Title 4—DEPARTMENT OF ECONOMIC DEVELOPMENT
Division 240—Public Service Commission Chapter 20—Electric Utilities

ORDER OF RULEMAKING

By the authority vested in the Public Service Commission under section 386.250, RSMo 2000, and section 386.890.9, RSMo Supp. 2011, the commission amends a rule as follows:

4 CSR 240-20.065 is amended.

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on March 1, 2012 (37 MoReg 315-333). Those sections with changes are reprinted here. This proposed amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: The public comment period ended April 2, 2012, and the commission held a public hearing on the proposed amendment on April 3, 2012. The commission received timely written comments from the staff of the Missouri Public Service Commission and from Union Electric Company, d/b/a Ameren Missouri. In addition, the Public Counsel offered comments at the hearing. The comments generally supported the proposed amendment but offered suggestions for improvement.

COMMENT #1: The commission's staff offered a written comment advising the commission to revise the proposed definition of "avoided cost" found at subsection (1)(A). Staff's revision would make this rule's definition of that term consistent with the definition in the commission's cogeneration rule, 4 CSR 240-3.155. At the hearing, public counsel and Ameren Missouri indicated they did not oppose this revision.

RESPONSE AND EXPLANATION OF CHANGE: The commission has modified the definition of "avoided cost" as proposed by staff

COMMENT #2: The commission's staff offered a written comment regarding paragraph (9)(A)1. Staff explained that the paragraph requires the electric utility to provide the electronic application/agreement to staff for review before placing it on the company's website. Staff recommends that the provision be modified to specify to whom at staff the utility should submit the application/agreement for review. At the hearing, public counsel and Ameren Missouri indicated they do not oppose this revision.

RESPONSE AND EXPLANATION OF CHANGE: The commission has modified the paragraph as proposed by staff.

COMMENT #3: Ameren Missouri submitted a written comment in which it suggests certain changes to the model interconnection application/agreement that is incorporated into the rule. Ameren Missouri suggests that the signature line for the utility be moved from its current location in the document immediately following the solar rebate information found in sections G. and H. Ameren Missouri explains that the electric utility is often able to commence net metering service before all solar rebate documentation has been received from the customer. If the utility's signature line is moved to before section G., it would be clear that the utility could offer net metering service before obtaining all solar rebate documentation. At the hearing, public counsel and staff indicated they do not oppose this revision

RESPONSE AND EXPLANATION OF CHANGE: The commission agrees with Ameren Missouri's suggestion. The commission will move the signature line to the interconnection application/agreement before the solar rebate information currently in sections G. and H. In doing so, the commission will also move current section I.,

which contains the utility's approval language, to before the solar rebate information and reletter the sections accordingly.

COMMENT #4: Ameren Missouri submitted a written comment in which it suggests certain changes to section 5) Energy Pricing and Billing of the model interconnection application/agreement that is incorporated into the rule. Ameren Missouri suggests that paragraph be modified to refer to the appropriate net metering tariff and to clearly refer to the value of net electricity delivered by the Customer-Generator to the utility. At the hearing, public counsel and staff indicated they do not oppose this revision.

RESPONSE AND EXPLANATION OF CHANGE: The commission agrees with Ameren Missouri's suggestion and will modify the interconnection application/agreement accordingly.

COMMENT #5: Ameren Missouri submitted a written comment in which it suggests a change in the definition of REC found in subsection (1)(G). Ameren Missouri suggests the word "that" be inserted into the definition to clarify that the REC is not actual energy produced but rather is a demonstration that renewable energy was produced. At the hearing, public counsel and staff indicated they do not oppose this revision.

RESPONSE AND EXPLANATION OF CHANGE: The commission agrees with Ameren Missouri's suggestion and will modify the definition accordingly.

COMMENT #6: Ameren Missouri submitted a written comment in which it suggests a change in section A. of the interconnection application/agreement. That informational section currently requires the Customer-Generator to "provide the meter number to be used for net metering." Ameren Missouri suggests that language be changed to require the Customer-Generator to "provide the meter number to which generation will be connected." At the hearing, public counsel and staff indicated they do not oppose this revision.

