

2010-2011

Biennial Conservation Report

Washington

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# Introduction

PacifiCorp’s, d.b.a. Pacific Power & Light Company (“PacifiCorp” or the “Company”) 2010-2011 Biennial Conservation Report is being submitted to the Washington Department of Commerce (“Commerce”) and Washington Utilities and Transportation Commission (“Commission”) in response to reporting requirements established as part of the Energy Independence Act. The report is consistent with chapter 19.285 RCW, section 70 which states:

1. *On or before June 1, 2012, and annually thereafter, each qualifying utility shall report to the department on its progress in the preceding year in meeting the targets established in RCS 19.285.40, including expected electricity savings from the biennial conservation target, expenditures on conservation, actual electricity savings results, the utility’s annual load for the prior two years, the amount of megawatt-hours needed to meet the annual renewable energy target, the amount of megawatt-hours of each type of eligible renewable resource acquired, the type and amount of renewable energy credits acquired, and the percent of its total annual retail revenue requirement invested in the incremental cost of eligible renewable resources and the cost of renewable energy credits.”*

This report is also consistent with the guidelines set forth in WAC 480-109-040(1) and Condition (8)(h) in Docket UE-100170, Order 02, addressing annual reporting requirements.

As directed in Docket UE-100523 memorandum dated May 4, 2012, two separate filings will be submitted for “Conservation” and “Renewables”. This report is addressing the Conservation target and savings.

Consistent with the requirement to pursue all cost-effective, reliable and feasible conservation, the Company completed a comprehensive conservation potential assessment followed by economic resource screening and selection through the Company’s Integrated Resource Planning process. The resulting ten-year conservation forecast and biennial target was filed with and approved by the Commission in Docket UE-100170.

# Executive Summary

The Company has achieved its 2010-2011 Biennial Conservation Target as set forth in Docket UE-100170, PacifiCorp’s Ten-Year Conservation Potential and 2010-2011 Biennial Conservation Target.

A summary of 2010-2011 electric conservation targets, expenditures and savings results are provided below.



Consistent with the conditions established by the Commission in Docket UE-100170 Order 02, the cost-effectiveness has been determined based on the Total Resource Cost (TRC) test incorporating the 10 percent conservation benefit and risk adder consistent with the Northwest Power and Conservation Council’s approach. Using this test, the benefit to cost ratio for the Company’s 2010-2011 Biennial Conservation savings was 3.0.

Working in partnership with its customers, Commission staff, and demand side management advisory group members the Company achieved these results while adhering to the conditions established by the Commission in Docket UE-100170. Appendix 2 summarizes the Company’s compliance.

# Energy Independence Act (I-937) Commerce Conservation Report

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# Biennial Target Compared to Actual







# Savings Reporting Adjustments

During the 2011 Washington Conservation Working Group, parties agreed “to the extent practicable, there should be consistency between the use of prescriptive unit energy savings estimates in the establishment of the biennial target and the reliance on those same savings estimates in the utility’s demonstration that it met the biennial target.”[[1]](#footnote-1) Consistent with this approach, the results provided in the Company’s 2010 and 2011 reports have been adjusted incorporating the key planning assumptions used in establishing the 2010-2011 target. The adjustments are discussed in detail in the following sections.

Appliance Recycling

The 2007 potential study utilized a simulation model for prototype residential dwellings; single family, multi-family and manufactured homes to estimate consumption of refrigerators and freezers in the home. Savings from this measure is the same as the consumption since the appliance is removed to generate the savings. The savings by appliance type varied slightly by home type based on the final calibration of all end use consumption. For the purpose of this analysis, savings by appliance type from all three types of home is averaged and is provided in Table 1. These unit energy savings are different than those used for reporting.

**Table 1**

**Unit Energy Savings (UES) by Appliance and Home Type**

**from 2007 Potential Study**



As a result, the Company is adjusting the reported savings from these measures to reflect the savings assumed in the 2007 potential study savings assumptions. The impact on savings reporting adjustments is provided in Tables 2 and 3 below.

**Table 2**

**2010 Appliance Recycling Adjustment Calculations**



**Table 3**

**2011 Appliance Recycling Adjustment Calculations**



Compact Florescent Lamps (“CFL”)

The 2007 potential study estimated overall residential lighting savings on a lighting power density basis using the prototype residential models for single family, multi-family and manufactured homes. Unit energy savings for a typical socket were developed so measure levelized costs could be estimated. Unit energy savings for reporting were calculated on a wattage specific basis using 2.3 hours per day and a 20 percent storage factor. For the purposes of this analysis, the average per lamp savings used for reporting were calculated and compared to the average per lamp savings used for planning purposes. The reported average savings were different than those used for planning.

