



May 26, 2011

Darcy L. Endo-Omoto  
Vice President  
Government & Community Affairs

The Honorable Chair and Members of  
the Hawaii Public Utilities Commission  
465 South King Street  
Kekuanaoa Building, 1st Floor  
Honolulu, Hawaii 96813

FILED  
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PUBLIC UTILITIES  
COMMISSION

Dear Commissioners:

Subject: Docket No. 2007-0008  
Renewable Portfolio Standards Law Examination

In accordance with Decision and Order No. 23912 and the Framework for Renewable Portfolio Standards, issued December 20, 2007, attached is the Renewable Portfolio Standard Status Report for the year ended December 31, 2010 for Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc. and Maui Electric Company, Limited.

Sincerely,

Attachment

cc: Division of Consumer Advocacy  
R. J. Hee/T. Blume  
H. Curtis  
W. S. Bollmeier II

# 2010 Renewable Portfolio Standard Status Report

**Hawaiian Electric Company, Inc.  
Hawaii Electric Light Company, Inc.  
Maui Electric Company, Limited**

**For the Year Ended December 31, 2010**

This report was prepared pursuant to the Framework for Renewable Portfolio Standards issued by the Hawaii Public Utilities Commission (“Commission”) on December 19, 2008 (Order Relating to RPS Penalties, Docket No. 2007-0008).

Hawaiian Electric Company and its subsidiaries, Hawaii Electric Light Company and Maui Electric Company (collectively, the “Hawaiian Electric Companies”), have achieved a consolidated Renewable Portfolio Standard (RPS) of 20.7 percent in 2010. This is an increase from the 19.0 percent achieved in 2009 and is primarily the result of the additional energy efficiency demand-side management (“DSM”) implemented in 2010 and increased installations of solar water heating and photovoltaic systems. In 2010, renewable energy generation totals were hampered by lower generation output from biomass and hydroelectric resources.

New DSM program participants in 2010 contributed approximately 111,263 megawatt-hours of additional electrical energy savings.<sup>1</sup> Also, approximately 788,246 megawatt-hours of electrical energy savings in 2010 came from participants in the Hawaiian Electric Companies’ and Public Benefits Fee Administrator’s (“PBFA’s”) energy efficiency DSM programs from previous years that continue to save electricity. DSM continues to achieve significant energy conservation benefits.

This report shows that the Hawaiian Electric Companies have exceeded the 2010 RPS compliance percentage of 10% required by Hawaii law. However, achieving higher RPS percentages beyond 2010 will have its challenges since the current RPS law, which became effective on July 1, 2009, will not allow the electrical energy savings from energy efficiency and solar water heating technologies to count towards the RPS from January 1, 2015 (the 2015 RPS target is 15%, the 2020 RPS target is 25% and the 2030 RPS target is 40%). Excluding electrical energy savings from energy efficiency and solar water heating technologies, the 2010 RPS for the Hawaiian Electric Companies is 9.5% compared to the 20.7% stated above. This 9.5% figure represents how the RPS will be calculated in 2015 when the RPS calculation will be based only on renewable energy generation and customer-sited grid-connected renewable energy.<sup>2</sup>

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<sup>1</sup> On February 13, 2007, the Commission issued Decision and Order No. 23258 in the Energy Efficiency proceeding (Docket No. 05-0069). The Commission ordered that the administration of energy efficiency programs transition to a non-utility third-party administrator, funded through a public benefits fund surcharge, to become effective around January 2009. Effective July 1, 2009, the administration of the Hawaiian Electric Companies’ energy efficiency DSM programs was transitioned to the Public Benefits Fee Administrator, Hawaii Energy (R. W. Beck / SAIC). Therefore, energy efficiency program impacts claimed in 2010 are based on the combination of the Hawaiian Electric Companies’ records for customers who participated in the Hawaiian Electric Companies’ programs prior to July 1, 2009 and impact estimates provided by Hawaii Energy (R. W. Beck / SAIC) following the transition.

<sup>2</sup> On April 25, 2011, Act 010 (S.B. No. 1346 SD2) Relating to Renewable Portfolio Standards was signed into law. Act 010 amends the definition of “renewable electrical energy” to include, beginning January 1, 2015, customer-sited, grid-connected renewable energy generation (currently represented on the attached 2010 RPS Summary Report as “Photovoltaic Systems” under Renewable Displacement Technologies). The RPS value of 9.5% represents the electrical energy generated from Renewable Energy Sources and Photovoltaic Systems as a percentage of Total Sales.



In 2010, the Hawaiian Electric Companies continued to position themselves to increase their renewable energy portfolio. A new 30 MW wind farm at Kahuku on the island of Oahu delivered energy during its commissioning period in 2010 and went into commercial operation in 2011. The Hawaiian Electric Companies also launched their Feed-in-Tariff (“FIT”) Tier 1 and Tier 2 programs in November 2010 to encourage the addition of more renewable energy projects in Hawaii. Commission approvals were obtained in 2009 and 2010 for an 8 MW Airport Dispatchable Standby Generation project on Oahu, which is anticipated to begin commercial operation on biofuel in 2012. In 2010, the Hawaiian Electric Companies also submitted for approval the power purchase agreements for a 21 MW wind power project on Maui and a 6.2 MW waste-to-energy project on Oahu.<sup>3</sup> In 2011, the Hawaiian Electric Companies have also filed several applications for Commission approval for new renewable energy contracts that will grow the renewable energy portfolio.<sup>4</sup>

Integrating additional amounts of intermittent renewable generation while preserving stable electric grids and converting existing fossil fuel generating units to biofuels are essential elements of the Hawaiian Electric Companies’ plans to meet the future RPS requirements. Siting renewable facilities continues to be a challenge in many communities and federal and state tax credits and incentives remain important in the development of renewable projects. Approvals and implementation of power purchase agreements, biofuel contracts, and other mechanisms for renewable energy projects such as a renewable energy surcharge provision will also play a key role. It will take a concerted effort by all stakeholders to meet the State’s RPS requirements and achieve a clean energy future. The Hawaiian Electric Companies look forward to working together to help Hawaii achieve these important objectives.

