#### RULE NO. 17

#### **NET ENERGY METERING**

#### A. ELIGIBLE CUSTOMER-GENERATOR

Net energy metering is available to eligible customer-generators, defined as, permanent customers who own (or lease from a third party) and operate (or contract to operate with a third party) a solar, wind turbine, biomass, or hydroelectric energy generating facility, or a hybrid system consisting of two or more of these facilities, with a total capacity\* of not more than fifty kilowatts (kw) or greater amount as approved by Commission rule or order, that is:

- 1. located on the customer's premises,
- 2. operated in parallel with the Company's transmission and distribution facilities,
- 3. in conformance with the Company's interconnection requirements, and
- 4. intended primarily to offset part or all of the customer's own electrical requirements.

#### B. METERING AND RENDERING OF BILLS

The Company, at its expense, may install meter(s) to record the flow of electric power in each direction. The eligible customer-generator shall, at its expense, provide, install and maintain all conductors, service switches, fuses, meter sockets, meter and instrument transformer housing and mountings, switchboard meter test buses, meter panels and similar devices required for service connection and meter installations on the customer's premises in accordance with the Company's Rule No. 14, Section A.2.

An eligible customer-generator's bill will be based on the rate schedule otherwise applicable to the customer as a non-net metered customer. Where an eligible customer-generator's current month's net metered registration for billing purposes is less than the previous month's meter registration for billing purposes (i.e., the customer has generated and transmitted more electricity to the Company's system than consumed from the Company's system), the eligible customer-generator shall not be owed any compensation for excess kilowatt-hours (kwh) unless the Company enters into a purchase agreement with the eligible customer-generator for those excess kwh.

The eligible customer-generator shall, however, receive a monetary credit for any net excess generation (kwh). This credit, which will be carried over to the following month's bill, is calculated based upon the average cost of energy (cents/kwh) applicable in the month in which the net excess generation occurred. This average cost of energy includes the Energy Charge and other base rate adjustments such as the Resource Cost Adjustment Surcharge and the Energy Rate Adjustment Clause, but excludes the monthly Customer Charge/Minimum Charge and any Demand Charge.

\* "Total capacity" for purposes of this Rule No. 17, shall be defined as the potential alternating current kilowatt output of the customer-generator's system generation, which would be limited by the smallest component in the customer-generator's system.

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KIUC Tariff No. 1 First Revised Sheet 55b Cancels Original Sheet 55b

An eligible customer-generator continues to be subject to the monthly Customer Charge, Minimum Charge and/or Demand Charge, if any and as set forth in the applicable rate schedule, notwithstanding the fact that the customer, in a particular month, has generated and transmitted more electricity to the Company's system than consumed from the Company's system. When the eligible customer-generator is billed the Customer Charge, Minimum Charge and/or Demand Charge in any billing period, the customer's cumulative net monetary credit that remains unused at the end of the twelve-month reconciliation period, if any, shall not be applied or otherwise credited toward the monthly Customer Charge, Minimum Charge and/or Demand Charge due. A sample spreadsheet illustrating the above-referenced annual reconciliation process, including the manner in which the monthly reconciliation is calculated and an accounting of credits, is attached as Exhibit A to this Rule No. 17.

The monthly carry-over credit shall be reconciled every twelve months. The twelve-month reconciliation period is from January 1 – December 31. Any credit for excess electricity from the eligible customer-generator that remains unused at the end of the twelve-month reconciliation period may not be carried over to the next twelve-month reconciliation period. Notwithstanding the above, only for the initial period beginning on July 1, 2007 and ending on December 31, 2007, any unused credit for excess electricity from the eligible customer-generator that remains unused at the end of this initial period will be carried over to the following twelve-month period beginning on January 1, 2008 and ending on December 31, 2008.

#### C. AGREEMENT, INTERCONNECTION REQUIREMENTS AND PROCESS

1. <u>10 kw or Less and Inverter-Based</u> — An eligible customer-generator with a generating facility with a capacity of 10 kw or less and inverter-based shall complete and execute the standard Net Energy Metering Agreement form attached as Exhibit B to this Rule No. 17. Conformance with the Company's interconnection requirements shall be demonstrated through the completion and execution of the application forms attached as Attachment 5 of the Company's Interconnection Tariff (10 kw Inverter Application). The eligible customer-generator's facilities and interconnection systems must be in compliance with all applicable safety and performance standards of the National Electric Code (NEC), the Institute of Electrical and Electronic Engineers (IEEE), accredited testing laboratories such as the Underwriters Laboratories (UL), and, where applicable, the Company's additional requirements provided in the Net Energy Metering Agreement, the 10 kw Inverter Application and the rules of the Commission regarding safety and reliability.