As a result, the Company is adjusting the reported savings from these measures to reflect the savings assumed in the 2007 potential study. The typical socket assumptions and calculation of the planning CFL UES are shown in Table 4. This estimate does not include the effect of the storage factors which is a delivery, not a planning assumption.

**Table 4**

**Calculation of CFL UES from 2007 potential study values**



The impact on savings reporting adjustments is provided in Tables 5 and 6 below. Adjustments to reported CFL savings is utilizing the planning UES assumption and the impact and storage factor.

**Table 5**

**2010 CFL adjustment calculations**



**Table 6**

**2011 CFL Adjustment calculations**



The difference in reported UES’s is attributable to differences in CFL wattages that moved through the retail buy down channel during the period(s).

Northwest Energy Efficiency Alliance (“NEEA”)

In the Company’s 2010 Annual Report on Conservation Acquisition in Washington (filed on March 31, 2011), the Company reported a 57 percent negative variance between forecasted savings and reported savings associated with the Company’s investments in NEEA. The variance was the result of NEEA adjusting its savings baseline used to calculate gross regional savings for the year, post the April 2010 forecast it provided to PacifiCorp of expected 2010 and 2011 savings contributions

Utilizing the NEEA baseline assumptions relied upon in setting the Company’s 2010 and 2011 biennial target, NEEA’s revised results for 2010 are closer to the initial forecast provided PacifiCorp in April, 2010. The consensus agreement regarding frozen planning assumptions was in place when the Company prepared the 2011 Report on Conservation Acquisition in Washington (filed on March 31, 2012) however, NEEA had yet to finalize its 2011 results. PacifiCorp’s reported NEEA savings in the 2011 Report on Conservation reflected this by noting the savings as “preliminary”.

The following table documents the adjustments to the Company’s NEEA savings initially reported in the 2010 and 2011 reports on conservation acquisitions filed in March, 2010 and 2011, respectively. The revised savings were provided by NEEA to PacifiCorp in a May 8, 2012, Memorandum, which explains the adjustment to the baseline, actions taken to correct the baseline, and the impact on final reported savings. See Appendix 1 for detail.

**Table 7**

**Revised NEEA savings 2010 and 2011 (MWh)**



The net effect of all adjustments applied to the 2010-2011 biennial targets is an increase of 1,159 MWh or 0.13 aMW. These adjustments include the effects of line losses.[[2]](#footnote-2) Table 8 provides detail by adjustment type and reporting year.

**Table 8**

**Adjustments by Type and Year (MWh)**



Table 9 provides detail by adjustment type in kWh and reporting year.

**Table 9**

**Adjustments by Type and Year (kWh)**



# Supporting Documents for Conservation

Provided below are links to supporting documents relied upon in support of the Company’s planning assumptions and associated reporting of actual savings results for the 2010-2011 Biennial Conservation.

1. Assessment of Long-Term, System-Wide Potential for Demand-Side and Other Supplemental Resources, Volumes I and II (July 11, 2007) – Conservation Potential Assessment

          <http://www.pacificorp.com/es/dsm.html>

1. 2010 and 2011 Annual Report(s) on Conservation Acquisition

          <http://www.pacificorp.com/es/dsm/washington.html>

1. Revised Report on its Ten-year Achievable Conservation Potential and its Biennial Conservation Target for 2010 and 2011, filed in Docket UE-100170 on July 2, 2010

<http://www.utc.wa.gov/docs/Pages/FilingIdBrowser.aspx>

1. Demand-side Management Business Plan – Washington, November 2010 Update filed November 1, 2010 in Docket UE-100170.

<http://www.utc.wa.gov/docs/Pages/FilingIdBrowser.aspx>

1. Independent third-party process and impact evaluations completed during the 2010-2011 biennium, validating program results, assessing ex-post program savings and providing information used to inform future conservation potential assessments, conservation forecasts and the establishment of targets. See Appendix 3 for more information on verification of measure installations.

          <http://www.pacificorp.com/es/dsm/washington.html>

1. Collaborative group documents completed last summer demonstrating Company’s and other utilities’ alignment with planning methodologies used by the Northwest Power and Conservation Council – Reference Appendix 3 Comparison of Regional Methodologies of the Company’s Ten-year Achievable Conservation Potential and its Biennial Conservation Target for 2012 and 2013, filed in Docket UE-111880 on January 31, 2012.

          <http://www.utc.wa.gov/docs/Pages/FilingIdBrowser.aspx>

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# Appendices

## Appendix 1 – NEEA Memorandum of 2010-2011 Final Savings

## Appendix 2 – 2010-2011 Plan Condition Requirements and Compliance

## Appendix 3 – PacifiCorp Measure Installation Verifications

1. Washington Conservation Working Group Consensus Document as of June 30, 2011. [↑](#footnote-ref-1)
2. Except for NEEA where the planning target and reported results are both based on site values. [↑](#footnote-ref-2)