Table 9.1 – IRP Action Plan Update

Action items anticipated to extend beyond the next two years, or occur after the next two years, are indicated in blue italic font. Transmission action plan items have been moved to Chapter 10, Transmission Action Plan.

Action Item	Category	Timing	Action(s)
1	**Renewables/ Distributed Generation**	**2011-2020**	**Wind** • ***Acquire up to 800 MW of wind resources by 2020, dictated by regulatory and market developments such as (1) renewable/clean energy standards, (2) carbon regulations, (3) federal tax incentives, (4) economics, (5) natural gas price forecasts, (6) regulatory support for investments necessary to integrate variable energy resources, and (7) transmission developments. The 800-megawatt level is supported by consideration of regulatory compliance risks and public policy interest in clean energy resources.*** **Geothermal** • The Company identified over 100 MW of geothermal resources as part of a least-cost resource portfolio. Continue to refine resource potential estimates and update resource costs in 2011-2012 for further economic evaluation of resource opportunities. Continue to include geothermal projects as eligible resources in future all-source RFPs. **Solar** • Evaluate procurement of Oregon solar photovoltaic resources in 2011 via the Company's solar RFP. • ***Acquire additional Oregon solar resource through RFPs or other means in order to meet the Company's 8.7 MW compliance obligation.*** • Work with Utah parties to investigate solar program design and deployment issues and opportunities in late 2011 and 2012, using the Company's own analysis of Wasatch Front roof top solar potential and experience with the Oregon solar pilot program. As recommended in the Company's response to comments under Docket No. 07-035-T14, the Company requested that the Utah Commission establish "a process in the fall of 2011 to determine whether a continued or expanded solar program in Utah is appropriate and how that program might be structured."[1] • ***Investigate, and pursue if cost-effective from an implementation standpoint, commercial/residential solar hot water heating programs.*** – ***The 2011 IRP preferred portfolio includes 30 MW of solar hot water heating resources by 2020 (18 MW in the east side and 12 MW in the west side).*** **Combined Heat & Power (CHP)** • ***Pursue opportunities for acquiring biomass CHP resources, primarily through the PURPA Qualifying Facility contracting process.***

[1] Rocky Mountain Power, "Re: Docket No. 07-035-T14 – Three year assessment of the Solar Incentive Program", December 15, 2010.

Action Item	Category	Timing	Action(s)
			– ***The preferred portfolio contains 52 MW of CHP resources for 2011-2020 (10 MW in the east side and 42 MW in the west side)*** **Energy Storage** • Proceed with an energy storage demonstration project, subject to Utah Commission approval of the Company's proposal to defer and recover expenditures through the demand-side management surcharge. • Initiate a consultant study in 2011 or 2012 on incremental capacity value and ancillary service benefits of energy storage. **Renewable Portfolio Standard Compliance** • Develop and refine strategies for renewable portfolio standard compliance in California and Washington.
2	**Intermediate / Base-load Thermal Supply-side Resources**	**2014-2016**	• Acquire a combined-cycle combustion turbine resource at the Lake Side site in Utah by the summer of 2014; the plant is proposed to be constructed by CH2M Hill E&C, Inc. ("CH2M Hill") under the terms of an engineering, procurement, and construction (EPC) contract. This resource corresponds to the 2014 CCCT proxy resource included in the 2011 IRP preferred portfolio. • Issue an all-source RFP in late 2011 or early 2012 for acquisition of peaking/intermediate/baseload resources by the summer of 2016. – This acquisition corresponds to the 597 MW 2016 CCCT proxy resource (F Class 2x1). • PacifiCorp will reexamine the timing and type of post-2014 gas resources and other resource changes as part of the 2011 business planning process and preparation of the 2011 IRP Update. – ***Consider siting additional gas-fired resources in locations other than Utah. Investigate resource availability issues including water availability, permitting, transmission constraints, access to natural gas, and potential impacts of elevation.***
3	**Firm Market Purchases**	**2011-2020**	• Acquire up to 1,400 MW of economic front office transactions or power purchase agreements as needed until the beginning of summer 2014, unless cost-effective long-term resources are available and their acquisition is in the best interests of customers. – Resources will be procured through multiple means, such as periodic mini-RFPs that seek resources less than five years in term, and bilateral negotiations. • ***Closely monitor the near-term and long-term need for front office transactions and adjust planned acquisitions as appropriate based on market conditions, resource costs, and load expectations.***
4	**Plant Efficiency Improvements**	**2011-2020**	• Continue to pursue economic plant upgrade projects—such as turbine system improvements and retrofits—and unit availability improvements to lower operating costs and help meet the Company's future CO_2 and other environmental compliance requirements. – Successfully complete the dense-pack coal plant turbine upgrade projects scheduled for 2011 and 2012, totaling 31 MW.

