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Regulatory Affairs

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PUBLIC UTILITIES  
COMMISSION

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

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, 2013 for Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc. and Maui Electric Company, Limited.

Very truly yours,

Attachment

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

# **2013 Renewable Portfolio Standard Status Report**

**Hawaiian Electric Company, Inc.  
Hawai'i Electric Light Company, Inc.  
Maui Electric Company, Limited**

**For the Year Ended December 31, 2013**

This report was prepared pursuant to the Framework for Renewable Portfolio Standards, which was adopted by the Hawaii Public Utilities Commission ("Commission") in Docket No. 2007-0008.<sup>1</sup>

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 34.4% in 2013, including the electrical energy savings from energy efficiency and solar water heating technologies. This is an increase from the 28.7% achieved in 2012 and is primarily the result of the increased energy from renewable energy sources (biomass, geothermal, photovoltaic, hydro, wind, and biofuels), additional energy from customer-sited grid-connected technologies (primarily photovoltaic systems), and additional energy efficiency demand-side management ("DSM") implemented in 2013 (including increased installations of solar water heating systems).

New DSM program participants in 2013 contributed approximately 127,799 megawatt-hours of additional electrical energy savings.<sup>2</sup> Also, approximately 1,169,764 megawatt-hours of electrical energy savings in 2013 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.

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 2013 renewable generation percentage for the Hawaiian Electric Companies is 18.2%. This renewable generation figure approximates 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>3</sup>

<sup>1</sup> The Framework for Renewable Portfolio Standards was adopted by Decision and Order No. 23912, issued December 20, 2007, and revised by the Commission on December 19, 2008 (Order Relating to RPS Penalties).

<sup>2</sup> Energy efficiency program impacts claimed in 2013 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. Hawaii Energy provided data for customer level energy efficiency impacts by program category reported during calendar year 2013. This data was used to calculate electrical energy savings for new 2013 PBFA participants.

<sup>3</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 2012 RPS Summary Report as "Customer-Sited, Grid-Connected" under Renewable Displacement Technologies). The RPS value of 18.2% represents the electrical energy generated from Renewable Energy Sources and Customer-Sited, Grid-Connected renewable energy as a percentage of Total Sales.



The Hawaiian Electric Companies continued to position themselves to increase their renewable energy portfolio. In calendar year 2013, new Net Energy Metering installations totaled 107.0 MW, new Standard Interconnection Agreement installations totaled 11.7 MW, and new Feed-In Tariff installations totaled 5.1 MW for the Hawaiian Electric Companies. The Hawaiian Electric Companies' Feed-In Tariffs for Tier 1 and Tier 2 ("Schedule FIT Tier 1 and 2") became effective October 22, 2010, and their Feed-In Tariffs for Tier 3 ("Schedule FIT Tier 3") became effective November 22, 2011, which will help to encourage the addition of more renewable energy projects in Hawaii. The total amount of electrical energy generated using renewable energy sources increased by 210,929 megawatt-hours in 2013, a 19.3% increase compared to the previous year. On Oahu, a new 5 MW PV plant began commercial operation and the Kahuku Wind project was able to resume operation in late 2013.

Integrating additional amounts of renewable generation must be undertaken in a way that benefits Hawai'i's economy and all electric customers, and helps maintain affordability of electric rates, and the safety and reliability of service to our customers. There are many complexities to achieving the RPS requirements, including technical, cost, siting, and working with our communities to develop renewable energy facilities. 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 with all stakeholders to help Hawai'i achieve these important objectives.



**2013 Renewable Portfolio Standard Status Report**  
**Hawaiian Electric Company, Inc. ("Hawaiian Electric")**  
**Hawai'i Electric Light Company, Inc. ("Hawai'i Electric Light")**  
**Maui Electric Company, Limited ("Maui Electric")**

**For the Year Ended December 31, 2013**  
*(In Net Megawatt Hours)*

	2013				2012
	Hawaiian Electric	Hawai'i Electric Light	Maui Electric	TOTAL	TOTAL
<b>Electrical Energy Generated Using Renewable Energy Sources</b>					
Biomass (including municipal solid waste)	374,569		41,122	415,691	341,790
Geothermal		281,417		281,417	266,234
Photovoltaic and Solar Thermal <sup>1</sup>	27,303	1,525	5,097	33,924	9,643
Hydro <sup>1</sup>		35,410	4,745	40,155	65,066
Wind <sup>1</sup>	121,691	151,552	230,305	503,548	388,256
Biofuels	28,508		1,281	29,788	22,607
<b>Subtotal</b>	<b>552,071</b>	<b>469,904</b>	<b>282,550</b>	<b>1,304,525</b>	<b>1,093,596</b>
<b>Electrical Energy Savings Using Renewable Displacement Technologies</b>					
Customer-Sited, Grid-Connected <sup>2</sup>	248,938	47,471	47,517	343,926	182,638
Solar Water Heating <sup>3</sup>					
Utility	100,997	16,678	26,774	144,449	159,801
PBFA <sup>4</sup>	21,945	4,628	3,161	29,733	24,910
<b>Subtotal</b>	<b>371,880</b>	<b>68,776</b>	<b>77,452</b>	<b>518,108</b>	<b>367,349</b>
<b>Electrical Energy Savings Using Energy Efficiency Technologies<sup>5</sup></b>					
Pre-2013 Participants					
Utility	630,696	47,065	84,856	762,617	777,640
PBFA	315,955	48,765	42,427	407,147	231,670
2013 Participants (PBFA)	92,516	18,286	16,998	127,799	175,950
<b>Subtotal</b>	<b>1,039,167</b>	<b>114,116</b>	<b>144,281</b>	<b>1,297,564</b>	<b>1,185,260</b>
<b>TOTAL</b>	<b>1,963,119</b>	<b>652,796</b>	<b>504,282</b>	<b>3,120,196</b>	<b>2,646,205</b>
<b>TOTAL SALES</b>	<b>6,858,536</b>	<b>1,076,104</b>	<b>1,134,873</b>	<b>9,069,512</b>	<b>9,205,998</b>
<b>RPS PERCENTAGE</b>	<b>28.6%</b>	<b>60.7%</b>	<b>44.4%</b>	<b>34.4%</b>	<b>28.7%</b>
<b>RENEWABLE GENERATION RPS PERCENTAGE</b>					
<b>(Not Counting Energy Efficiency and Solar Water Heating)<sup>6</sup></b>					
Energy	801,009	517,374	330,067	1,648,451	1,276,234
Percentage	11.7%	48.1%	29.1%	18.2%	13.9%

<sup>1</sup> Renewable electrical energy generated is based on recorded data from FIT contracts and Independent Power Producers with PPAs.

<sup>2</sup> Savings from photovoltaic, wind, and hydro systems are based on known system installations for 2013 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 PBFA Data is from July 2009 through December 2013.

<sup>4</sup> Public Benefits Fee Administrator ("PBFA") in 2009 through 2013 is Hawaii Energy (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 December 2013. The energy savings from the utility DSM programs were reported to the Public Utilities Commission ("Commission") and the Consumer Advocate and were verified by an independent consultant whose evaluation reports are also filed with the Commission and the Consumer Advocate. The energy savings from the PBFA (Public Benefits Fee Administrator) was based on data provided by Hawaii Energy (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.

