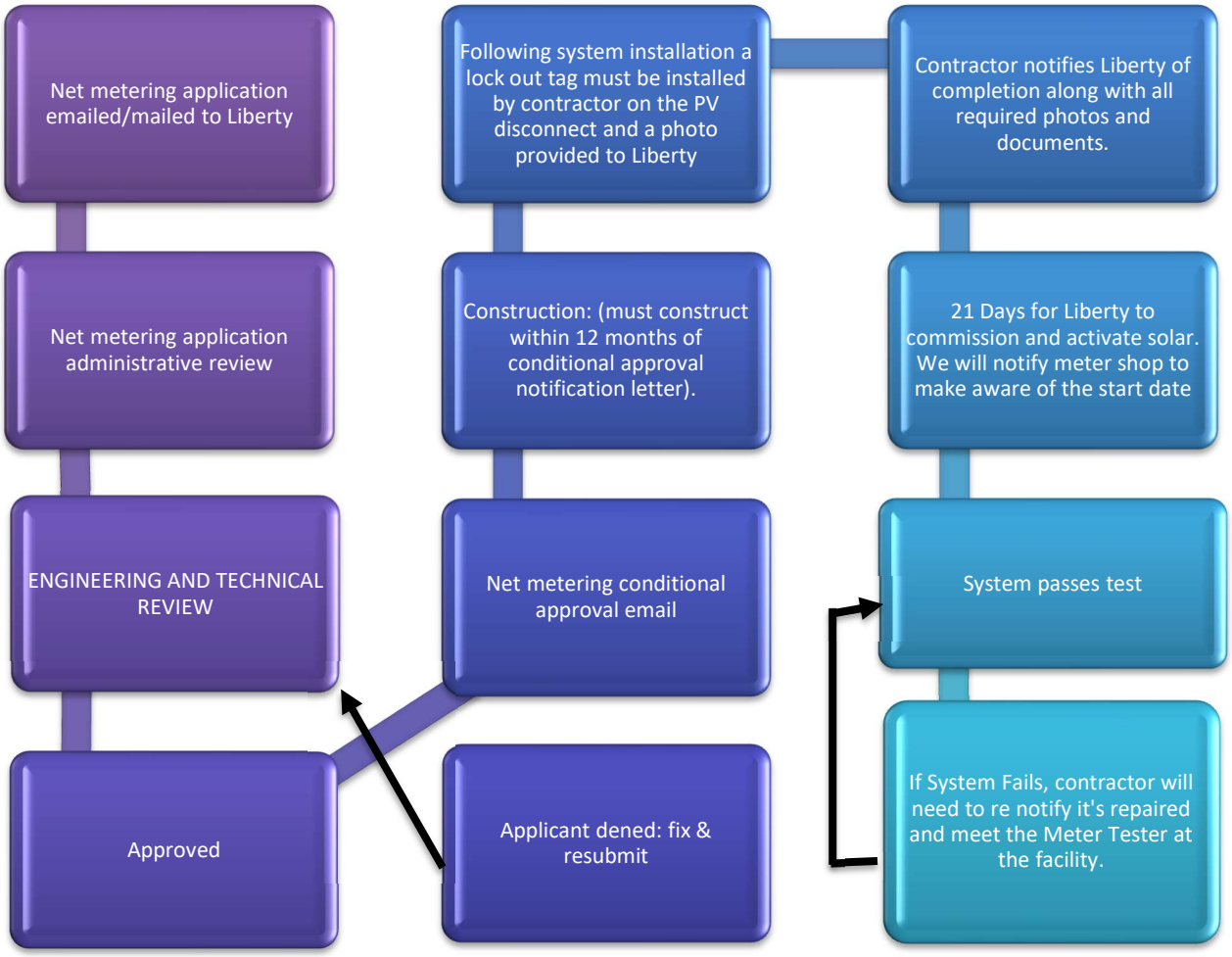
2. The Company's electricity rates, charges, and service fees are determined by the Commission and are subject to change based upon the decisions of the Commission. These future adjustments may positively or negatively impact any potential savings or the value of your PV system.

3. Any future electricity rate projections which may be presented to you are not produced, analyzed, or approved by the Company or the Commission. They are based on projections formulated by external third parties not affiliated with the Company or the Commission.

The undersigned warrants, certifies, and represents that the information provided in this form is true and correct to the best of my knowledge; and the installation meets all Missouri Net Metering and Solar Electric Rebate program requirements.

Print Name of Applicant	Print Installer's Name
Applicant's Signature	Installer's Signature
If Applicant is a Business, Print Title/Authority of Person Signing on behalf of Applicant	
Date	Date

Net Metering Process—New Net Metering Customer



1. Systems with **lock out tags removed** and **disconnects on** when Liberty arrives for solar activation, Liberty will **lock PV disconnect** until we find out where the customer is at in the process.
2. Systems running before final approval from Liberty, will be **locked off and will need rescheduled**.
3. Failure of the system not operating during the activation attempt, we will need the solar company/ contractor to **meet us at the facility**.