



May 6, 2013

The Honorable Chair and Members of the  
Hawaii Public Utilities Commission  
465 South King Street  
Kekuanaoa Building, Room 103  
Honolulu, HI 96813  
Attention: Kaiulani Kidani Shinsato, Esq.

**FILED**  
2013 MAY - 8 P 12:59  
PUBLIC UTILITIES  
COMMISSION

Re: Docket No. 2007-0008 – In the Matter of Public Utilities  
Commission Instituting a Proceeding to Examine Hawaii's  
Renewable Portfolio Standards Law, Hawaii Revised Statutes  
("HRS") §§ 269-91 – 269-95, as Amended by Act 162, Session  
Laws of Hawaii 2006: Kauai Island Utility Cooperative's ("KIUC's")  
2012 Annual Renewable Portfolio Standards ("RPS") Status Report

Dear Commissioners and Commission Staff:

Please find enclosed KIUC's Annual RPS Status Report for the year ending  
December 31, 2012 ("2012 RPS Report").

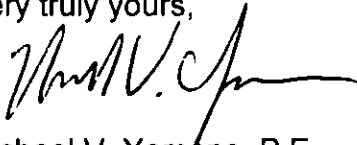
As shown in the attached 2012 RPS Report, renewable energy resources and  
energy savings supplied 16.64% of KIUC's net electricity sales during the 2012 calendar  
year. This exceeds the year 2010 RPS goal of 10.0% to be achieved by each electric  
utility as established by HRS § 269-92(a)(1), as amended.

The attached 2012 RPS Report also includes a breakdown of the renewable  
energy resources on Kauai comprising the 16.64% RPS for 2012 and the RPS reached  
in 2005, 2006, 2007, 2008, 2009, 2010 and 2011. Also included in said report is a  
discussion of KIUC's commitment to continue to increase the growth of renewable  
energy and energy savings on Kauai.

The Honorable Chairman and Members of the  
Hawaii Public Utilities Commission  
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We thank you for your consideration of this matter. If you should have any questions concerning this report, please call me at (808) 246-8208.

Very truly yours,

A handwritten signature in black ink, appearing to read "Michael V. Yamane". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Michael V. Yamane, P.E.  
Chief of Operations

Enclosure

cc: Kent Morihara  
Consumer Advocate (2)  
Ms. Darcy Endo-Omoto  
Mr. Dean Matsuura  
Mr. Jay Ignacio  
Mr. Edward Reinhardt  
Thomas W. Williams, Jr., Esq.  
Craig I. Nakanishi, Esq.  
Mr. David Bissell  
Mr. Timothy Blume  
Mr. Warren S. Bollmeier, II  
Mr. Henry Q. Curtis

# Kauai Island Utility Cooperative Renewable Portfolio Standards (RPS) Status Report Year Ending December 31, 2012

## KIUC RPS Results for 2012

Kauai Island Utility Cooperative (KIUC or Company) achieved a Renewable Portfolio Standard (RPS) percentage of 16.64% for calendar year 2012. This exceeds the State of Hawaii's 2010 RPS requirement of meeting 10% of KIUC's net electricity sales with electrical energy generated and/or displaced by renewable resources.<sup>1</sup> In addition to meeting the 2010 required RPS percentage of net electricity sales, KIUC has also met the requirement that at least 50% of its RPS be met by electrical energy generated using renewable energy as the source.<sup>2</sup>

KIUC met the electrical energy needs of its customers with a combination of Company-owned fossil fueled generation, Company-owned renewable generation, and non-firm (100% renewable) power purchases<sup>3</sup>. In addition to this generated electricity, Photovoltaic (PV) systems and Demand Side Management (DSM) measures, including Solar Water Heating (SWH), also supplied some of KIUC consumers' energy needs, while at the same time, displacing fossil-fuel generated power. The portion of the RPS met by electrical energy generated using renewable energy as the source was 40,793 megawatt-hours, which is greater than 50% of the total 2012 10% RPS requirement of 43,315 megawatt-hours (MWh).<sup>4</sup> Exhibit A, attached hereto, illustrates how KIUC met the energy needs of its approximately 36,000 accounts.

In 2012, KIUC achieved an RPS percentage of 16.64%, which is 1.95% more than KIUC's 2011 RPS percentage of 14.69%. This is due to the following:

1. A full year of solar production from Kapaa Solar, which began operation in February 2011.

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<sup>1</sup> Hawaii Revised Statutes (HRS) § 269-92(a)(1).

<sup>2</sup> HRS § 269-92(b).