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- Greater than 10 kw or Non-Inverter-Based An eligible customer-generator with 2. a generating facility that is non-inverter-based or with a capacity greater than 10 kw, but not exceeding 50 kw or a greater amount as approved by Commission rule or order, shall complete and execute the standard Net Energy Metering Agreement form attached as Exhibit B to this Rule No. 17. Conformance with the Company's interconnection requirements shall be demonstrated through the completion and execution of the Company's Interconnection Agreement attached as Attachment 9 of the Company's Interconnection Tariff. For systems greater than 10 kw, an eligible customer-generator may be required to install additional controls, perform or pay for additional tests, or purchase additional liability insurance. The eligible customer-generator's facilities and interconnection systems must be in compliance with all applicable safety and performance standards of the NEC, the IEEE, accredited testing laboratories such as the UL, and, where applicable, the Company's additional requirements provided in the Net Energy Metering Agreement, the above Interconnection Agreement, and the rules of the Commission regarding safety and reliability.
- 3. <u>Net Metering Process</u> The overall net metering process, which includes the process to be followed by the Company to interconnect the eligible customer-generator, is further illustrated by the flow chart attached as Exhibit C of this Rule No. 17.

#### D. MAXIMUM ALLOWABLE PERCENTAGE AMOUNT

Net energy metering will be made available to customers until the sum of the total rated generating capacity of all net metered customer facilities equals approximately 1.0% of the Company's annual system peak demand for the preceding calendar year (maximum allowable percentage amount)\*\*. For the initial eligibility review of an interested customer-generator, in no instance will the sum of the total rated generating capacity of all eligible customer-generator facilities, including the addition of the interested customer-generator's system exceed 1.0% of the Company's system peak demand for the preceding calendar year or a different percentage as approved by Commission rule or order. The maximum net metering capacity will be determined during the month of January of each year and that capacity limit will apply for the remainder of that year. Net metering will not be available to any interested customer-generator whose system addition will cause the sum of the total rated generating capacity of all net metered customer facilities to exceed 1.0% of the Company's system peak but qualified applicants may be waitlisted in accordance with the Company policies. Further, the 1.0% of the Company's peak demand shall be allocated as follows: (a) 50% will be allocated to systems whose size is 10kW or smaller; and (b) the remaining 50% will be allocated to systems whose size is greater than 10kW, but not greater than 50kW.

An eligible customer-generator will not be reclassified when the maximum net metering capacity is exceeded from time to time; as long as the eligible customer-generator continues to meet all other net metering requirements.

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<sup>\*\* &</sup>quot;Maximum allowable percentage" amount for purposes of this Rule No. 17, shall be defined as the sum of the individual installed customer-generator system's net energy metering capacities for customers with active net energy metering agreements at any given time.