RESPONSE AND EXPLANATION OF CHANGE: The commission agrees with Ameren Missouri's suggestion and will modify the section accordingly.

4 CSR 240-20.065 Net Metering

(1) Definitions.

- (A) Avoided fuel cost means avoided costs described in 4 CSR 240-20.060 used to calculate the electric utility's cogeneration rate filed in compliance with 4 CSR 240-3.155. The information used to calculate this rate is provided to the commission biennially and maintained for public inspection.
- (G) REC means Renewable Energy Credit or Renewable Energy Certificate which is tradable, and represents that one (1) megawatthour of electricity has been generated from a renewable energy resource.

(9) Interconnection Agreement.

- (A) Each customer-generator and electric utility shall enter into the interconnection agreement included herein.
- 1. If the electric utility so chooses, it may allow customers to apply electronically through the electric utility's website.
- A. The interconnection agreement on the electric utility's website shall substantially be the same as the interconnection agreement included herein.
- B. The electronic agreement shall be submitted to the manager of the Energy Unit of the staff for review by staff prior to being placed on the electric utility's website.
- C. The electric utility shall notify the manager of the Energy Unit of the staff of any revisions to the electronic agreement on its website within ten (10) working days of when the electronic agreement is revised.

INTERCONNECTION APPLICATION/AGREEMENT FOR NET METERING SYSTEMS WITH CAPACITY OF ONE HUNDRED KILOWATTS (100 kW) OR LESS

[Utility Name and Mailing Address]

For Customers Applying for Interconnection:

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

If you wish to apply for interconnection to [Utility Name]'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 [Utility Name] at the address above. The company will provide notice of approval or denial within thirty (30) days of receipt by [Utility Name] for Customer-Generators of ten kilowatts (10 kW) or less and within ninety (90) days of receipt by [Utility Name] 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 [Utility Name], it shall become a binding contract and shall govern your relationship with [Utility Name].

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 [Utility Name] for review and completion of section G at the address above. Prior to the interconnection of the qualified generation unit to [Utility Name] system, the Customer-Generator will furnish [Utility Name] a certification from a qualified professional electrician or engineer that the installation meets the plans and specification described in the application. If the application for interconnection is approved by [Utility Name] 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.

[Utility Name] will complete the utility portion of section G and, upon receipt of a completed Application/Agreement form and payment of any applicable fees, schedule a date for interconnection of the Customer-Generator System to [Utility Name]'s electrical system within fifteen (15) days of receipt by [Utility Name] if electric service already exists to the premises, unless the Customer-Generator and [Utility Name] agree to a later date. Similarly, upon receipt of a completed Application/Agreement form and payment of any applicable fees, if electric service does not exist to the premises, [Utility Name] will schedule a date for interconnection of the Customer-Generator System to [Utility Name]'s electrical system no later than fifteen (15) days after service is established to the premises, unless the Customer-Generator and [Utility Name] agree to a later date.

For Customers Who Are Installing Solar Systems:

Upon completion of section H and I, a rebate of \$2/watt up to 25,000 watts (25kW) is available from [Utility Name] on an expanded or new system that becomes operational after 12/31/2009 with a maximum rebate of \$50,000.

