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


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.


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KIUC is an equal opportunity provider and employer.
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,

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

Enclosure

cc: Kent Morihara
    Consumer Advocate (3)
    Mr. Joseph Viola
    Mr. Dean Matsuura
    Mr. Jay Ignacio
    Ms. Sharon Suzuki
    Thomas W. Williams, Jr., Esq.
    Craig I. Nakanishi, Esq.
    Mr. David Bissell
    Mr. Timothy Blume
    Mr. Warren S. Bollmeier, II
    Mr. Henry Q. Curtis
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 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.
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.
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1. **Net Fossil Generation**


2. **Net Renewable Generation / Electrical Energy Generated Using Renewable Energy As Source**

3. **Electrical Energy Savings**

| 20,976 | 21,502 | 21,629 | 20,945 | 22,533 | 21,410 | 23,440 | 31,293 | 34,151 | 38,180 | 19,947 | 43,207 |

Exhibit A

- **Net Fossil Generation**
  - KIUC Hydro: 4,232
  - Gay & Robinson Hydro: 3,501
  - Kauai Coffee Hydro: 28,292
  - KAA Hydro: 3,499
  - Green Energy Hydro: 0
  - Pioneer Solar: 21
  - Kapaa Solar: 1,468
  - MP2 Kauai Solar: 535
  - McBryde Solar: 11,945
  - KRS2 Kolea Solar: 10,042
  - KRS1 Anahola Solar: 6,456
  - Green Energy Biomass: 5,465
  - NEM: 1,398
  - NEM Pilot: 3,801
  - Larger Systems (No Buyback): 6,912
  - Schedule Q: 26,497
  - **Total**: 37,491

- **Total Renewable Electrical Energy**
  - From Renewable Displacement or Off-Set Technologies:
    - Customer Renewable Generation (own use): 121
    - From Use of Energy Efficiency Technologies:
      - Demand Side Management (DSM): 20,855
  - **Total**: 20,976

- **Total Sales / Total Electrical Energy Sales / Net Electricity Sales**
  - **Total**: 448,011

- **Percent of Net Electricity Sales supplied by Item 2 Above**
  - 8.36%

- **Percent of Net Electricity Sales supplied by Item 3 Above**
  - 4.68%

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 269-91, 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.

4. Pursuant to Section II.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)."

5. 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.

6. 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.

7. 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) does not equal Item 2 (Net Renewable Generation) plus Item 2 Total, 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).