# EXHIBIT A OF RULE NO. 17 KIUC SAMPLE SPREADSHEET ILLUSTRATING ANNUAL NET ENERGY METERING RECONCILIATION PROCESS

KIUC NEM Reconciliation

Rev. 11/02/07

Customer Name: John Doe

Min Monthly Charge

\$12.16

Account No. 123456789001 Rate: Residential **Customer Monthly Charge** 

\$9.72

Nate, Nesiuciliai

	Date	kWh Supplied by KIUC	kWh Produced by Net Energy Customer	Net kWh	kWh for Billing Purposes	Net kWh Produced by Customer to determine credit	Base Rate <sup>1</sup> \$/kWh	ERAC <sup>2</sup> \$/kWh	RCS <sup>3</sup> \$/kWh	Effective Rate \$/kWh	Energy Charge \$	Customer Charge \$	Apply test for Minimum Bill \$	Minimum Bill (Y/N)	\$	Net Customer Generation Credits \$	Credits Applied to Energy Charge \$	Cumulative Credits \$	Credit \$
		(A)	(B)	(C) = A-B	(D)	(E)	(F)	(G)	(H)	(I) = F+G+H	(J) = D x I	(K)	(L) = J + K	(M)	(N)	(0) = E x 1	(P)	(Q)	(R)
1	01/01/06		167	103	103	0	0.17489	0.11015	0.00082	0.28586	29.44	9.72	39.16	N	39.16	0.00	0.00		39.16
2	02/01/06		215	97	97	0	0.17489	0.11486		0.29057	28.19	9.72	37.91	N	37.91	0.00	0.00		37.91
3	03/01/06	271	214		57	0	0.17489	0.13621	0.00082	0.31192	17.78	9.72	27.50	N	27.50	0.00	0.00		27.50
4	04/01/06		283		0	108	0.17489	0.14674	0.00082	0.32245	0.00	9.72	9.72	Υ	12.16	34.82	0.00	34.82	12.16
5	05/01/06	307	322	-15	0	15	0.17489	0.16860	0.00082	0.34431	0.00	9.72	9.72	Υ	12.16	5.16	0.00	39.99	12.16
6	06/01/06	332	594	-262	0	262	0.17489	0.13044	0.00082	0.30615	0.00	9.72	9.72	Y	12.16	80.21	0.00	120.20	12.16
7	07/01/06	341	639	-298	0	298	0.17489	0.11564	0.00082	0.29135	0.00	9.72	9.72	Υ	12.16	86.82	0.00	207.02	12.16
8	08/01/06	171	138	33	33	0	0.17489	0.12190	0.00067	0.29746	9.82	9.72	19.54	N	19.54	0.00	9.82	197.21	9.72
9	09/01/06	192	95	97	97	0	0.17489	0.12755	0.00067	0.30311	29.40	9.72	39.12	N	39.12	0.00	29.40	167.81	9.72
10	10/01/06	217	110	107	107	0	0.17489	0.13513	0.00067	0.31069	33.24	9.72	42.96	N	42.96	0.00	33.24	134.57	9.72
11	11/01/06	124	75	49	49	0	0.17489	0.14920	0.00067	0.32476	15.91	9.72	25.63	N	25.63	0.00	15.91	118.66	9.72
12	12/01/06	167	195	-28	0	28	0.17489	0.17276	0.00067	0.34832	0.00	9.72	9.72	Y	12.16	9.75	0.00	128.41	12.16

\$163.79 \$216.78 \$88.37 \$128.41 Total Energy Charges: \$163.79 Cumulative Credits: \$216.78 Total Credits Applied: \$88.37 Total Credits Applied: \$88.37 Energy Charges Eligible for Credits: \$75.42 Cumulative Credits Balance: \$128.41 Energy Charges Eligible for Credits: \$75.42

Energy Credits Not Elegible for Refund:

Notes

1 KIUC's base rate effective November 1, 1998.

2 Energy Rate Adjustment Charge

3 Resource Cost Surcharge

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\$52.99

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## EXHIBIT B OF RULE NO. 17 NET ENERGY METERING AGREEMENT

SECTION 1. GENERAL
This Net Energy Metering Agreement is made on
SECTION 2. CUSTOMER INFORMATION
Eligible Customer-Generator
Name:
Mailing Address:
City: State: Zip Code:
Facility Location (if different from above):
Daytime phone: Evening phone:
KIUC service account No.:
Owner or Operator of Generating Facility (if different from Eligible Customer-Generator above)
Name:
Mailing Address:
City: State: Zip Code:
Daytime phone: Evening phone:

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SECTION 3. FACILITY INFORMATION							
Solar:	Rated generator capacity in kW	Generator/Inverter Make & Model					
Wind:	Rated generator capacity in kW	Generator/Inverter Make & Model					
Biomass:	Rated generator capacity in kW	Generator/Inverter Make & Model					
Hydro:	Rated generator capacity in kW	Generator/Inverter Make & Model					
Hybrid:	Rated generator capacity in kW	Generator/Inverter Make & Model					
Total rated capacity in kW (The total capacity of the generating facility shall be the least rated capacity (i.e., limiting) of the system component and shall not exceed 50 kW).							
Kauai County Building Permit No.							
(Attach Certificate of Completion or Notice of Electrical Inspection)							
Single line diagram attached (check one): Yes  No							

### SECTION 4. CERTIFICATION BY ELECTRICIAN AND CUSTOMER-GENERATOR

Generating and interconnection systems must comply with all applicable safety and performance standards of the National Electrical Code (NEC), Institute of Electrical and Electronic Engineers (IEEE), and accredited testing laboratories such as the Underwriters Laboratories (UL), and where applicable, the rules of the Hawaii Public Utilities Commission, or other applicable governmental laws and regulations, and all requirements as specified in KIUC's Interconnection Agreement and applicable tariffs. For inverter-based systems less than ten kilowatts, the application forms attached as Attachment 5 of the Company's Interconnection Tariff (10 kw Inverter Application) and between the Eligible Customer-Generator and KIUC must be fully completed and executed prior to this NEM Agreement. For systems greater than ten kilowatts or for non-inverter-based systems, an Interconnection Agreement attached as Attachment 9 of the Company's Interconnection Tariff and between the Eligible Customer-Generator and KIUC must be fully completed and executed prior to this NEM Agreement.