<sup>3</sup> KIUC has nine non-firm power purchase contracts to purchase excess electrical power from Gay & Robinson (G&R) (hydro), Kauai Coffee (hydro), Kekaha Agriculture Association (KAA) (hydro), Green Energy Team (hydro), Green Energy Team (biomass), Pioneer (solar), Kapaa Solar (solar), McBryde Resources (solar), and MP2 Kaneshiro (solar). G&R shutdown its sugar operation in 2009 and as such has not generated any biomass-fueled energy since then. Green Energy Team's 6.7 megawatt (MW) biomass project is currently under development and as such KIUC will not receive any energy from it unless and until the plant is completed and commissioned. If built, KIUC anticipates that energy from that plant will not be available until 2014. Both McBryde Resources and MP2 Kaneshiro solar were interconnected in late 2012 and energy sales were not billed until January 2013.

<sup>4</sup> 43,315 MWh is 10% of KIUC's annual MWh sales of 433,159.

2. Significant addition of customer-sited photovoltaic systems.
3. Continued success integrating DSM technologies.

### **KIUC Future RPS Activities**

While KIUC exceeded the 2010 RPS goal of 10%, the Company is committed to even further increasing the growth of renewable energy and energy savings. To accomplish this, KIUC is undertaking the following:

1. On July 18, 2011, KIUC signed a Purchase Power Agreement (PPA) for purchase of electricity generated from the 6 MW McBryde Resources PV facility. The Hawaii Public Utilities Commission (Commission) approved the PPA on March 16, 2012, and the project began operation in late December 2012. This facility will provide approximately 2-3% of KIUC's current annual energy requirements.
2. Two 1.5 MW battery energy storage systems have been purchased to support the integration of the McBryde Resources 6 MW PV facility, the continued integration of customer generation, and to provide additional system support.
3. On September 29, 2011 the Commission approved KIUC's expenditures for the Smart Grid Project. KIUC has installed about 28,600 smart meters to date, and expects to complete the installation portion of the project by May 2013.
4. On November 29, 2012, the Commission approved KIUC's application to develop a 12 MW PV facility to be located in Anahola. KIUC expects to start construction of this facility in late 2013, and begin operation in mid-2014. This facility will provide approximately 5% of KIUC's current annual energy requirements.
5. On December 19, 2012, KIUC filed an application with the Commission to develop a second 12 MW PV project, to be located in Koloa. If approved, this facility will provide approximately 5% of KIUC's current annual energy requirements.
6. On January 12, 2011, KIUC announced a hydro development partnership with Free Flow Power to permit and investigate island wide hydro electric projects that, if successful, could provide greater than 20% of the island's annual electricity requirements. At this time, it is KIUC's intention to finance and own hydro electric facilities, as such structure will facilitate the lowest possible generation cost to the people of Kauai.
7. On January 25, 2011, KIUC signed a PPA for the purchase of electricity generated from the 6.7 MW Green Energy Biomass-To-Energy facility. The

Commission approved the PPA on October 31, 2011. The project began construction in early 2013 and is expected to begin operation in mid-2014. This facility will provide approximately 10-12% of KIUC's current annual energy requirements.

8. KIUC continues its efforts in securing a long-term water lease from the Department of Land and Natural Resources for the Waiahi hydro-electric facilities.
9. In addition to large utility-scale renewable energy projects, KIUC also recognizes the importance of small-scale PV, SWH, and DSM systems in meeting future RPS goals. To this end, KIUC is also continuing its residential energy efficiency programs, commercial retrofit program, and its SWH programs.

### **Conclusion**

KIUC achieved an RPS percentage of 16.64% in 2012, which currently surpasses the 10% by 2010 RPS requirement by 6.64%. With the future activities identified above, KIUC is on target to meet the 2015 RPS requirement of 15%. KIUC recognizes the *benefits that renewable energy and energy savings provide to the visitors, residents, and commercial sectors of Kauai, as well as the positive impacts on global environmental, societal, and economic issues.* As such, KIUC will continue to evaluate, promote, and incorporate renewable energy and energy savings to meet the needs of its members, the Kauai community, and the State.

