Kaua`i Island Utility Cooperative
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PUBLIC UTILITIES COMMISSION

March 31, 2016

The Honorable Chair and Members of the
Hawaii Public Utilities Commission
465 South King Street
Kekuanaoa Building, Room 103
Honolulu, HI 96813

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") 2015 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, 2015 ("2015 RPS Report").

As shown in the attached 2015 RPS Report, renewable energy resources and energy savings supplied 27.32% of KIUC's net electricity sales during the 2015 calendar year. This exceeds the year 2015 RPS goal of 15.0% to be achieved by each electric utility as established by HRS § 269-92(a)(1), as amended.

The attached 2015 RPS Report also includes a breakdown of the renewable energy resources on Kauai comprising the 27.32% RPS for 2015 and the RPS reached in 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 and 2014. 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.

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,

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

Enclosure

cc: Kent Morihara
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Kauai Island Utility Cooperative
Renewable Portfolio Standards (RPS) Status Report
Year Ending December 31, 2015

KIUC RPS Results for 2015

Kauai Island Utility Cooperative (KIUC or Company) achieved a Renewable Portfolio Standard (RPS) percentage of 27.32% for calendar year 2015. This exceeds the State of Hawaii's 2015 RPS requirement of meeting 15% of KIUC's net electricity sales with electrical energy generated and/or displaced by renewable resources.[1] As of January 1, 2015, all of KIUC's 2015 RPS of 27.32% was be met by electrical energy generated using renewable energy as the source.[2]

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 and firm (100% renewable) power purchases.[3] 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. As of January 1, 2015, these sources are no longer counted toward KIUC's RPS. The portion of the RPS met by electrical energy generated using renewable energy as the source was 118,026 megawatt-hours (MWh), which is greater than the 2015 15% RPS requirement of 64,812 MWh.[4] Exhibit A, attached hereto, illustrates how KIUC met the energy needs of its approximately 36,000 accounts.

KIUC's 2015 RPS percentage of 27.32% is 4.86% more than KIUC's 2014 RPS percentage of 22.46%. This is due to the following:

1. A full years' production from the 12 megawatt (MW)ac KRS2 Koloa Solar project which began operation in July 2014.

2. The addition of the 12 MWac KRS1 Anahola Solar project which began operation in October 2015.

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[1] Hawaii Revised Statutes (HRS) § 269-92(a)(2).

[2] See HRS § 269-92(b).

[3] KIUC has ten non-firm power purchase contracts to purchase electrical power from Gay & Robinson (G&R) (hydro), Kauai Coffee (hydro), Kekaha Agriculture Association (KAA) (hydro), Green Energy Team (hydro), Pioneer (solar), Kapaa Solar (solar), McBryde Resources (solar), MP2 Kaneshiro (solar), KRS2 Koloa Solar (solar), and KRS1 Anahola Solar (solar). KIUC also has one firm purchase power contract, Green Energy Team (biomass). G&R shutdown its sugar operation in 2009 and as such has not generated any biomass-fueled energy since then.

[4] 64,812 MWh is 15% of KIUC's annual sales of 432,078 MWh.

3. Significant addition of customer-sited solar systems.

KIUC Future RPS Activities

While KIUC exceeded the 2015 RPS goal of 15%, 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 January 25, 2011, KIUC signed a Power Purchase Agreement (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 first produced energy in April 2015, but did not provide a significant amount of energy during 2015 due to pre-commissioning issues. The facility achieved commercial operation on January 11, 2016 and has been operating reliably for all of 2016 to date. This facility, given a full year of production in 2016, is expected to increase KIUC's annual RPS by about ten percentage points (i.e. from approximately 27% to approximately 37%).

2. On November 29, 2012, the Commission approved KIUC's application to develop a 12 MW PV facility (aka, KRS1 Anahola Solar project) to be located in Anahola. KIUC began construction of this facility in June 2014, and the facility achieved commercial operation in October 2015. This facility, given a full year of production in 2016, is expected to increase KIUC's annual RPS by about three percentage points (i.e. from approximately 37% to approximately 40%).

3. On September 9, 2015, KIUC signed a PPA with SolarCity for the purchase of electricity generated from the Kapaia Solar and Battery facility. The Commission approved the PPA on February 26, 2016. The project is expected to begin construction in May 2016, and be in-service before the end of 2016. This facility, given a full year of production in 2017, is expected to increase KIUC's annual RPS by about five percentage points (i.e. from approximately 40% to approximately 45%).

4. On July 3, 2014, KIUC signed a PPA with Gay & Robinson for the purchase of electricity generated from a new hydroelectric facility. The Commission approved the PPA on March 14, 2016. The project is expected to begin construction in 2017 and be in service by 2019. This facility, given a full year of production in 2019, is expected to increase KIUC's annual RPS by about five percentage points (i.e. from approximately 45% to approximately 50%).

5. Following the Federal ITC extension, KIUC continues to investigate additional solar plus storage projects that, if successful, could provide an additional ten to twenty percentage points toward KIUC's annual RPS in 2019.