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The following certifies that the installed generating system meets all of the preceding requirements. Signed (Licensed Electrical Contractor): Date: \_\_\_\_\_ Hawaii License #C: \_\_\_\_\_ Name (printed): \_\_\_\_\_ Mail address: City: \_\_\_\_\_ State: \_\_\_\_ Zip Code: \_\_\_\_\_ Daytime Phone: \_\_\_\_\_ Installation date: \_\_\_\_\_ **SECTION 5. INSTALLATION** Design, installation, operation and maintenance of the Eligible Customer-Generator's facility shall include power conditioning equipment and a manual load-break disconnect device lockable in the open position and accessible by KIUC, as a means of electrically isolating the Eligible Customer-Generator's system from KIUC's system, and to establish working clearance for maintenance and repair work in accordance with KIUC's safety rules and practices. This load-break disconnect device shall be furnished and installed by the Eligible Customer-Generator and is to be connected between the generating system and KIUC's electric system. The disconnect device shall be located within 10 feet of the electric meter serving the customer. The disconnect device shall be clearly labeled "NEM". Upon reasonable notice to the Eligible Customer-Generator, KIUC shall have the right to inspect the installed system. Load-break disconnect will not be required if the Eligible Customer-Generator allows KIUC to "pull" the electric meter to carry out system maintenance. Initials required: For systems greater than 10 kW, an eligible Customer-Generator may be required to install

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controls, perform or pay for additional tests, or purchase additional liability insurance.

and Chief Executive Officer

#### **SECTION 6. BILLING**

Net Energy Metering customers shall be billed monthly using the same rate schedule otherwise applicable to comparable non-Net Energy Metering customers. Every 12 months, a reconciliation of the Eligible Customer-Generator's net electricity consumption supplied by KIUC with the net electricity produced by the Eligible Customer-Generator will be performed as described in Section B of KIUC's Rule No. 17. The 12-month reconciliation period shall be from January 1 to December 31 of each year.

#### Net Electricity Producer

At the end of each monthly billing period where the electricity generated by the Eligible Customer-Generator exceeds the electricity supplied by KIUC, the Eligible Customer-Generator is deemed a net electricity producer. The Eligible Customer-Generator will not be billed for the kilowatt-hours (kwh) supplied by KIUC during that billing period. However, the Eligible Customer-Generator shall be charged the Customer Charge, Minimum Charge, and/or Demand Charge of KIUC's applicable rate schedule. The excess electricity generated by the Eligible Customer-Generator in each monthly billing period shall be carried over to the next month as a monetary value to credit the Eligible Customer-Generator. This credit is calculated based upon the average cost of energy (cents/kwh) applicable in the month in which the net excess generation occurred. This credit may accumulate and be used to offset the kilowatt-hour charges owed to KIUC for succeeding months within each 12-month reconciliation period.

Credits for excess electricity from the Eligible Customer-Generator that remains unused after each 12-month reconciliation period may not be carried over to the next 12-month period. The Eligible Customer-Generator shall not be compensated for excess kilowatt-hours produced unless the Eligible Customer-Generator enters into a purchase power agreement with KIUC.

### Net Electricity Consumer

At the end of each monthly billing period, where the electricity supplied by KIUC exceeds the electricity generated by the Eligible Customer-Generator and any unused credits for excess electricity carried over from prior months since the last 12-month reconciliation period, the customer-generator is deemed a net electricity consumer. The Eligible Customer-Generator shall be charged for the net kilowatt-hours consumed based on KIUC's applicable rate schedule.

## **SECTION 7. NOTICE**

An Eligible Customer-Generator shall provide KIUC with 30-day advance written notice of any proposed changes made to its facility (e.g., a change in ownership or an increase in capacity). If a facility changes ownership, KIUC may require re-certification by the new owner.