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 [Utility Name] at the address above. [Utility Name] will review the new Application/Agreement and shall approve such, within fifteen (15) days of receipt by [Utility Name] 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 I	nformat	ion			
Name on [Utility Name] Ele	ctric Acc	ount:			
Mailing Address:					
City:			State	:	Zip Code:
Service/Street Address (if di	ferent fro	am abarra).			
City:			State	:	Zip Code:
Daytime Phone:	time Phone: Fax:		Email:		
Emergency Contact Phone:					
[Utility Name] Account No.	(from Ut	ility Bill):			
If account has multiple mete	rs, provid	le the meter numb	er to which gene	ration will b	e connected:
_					4
B. Customer-Generator's S	system Ir	ıformation			
Manufacturer Name Plate Po	wer Rati	ng:	kW AC or DO	C (circle one)
Voltage: Volts					
System Type:WindFu	el Cell	Solar Thermal	Photovoltaic	Hydroelec	tric Other (describe)
Inverter/Interconnection Equ	ipment M	Ianufacturer:			
Inverter/Interconnection Equ	ipment M	Iodel No.:			
Inverter/Interconnection Equ	ipment L	ocation (describe)	:		
Outdoor Manual/Utility Acce	essible &	Lockable Disconr	ect Switch Dista	nce from Me	eter:
Describe the location of the					
Existing Electrical Service C	apacity:	Amperes	Voltage:	Volts	
Service Character: Single					
Total capacity of existing Cu			if applicable):	kW	
			· · · · / —		
System Plans, Specification	s, and W	Viring Diagram n	ust be attached	for a valid	application.
	S.	0 0			₹ (± 0)
C. Installation Information	/Hardwa	are and Installati	on Compliance		
Company Installing System:			<u>.</u>		
Contact Person of Company				Phone Nun	nber:
Contractor's License No. (if					
Approximate Installation Da	te:	W0 7 03 :			
Mailing Address:					
City:			State	e:	Zip Code:
City:		Fax:	Email:	<u> </u>	
Person or Agency Who Will	Inspect/C	Certify Installation	•		

The Customer-Generator's proposed System hardware complies with all applicable National Electrical Safety Code (NESC), National Electrical Code (NEC), Institute of Electrical and Electronics Engineers (IEEE), and Underwriters Laboratories (UL) requirements for electrical equipment and their installation. As applicable to System type, these requirements include, but are not limited to, UL 1741 and IEEE 1547. The proposed installation complies with all applicable local electrical codes and all reasonable safety requirements of [Utility Name]. The proposed System has a lockable, visible AC disconnect device, accessible at all times to [Utility Name] personnel. The System is only required to include one lockable, visible disconnect device, accessible to [Utility Name]. 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 [Utility Name]'s electrical system. The proposed System does have an anti-islanding function that prevents the generator from continuing to supply power when [Utility Name]'s electric 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 [Utility Name]'s electrical system when the electrical system is not energized or not operating normally.

Signed (Installer): Date:

D. Additional Terms and Conditions

In addition to abiding by [Utility Name]'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 [Utility Name], 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 [Utility Name]'s electrical system, [Utility Name] may immediately disconnect and lock-out the Customer-Generator's System from [Utility Name]'s electrical system. The Customer-Generator shall permit [Utility Name]'s employees and inspectors 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 that 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 [Utility Name] to install additional distribution equipment to accommodate the Customer-Generator's facility, the

Customer-Generator shall reimburse [Utility Name] 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 [Utility Name], 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 until explicitly transferred to another entity. Nothing in this contract gives [Utility Name] any preferential entitlement to the RECs generated by the Customer-Generator's system.

5) Energy Pricing and Billing

The net electric energy delivered to the Customer-Generator shall be billed in accordance with the Utility's Applicable Rate Schedules [Utility's Applicable Rate Schedules]. The value of the net electric energy delivered by the Customer-Generator to [Utility Name] shall be credited in accordance with the net metering rate schedule(s) [Utility's Applicable Rate Schedules].