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<sup>3</sup> The Commission has since approved these power purchase agreements. The Honua Power agreement was approved on January 19, 2011 in Docket No. 2010-0010, and the Kaheawa Wind Power II agreement was approved on February 11, 2011 in Docket No. 2010-0279.

<sup>4</sup> Applications filed in 2011 (to-date) for Commission approval include Aina Koa Pono-Ka’u LLC Biofuel Contract (1/6/2011), IC Sunshine 5 MW photovoltaic (1/19/2011), Puna Geothermal Venture 8MW additional firm capacity (2/25/2011), Kalaeloa Solar Two 5 MW photovoltaic (3/9/2011), and Auwahi 21 MW wind (3/17/2011).



## 2010 Renewable Portfolio Standard Status Report

Hawaiian Electric Company, Inc. (“Hawaiian Electric”)  
Hawaii Electric Light Company, Inc. (“HELCO”)  
Maui Electric Company, Ltd. (“MECO”)

For the Year Ended December 31, 2010  
(In Net Megawatt Hours)

	Hawaiian Electric	HELCO	MECO	TOTAL
<b>Electrical Energy Generated Using Renewable Energy Sources</b>				
Biomass (including waste-to-energy)	314,614		44,238	358,852
Geothermal		201,587		201,587
Photovoltaic <sup>1</sup>		17	1,770	1,787
Hydro		29,189	6,701	35,890
Wind	23	140,956	120,227	261,206
Biofuels	1,575		1,585	3,160
<b>Subtotal</b>	<b>316,212</b>	<b>371,749</b>	<b>174,521</b>	<b>862,482</b>
<b>Electrical Energy Savings Using Renewable Displacement Technologies</b>				
Photovoltaic Systems <sup>2</sup>	28,597	11,873	8,039	48,509
Solar Water Heating <sup>3</sup>				
Utility	115,359	18,427	28,602	162,388
PBFA <sup>4</sup>	7,442	1,145	1,081	9,668
<b>Subtotal</b>	<b>151,398</b>	<b>31,445</b>	<b>37,722</b>	<b>220,565</b>
<b>Electrical Energy Savings Using Energy Efficiency Technologies<sup>5</sup></b>				
Pre-2010 Participants				
Utility	644,566	48,843	87,007	780,416
PBFA	7,489	226	115	7,830
2010 Participants (PBFA)	86,282	13,290	11,691	111,263
<b>Subtotal</b>	<b>738,337</b>	<b>62,359</b>	<b>98,813</b>	<b>899,509</b>
<b>TOTAL</b>	<b>1,205,947</b>	<b>465,553</b>	<b>311,056</b>	<b>1,982,556</b>
<b>TOTAL SALES</b>	<b>7,277,229</b>	<b>1,109,783</b>	<b>1,191,559</b>	<b>9,578,571</b>
<b>RPS PERCENTAGE</b>	<b>16.6%</b>	<b>41.9%</b>	<b>26.1%</b>	<b>20.7%</b>
<b>RPS Not Counting Energy Efficiency and Solar Water Heating<sup>6</sup></b>	<b>4.7%</b>	<b>34.6%</b>	<b>15.3%</b>	<b>9.5%</b>



<sup>1</sup> Renewable electrical energy generated by photovoltaic systems are based on recorded data of Independent Power Producers with power purchase agreements.

<sup>2</sup> Savings from photovoltaic systems are based on known system installations for 2010 including Net Energy Metering (“NEM”) installations, non-NEM systems, and Sun Power for Schools installations. Recorded generation data was used when available. For systems where recorded data was not available, estimates were made based on reasonable performance assumptions for typical photovoltaic systems.

<sup>3</sup> Savings from solar water heating systems were based upon the number of rebates paid through the program and an estimated savings per system based on the periodic evaluation of the program. Utility Data is through June 2009, and Public Benefits Fee Administrator (“PBFA”) Data is from July 2009 through 2010.

<sup>4</sup> The PBFA in 2009 through 2010 is Hawaii Energy (R. W. Beck / SAIC).

<sup>5</sup> Savings from the energy efficiency technologies are based upon the annualized system energy savings for all participants in the utility’s demand-side management (“DSM”) programs excluding solar water heating, which is listed under the Renewable Displacement Technologies. Utility Data is through June 2009, and PBFA Data is from July 2009 through 2010. The energy savings from the utility DSM programs are reported to the Public Utilities Commission (“Commission”) and the Consumer Advocate and are verified by an independent consultant whose evaluation reports are also filed with the Commission and the Consumer Advocate. The energy savings from the PBFA are provided by Hawaii Energy (R. W. Beck / SAIC).

<sup>6</sup> Beginning January 1, 2015, electrical energy savings from Energy Efficiency and Solar Water Heating technologies shall not count toward RPS standards. On April 25, 2011, Act 010 (S.B. No. 1346 SD2) Relating to Renewable Portfolio Standards was signed into law. Act 010 amends the definition of “renewable electrical energy” to include, beginning January 1, 2015, customer-sited, grid-connected renewable energy generation (currently represented on the attached 2010 RPS Summary Report as “Photovoltaic Systems” under Renewable Displacement Technologies). This RPS value represents the electrical energy generated from Renewable Energy Sources and Photovoltaic Systems as a percentage of Total Sales.