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#### **SECTION 8. INDEMNFICATION**

Each party as indemnitor shall hold harmless and indemnify the other party and the directors, officers, authorized agents, and employees of such other party against and from any and all loss and liability for injuries to persons including employees and authorized agents of either party, and damages, including property of either party, resulting from or arising out of the engineering, design, construction, maintenance, or operation of, or the making of replacements, additions, or betterments to the indemnitor's facilities which are required for the interconnection and parallel operation of the Eligible Customer-Generator facility with KIUC's electric system and the generation of energy by the Eligible Customer-Generator. Neither party shall be indemnified for liability or loss resulting from its sole negligence or willful misconduct. Nothing in this agreement shall create any duty to, any standard of care with reference to, or any liability to any person not a party to it.

#### **SECTION 9. PERSONNEL AND SYSTEM SAFETY**

If at any time KIUC determines that the continued operation of the Eligible Customer-Generator facility may endanger any person or property, KIUC's electric system, or have an adverse effect on the safety or power quality of other customers, KIUC shall have the right to disconnect the Eligible Customer-Generator facility from KIUC's electric system. The Eligible Customer-Generator facility shall remain disconnected until such time as KIUC is satisfied that the endangering or power quality condition(s) has been corrected, and KIUC shall not be obligated to accept any energy from the Eligible Customer-Generator during such period. KIUC shall not be liable directly or indirectly for permitting or continuing to allow an attachment of a net energy metering facility or for the acts or omissions of the Eligible Customer-Generator that cause loss or injury, including death, to any third party.

### SECTION 10. ADDITIONAL INFORMATION

KIUC reserves the right to require additional information, where necessary, to serve the Eligible Customer-Generator under net energy metering service.

## **SECTION 11. TERM**

This agreement shall become effective upon execution by the Eligible Customer-Generator and KIUC, and shall continue in effect on a month-to-month basis. The Eligible Customer-Generator may terminate this agreement at any time. KIUC may terminate this agreement at any time if the Eligible Customer-Generator fails to comply with the terms of this NEM Agreement, Interconnection Agreement or other applicable tariff requirements or meet the definition of Eligible Customer-Generator under KIUC's Rule No. 17.

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## **SECTION 12. CUSTOMER-GENERATOR SIGNATURE**

I agree to be bound by the terms and conditions of this NEM Agreement, and I understand that all aspects of billing for electric service will conform to existing KIUC rules, the Commission's orders and rules, and the provisions of all applicable Hawaii laws, as may be amended from time to time. I also certify that, to the best of my knowledge, all the information provided in this agreement is true and correct. I also understand that I am required to pay the applicable application fee.

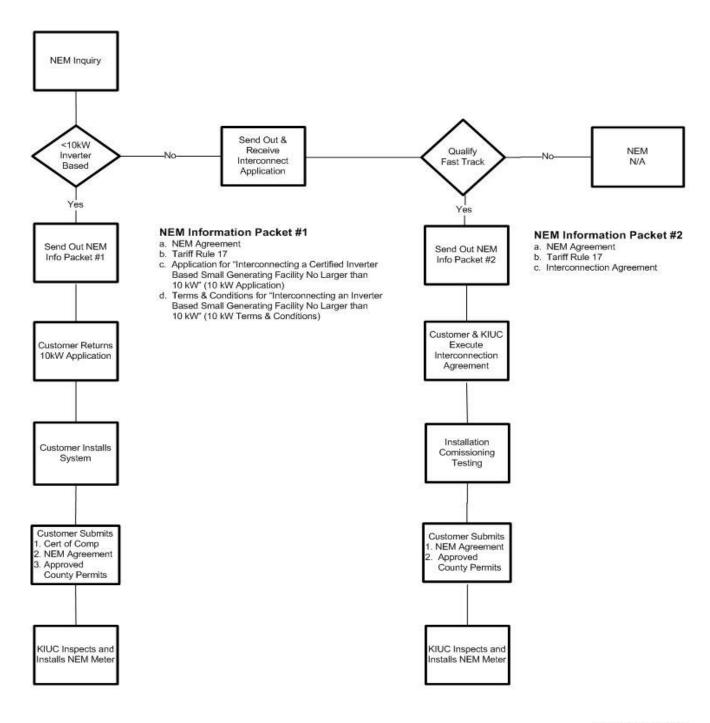
agreement is true and correct. I also understa application fee.	and that I am required to pay the applicable
Customer-Generator:	Date:
SECTION 13. KAUAI ISLAND UTILITY COOPER	RATIVE SIGNATURE
I hereby acknowledge receipt and completeness of	of the NEM Agreement.
KIUC Representative:	
Title:	Date:

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By: Randall J. Hee, President
and Chief Executive Officer

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#### **EXHIBIT C OF RULE NO. 17**

# **KIUC Net Energy Metering Process**



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