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;
- (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 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 [Utility Name]'s tariff filed 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 [Utility Name], 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 [Utility Name] 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 [Utility Name]'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 [Utility Name]. 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. [Utility Name] 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 operational control of Customer-Generator's System must file a new Application/Agreement, and must receive authorization from [Utility Name], before the existing Customer-Generator System can remain interconnected with [Utility Name]'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 Customer-Generator System completely understand the provisions of this Application/Agreement and agree 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, [Utility Name] will assess no charges or fees for this transfer. [Utility Name] 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. [Utility Name] 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 [Utility Name]'s electrical system. If any changes are planned to be made to 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 [Utility Name] 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 [Utility Name] 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 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 [Utility Name]'s electrical system. Disconnecting the net metering unit from [Utility Name]'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 [Utility Name], shall provide a copy of the test results to [Utility Name]. If the Customer-Generator is unable to provide a copy of the test results upon request, [Utility Name] 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 [Utility Name], 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 [Utility Name]'s system. If the Customer-Generator does not provide results of a test to [Utility Name] within thirty (30) days of receiving a request from [Utility Name] or the results of the test provided to [Utility Name] show that the Customer-Generator's net metering unit is not functioning correctly, [Utility Name] may immediately disconnect the Customer-Generator's System from [Utility Name]'s system. The Customer-Generator's System shall not be reconnected to [Utility Name]'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.							
Signed (Customer-Generator): Must be signature of [Utility Name] account holder (cu	Date:						
Must be signature of [Offinty Name] account holder (cu	istomer)						
E. Electrical Inspection							
The Customer-Generator System referenced above satisfuspector Name (print):							
Inspector Name (print): Inspector Certification: Licensed Engineer in Missouri License No	Licensed Electrician in Missouri						
Signed (Inspector):	Doto						
e-gara (auspector):	Date:						
Itility Name]'s parallel generation tariff or rate schedular am familiar with the operation of the Customer-General agree to abide by the terms of this Application Customer-Generator System in accordance with the [Utility Name]'s interconnection standards. If, at any ting Generator System is operating in an unusual manner that electrical system, I shall disconnect the Customer-Generate electrical system until the Customer-Generator System Further, I agree to notify [Utility Name] no less than this or design of the Customer-Generator System that in any output characteristics. I acknowledge that any such Application/Agreement to [Utility Name]. I agree not to operate the Customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until this Application/Agreement has been approved the customer-Generator System until the	ale (as applicable) and interconnection requirements. Tator System. Agreement and I agree to operate and maintain the manufacturer's recommended practices as well as me and for any reason, I believe that the Customerat may result in any disturbances on [Utility Name]'s rator System and not reconnect it to [Utility Name]'s m is operating normally after repair or inspection. Ity (30) days prior to modification of the components way may degrade or significantly alter that System's modifications will require submission of a new system in parallel with [Utility Name]'s electrical system in parallel with [Utility Name]'s electrical system [Utility Name].						
Signed (Customer-Generator):	Date:						
G. Utility Application/Agreement Approval (complete [Utility Name] does not, by approval of this Applibility for damage to property or physical injury to personal system or the Customer-Generator's negligence.	lication/Agreement, assume any responsibility or lia-						
This Application is approved by [Utility Name] on this [Utility Name] Representative Name (print):	day of(month),(year).						
Signed [Utility Name] Representative:							

H. Solar Rebate (For Solar Installations only)						
Solar Module Manufacturer:	Inverter Rating: kW					
Solar Module Model No.: Module rating: DC Watts Symbol Module Warranty: years (circle on spec she	Inverter Rating:kW Number of Modules/Panel:kW					
Module rating: DC Watts St	ystem rating (sum of solar panels): kW					
Module Warranty: years (circle on spec she	eet)					
Inverter Warranty: years (circle on spec she	pet)					
Location of modules:RoofGround	Installation type: Fixed Ballact					
System Installation Date:	installation type FixedBallast					
Solar system must be permanently installed on the applicant's premises for a valid application Required documents to receive solar rebate (required to be <u>attached</u> for a valid application): Copies of detail receipts/invoices with purchase date circled						
Copies of detail spec sheets on each compe						
Copies of proof of warranty sheet (minimu	m of 10 year warranty)					
Photo(s) of completed system	(0.00) 1786-96					
Completed Taxpayer Information Form						
come, first-served basis, while funds are available. a waiting list for the next year's rebate program if modified or discontinued at any time without notice. I understand that the solar system must be put the duration of its useful life – a minimum of 10 year warranty. I understand the equipment must be new year warranty. I understand a rebate of \$2/watt up to 25, expanded or new systems that become operational. I understand the DC wattage rating provide will be used to determine rebate amount. I understand business corporations receiving consult your tax advisor with any questions.) The undersigned warrants, certifies, and resistant and resistant provides with any questions.	d budget, and that application will be accepted on a first- It is possible that I may be notified I have been placed on funds run out for the current year. This program may be be from [Utility Name].					
resource program requirements.						
Applicant's Signature	Installer's Signature					
Print Solar Rebate Applicant's Name	Print Installer's Name					