Action Item	Category	Timing	Action(s)
			– ***Complete the remaining turbine upgrade projects by 2021, totaling an incremental 34.2 MW, subject to continuing review of project economics.*** – ***Seek to meet the Company's updated aggregate coal plant net heat rate improvement goal of 478 Btu/kWh by 2019.[2]*** – ***Continue to monitor turbine and other equipment technologies for cost-effective upgrade opportunities tied to future plant maintenance schedules.***
5	**Class 1 DSM**	**2011-2020**	Acquire up to 250 MW of cost-effective Class 1 demand-side management programs for implementation in the 2011-2020 time frame. – For 2012-2013, pursue up to 80 MW of the commercial curtailment product (which includes customer-owned standby generation opportunities) being procured as an outcome of the 2008 DSM RFP. – Depending on final economics, pursue the remaining 170 MW for 2012-2020, consisting of additional curtailment opportunities and irrigation/residential direct load control.
6	**Class 2 DSM**	**2011-2020**	• ***Acquire up to 1,200 MW of cost-effective Class 2 programs by 2020, equivalent to about 4,533 GWh. This includes programs in Oregon acquired through the Energy Trust of Oregon.*** – ***Procure through the currently active DSM RFP and subsequent DSM RFPs.*** • Apply the 2011 IRP conservation analysis as the basis for the Company's next Washington I-937 conservation target setting submittal to the Washington Utilities and Transportation Commission for the 2012-2013 biennium. The Company may refine the conservation analysis and update the conservation forecast and biennial target as appropriate prior to submittal based on final avoided cost decrement analysis and other new information. • ***Leverage the distribution energy efficiency analysis of 19 distribution feeders in Washington (conducted for PacifiCorp by Commonwealth Associates, Inc.) for analysis of potential distribution energy efficiency in other areas of PacifiCorp's system. (The Washington distribution energy efficiency study final report is scheduled for completion by the end of May 2011.)***
7	**Class 3 DSM**	**2011-2020**	• Continue to evaluate Class 3 DSM program opportunities. – Evaluate program specification and cost-effectiveness in the context of IRP portfolio modeling[3], and monitor market changes that may remove the voluntary nature of Class 3 pricing products.

[2] *PacifiCorp Energy Heat Rate Improvement Plan*, April 2010.
[3] Supply curve development indicates that when the stacking effect of Class 1 and Class 3 resource interactions are considered, the selected resources within both Classes of DSM diminish.

Action Item	Category	Timing	Action(s)
8	**Planning and Modeling Process Improvements**	**2011-2012**	• Continue to refine the System Optimizer modeling approach for analyzing coal utilization strategies under various environmental regulation and market price scenarios. • Continue to coordinate with PacifiCorp's transmission planning department on improving transmission investment analysis using the IRP models. • Incorporate plug-in electric vehicles and Smart Grid technologies as a discussion topic for the next IRP. • Continue to refine the wind integration modeling approach; establish a technical review committee and a schedule and project plan for the next wind integration study.