**Exhibit A**

**KIUC RPS Status Report**

	2005	2006	2007	2008	2009	2010	2011	2012
	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh
1. Net Fossil Generation	413,355	419,451	441,154	417,986	399,325	400,307	392,689	389,180
2. Net Renewable Generation / Electrical Energy Generated Using Renewable Energy As Source <sup>1</sup>								
KIUC Hydro	4,232	4,561	926	7,968	7,454	7,896	6,974	7,591
Gay & Robinson Hydro	3,501	3,921	2,845	2,385	3,574	3,450	4,871	4,142
Kauai Coffee Hydro	26,292	25,613	20,612	22,149	21,756	18,296	21,208	23,038
KAA Hydro	3,466	3,024	2,079	3,106	4,141	4,374	5,457	3,775
Green Energy Hydro					5	189	407	366
Pioneer Solar							21	23
Kapaa Solar							1,468	1,858
<b>Total</b>	<b>37,491</b>	<b>37,120</b>	<b>26,462</b>	<b>35,607</b>	<b>36,930</b>	<b>34,205</b>	<b>40,407</b>	<b>40,793</b>
3. Electrical Energy Savings <sup>2</sup>								
From Renewable Displacement or Off-Set Technologies <sup>3</sup>								
Customer Renewable Generation (own use)	121	153	268	1,712	3,316	4,499	5,176	6,925
From Use of Energy Efficiency Technologies <sup>4</sup>								
Demand Side Management (DSM)	20,855	21,349	21,361	19,233	19,217	16,911	18,264	24,368
<b>Total</b>	<b>20,977</b>	<b>21,502</b>	<b>21,629</b>	<b>20,945</b>	<b>22,533</b>	<b>21,410</b>	<b>23,440</b>	<b>31,293</b>
4. Total Sales / Total Electrical Energy Sales / Net Electricity Sales <sup>5</sup>	448,611	452,080	466,896	453,791	436,273	434,533	434,745	433,159
5. Total Renewable Electrical Energy (Item 2 Total + Item 3 Total)	58,468	58,622	48,091	56,552	59,462	55,615	63,847	72,086
<b>Total / RPS Percentage (Item 5 / Item 4)</b>	<b>13.03%</b>	<b>12.97%</b>	<b>10.30%</b>	<b>12.46%</b>	<b>13.63%</b>	<b>12.80%</b>	<b>14.69%</b>	<b>16.64%</b>
<b>Percent of Net Electricity Sales supplied by Item 2 Above</b>	<b>8.36%</b>	<b>8.21%</b>	<b>5.67%</b>	<b>7.85%</b>	<b>8.46%</b>	<b>7.87%</b>	<b>9.29%</b>	<b>9.42%</b>
<b>Percent of Net Electricity Sales supplied by Item 3 Above</b>	<b>4.68%</b>	<b>4.76%</b>	<b>4.63%</b>	<b>4.62%</b>	<b>5.16%</b>	<b>4.93%</b>	<b>5.39%</b>	<b>7.22%</b>

<sup>1</sup> Renewable electrical energy generated via power purchase agreements with independent power producers is based on recorded data of the energy generated from the power producer facility, which is typically the net electricity energy sold to the utility. Pursuant to the definition of "renewable electrical energy" under HRS Section 269-91, this will not include customer-sited, grid-connected renewable energy generation (i.e., net energy metering, Schedule Q) until January 1, 2015.

<sup>2</sup> Pursuant to HRS Section 269-92(b)(2), beginning January 1, 2015, electrical energy savings shall not count toward the RPS.

<sup>3</sup> Pursuant to HRS Section 269-91, under the definition of "Renewable electrical energy," these types of technologies include solar water heating, sea-water air-conditioning district cooling systems, solar air-conditioning, and customer-sited, grid-connected renewable energy systems. Beginning January 1, 2015, this shall not include electrical energy savings brought about by customer-sited, grid-connected renewable energy systems.

Pursuant to Section III A.3. of the RPS Framework: "Electrical energy savings brought about by the use of renewable displacement or off-set technologies shall be determined using actual recorded energy produced by the displacement or off-set technologies, if that information is available to the utility, and the corresponding estimated electrical savings. Where the recorded energy produced by the displacement or off-set technologies is not available to the utility, as in the case of customer-sited renewable energy systems, the utility may make reasonable estimates of the energy produced by such systems, and provide an explanation of the calculation of the estimates. The electrical energy savings shall be expressed at a comparable level to the electrical energy generated using renewable energy sources (i.e., at the net generation level)."

<sup>4</sup> Pursuant to HRS Section 269-91, under the definition of "Renewable electrical energy," energy efficiency technologies include heat pump water heating, ice storage, ratepayer-funded energy efficiency programs, and use of rejected heat from co-generation and combined heat and power systems, excluding fossil-fueled qualifying facilities that sell electricity to electric utility companies and central station power projects.

Pursuant to Section III A.4. of the RPS Framework: "Electrical energy savings brought about by the use of energy efficiency technologies shall be determined using the actual gross energy savings (i.e., gross of (including) free-riders) reported by the utility or third-party DSM administrator in its annual DSM program report to the Commission excluding any electrical energy savings brought about by the use of renewable displacement or off-set technologies. The electrical energy savings shall be expressed at a comparable level to the electrical energy generated using renewable energy sources (i.e., at the net generation level)."

<sup>5</sup> Pursuant to Section I of the RPS Framework "total electrical energy sales" or "net electricity sales" means the total MWhs of electrical energy sold by a utility to its customers during a given year. KIUC notes that Item 1 (Net Fossil Generation) plus Item 2 (Net Renewable Generation) does not equal Item 4 (Net Electricity Sales). This is because currently and until January 1, 2015, and as required by HRS § 269-91, Item 2 (Net Renewable Generation) does not include customer-sited, grid-connected renewable energy generation (e.g., energy generated and exported to KIUC by NEM, NEM Pilot, and Schedule Q customers). However, KIUC's sales of such customer-sited, grid-connected renewable energy generation are included in Item 4 (Net Electricity Sales).