6. 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, to ensure that existing hydroelectric resources continue to contribute to KIUC's RPS.

7. In addition to large utility-scale renewable energy projects, KIUC also recognizes the importance of small-scale PV, SWH, and DSM systems, despite not being able to count these projects toward future RPS goals. To this end, KIUC is also continuing its residential energy efficiency programs, commercial retrofit program, and its SWH programs.

Conclusion

KIUC's 2015 RPS percentage of 27.32% surpasses the 15% by 2015 RPS requirement by 12.32%. With current renewable energy sources and the future activities identified above, KIUC is on target to exceed the next RPS requirements of 30% by 2020 and 40% by 2030. 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 MWh	2006 MWh	2007 MWh	2008 MWh	2009 MWh	2010 MWh	2011 MWh	2012 MWh	2013 MWh	2014 MWh	2015 MWh
1. Net Fossil Generation	413,355	419,451	441,154	417,986	399,325	400,307	392,689	389,180	376,778	360,103	335,162
2. Net Renewable Generation / Electrical Energy Generated Using Renewable Energy As Source[1]											
KIUC Hydro	4,232	4,561	926	7,968	7,454	7,896	6,974	7,591	8,063	7,598	6,961
Gay & Robinson Hydro	3,501	3,921	2,845	2,385	3,574	3,450	4,871	4,142	3,355	2,878	3,051
Kauai Coffee Hydro	26,292	25,613	20,612	22,149	21,756	18,296	21,208	23,038	18,501	18,693	19,566
KAA Hydro	3,466	3,024	2,079	3,106	4,141	4,374	5,457	3,775	3,154	4,922	3,915
Green Energy Hydro					5	189	407	366	278	200	153
Pioneer Solar							21	23	22	372	434
Kapaa Solar							1,468	1,858	1,827	1,759	1,787
MP2 Kaneshiro Solar									530	535	547
McBryde Solar									11,945	11,393	10,772
KRS2 Koloa Solar										10,042	20,654
KRS1 Anahola Solar											6,456
Green Energy Biomass											5,465
NEM											1,256
NEM Pilot											3,601
Larger Systems (No Buyback)											6,912
Schedule Q											26,497
Total	37,491	37,120	26,462	35,607	36,930	34,205	40,407	40,793	47,674	58,392	118,026
3. Electrical Energy Savings[2]											
From Renewable Displacement or Off-Set Technologies[3]											
Customer Renewable Generation (own use)	121	153	268	1,712	3,316	4,499	5,176	6,925	11,710	16,810	0
From Use of Energy Efficiency Technologies[4]											
Demand Side Management (DSM)	20,855	21,349	21,361	19,233	19,217	16,911	18,264	24,368	22,441	21,370	19,947
Total	20,976	21,502	21,629	20,945	22,533	21,410	23,440	31,293	34,151	38,180	19,947
4 Total Sales / Total Electrical Energy Sales / Net Electricity Sales[5]	448,611	452,080	466,896	453,791	436,273	434,533	434,745	433,159	431,478	429,924	432,078
5. Total Renewable Electrical Energy (2015 & after: Item 2 Total; pre-2015: Item 2 Total + Item 3 Total)	58,467	58,622	48,091	56,552	59,463	55,615	63,847	72,086	81,825	98,572	118,026
Total / RPS Percentage (Item 5 / Item 4)	**13.03%**	**12.97%**	**10.30%**	**12.46%**	**13.63%**	**12.80%**	**14.69%**	**16.64%**	**18.96%**	**22.46%**	**27.32%**
Percent of Net Electricity Sales supplied by Item 2 Above	**8.36%**	**8.21%**	**5.67%**	**7.85%**	**8.46%**	**7.87%**	**9.29%**	**9.42%**	**11.05%**	**13.58%**	**27.32%**
Percent of Net Electricity Sales supplied by Item 3 Above	**4.68%**	**4.76%**	**4.63%**	**4.62%**	**5.16%**	**4.93%**	**5.39%**	**7.22%**	**7.91%**	**8.88%**	**4.62%**

[1] 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, adjusted downward for system losses. Pursuant to the definition of "renewable electrical energy" under HRS Section 269-91, beginning January 1, 2015, this includes customer-sited, grid-connected renewable energy generation (e.g., net energy metering, Schedule Q).

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

[3] 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 (up until, but not on or after January 1, 2015) 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)."

[4] 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)."

[5] 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 prior to January 1, 2015, and as required by HRS § 269-91, Item 2 (Net Renewable Generation) did not include customer-sited, grid-connected renewable energy generation. Beginning January 1, 2015, Item 2 (Net Renewable Generation) includes customer-sited, grid-connected renewable energy generation, including exported energy and behind-the-meter energy. KIUC's sales of such customer-sited, grid-connected renewable energy generation (i.e. only the exported portion) are included in Item 4 (Net Electricity Sales).