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March 31, 2010

**VIA ELECTRONIC FILING
AND OVERNIGHT DELIVERY**

Washington Utilities & Transportation Commission
1300 S. Evergreen Park Drive, S.W.
P.O. Box 47250
Olympia, WA 98504-7250

Attn: David W. Danner
Executive Director and Secretary

Re: Docket No. UE-10_____
Compliance Filing – Work Plan for 2011 Integrated Resource Plan

Dear Mr. Danner,

Please find enclosed an original and two (2) copies of PacifiCorp's Work Plan for the 2011 Integrated Resource Plan. This filing is submitted in accordance with WAC 480-100-238(4).

It is respectfully requested that all formal requests regarding this filing be addressed to the following:

By E-mail (preferred): datarequest@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, OR 97232

If there are any informal inquiries concerning this filing, please contact Pete Warnken, Manager Integrated Resource Planning at (503) 813-5518 or Cathie Allen, Regulatory Manager, at (503) 813-5934.

Sincerely,

Andrea L. Kelly
Vice President, Regulation

Enclosure

cc: David Nightingale



**Work Plan
For the
2011 Integrated Resource Plan**

**For the
Washington Utilities and Transportation Commission**

March 31, 2010

INTRODUCTION

In compliance with the Washington Utilities and Transportation Commission's Integrated Resource Planning (IRP) rules (WAC 480-100-238), PacifiCorp submits this work plan for its 2011 integrated resource plan ("2011 IRP"). As required in the rule, PacifiCorp outlines the content of its 2011 IRP, the general method for assessing potential resources, and the anticipated timing and extent of public participation.

This work plan is based on the best information available to the Company at this time, and may change for the following reasons:

- To date, the Company has not received a 2008 IRP acknowledgment order from the Public Service Commission of Utah. The Utah Commission's rulings may impact analytical or process-related IRP activities that may require a change to the work plan.
- During the public process, the Company will consider stakeholder input and may implement methodology changes, as appropriate, to support the IRP.
- The 2011 IRP is being developed in conjunction with the preparation of PacifiCorp's annual business plan for 2011-2020 ("2011 business plan"). IRP schedule adjustments may occur in response to changes in the 2011 business plan schedule.
- Market or regulatory developments may prompt the need for additional system modeling or impact assessment

CONTENTS OF THE 2011 INTEGRATED RESOURCE PLAN

The contents of the 2011 IRP are expected to be similar to that for the 2008 IRP, and will consist of two volumes: the main document and the appendices. The main document, or Volume I, will contain the following chapters:

- "Executive Summary"
- "Introduction." This chapter will describe the context for resource planning during this IRP cycle, summarize significant events and accomplishments, and provide an overview of the report contents.
- "The Planning Environment". This chapter will profile the major external influences that impact the Company's long-term planning (market conditions, legislative and regulatory events, etc.) as well as summarize activities supporting the development of the annual 10-year business plan and resource procurement.

- “Transmission Planning”: This chapter describes the Company’s long-term transmission planning initiatives, focusing on activities associated with the Energy Gateway Transmission projects and other regional planning efforts.
- “Resource Needs Assessment”: This chapter presents PacifiCorp’s findings of resource needs. The basis of the chapter is load/resource balances that characterize the Company’s capacity and energy positions on a system and control area basis for the next 10 years.
- “Resource Options”: This chapter provides background information on the resources considered in the 2011 IRP, detailing selection criteria for portfolio evaluation, cost and performance attributes, and current market outlook. Resources covered include utility-scale generation technologies, demand-side management (“DSM”), distributed generation, energy storage technologies, and firm market purchases by market hub.
- “Modeling and Risk Analysis Approach”: This chapter describes the modeling methods and portfolio evaluation techniques that are applied to determine relative portfolio cost/risk performance attributes and the overall ranking of portfolios.
- “Modeling and Portfolio Results”: This chapter summarizes the portfolio development and production cost modeling results, and presents the company’s preferred resource portfolio developed as a result of its portfolio evaluation process. A comparison of the advantages and disadvantages of the top-performing portfolios will also be provided.
- “Action Plan and Resource Risk Management”: This chapter presents the Company’s action plan and an acquisition path analysis that describes how resource acquisition strategies will be modified in response to load growth assumption changes and potential regulatory and market events. A discussion of other resource risk management issues will also be provided.

Volume II will consist of appendices that cover (1) detailed model simulation results, (2) information on PacifiCorp’s system models, (3) how the 2011 IRP complies with state IRP requirements, (4) state load forecasts, (5) the public input process, (6) investment and power cost reduction benefit analyses of the Energy Gateway Transmission project, and (7) a new wind integration analysis.

GENERAL METHOD FOR ASSESSING POTENTIAL RESOURCES

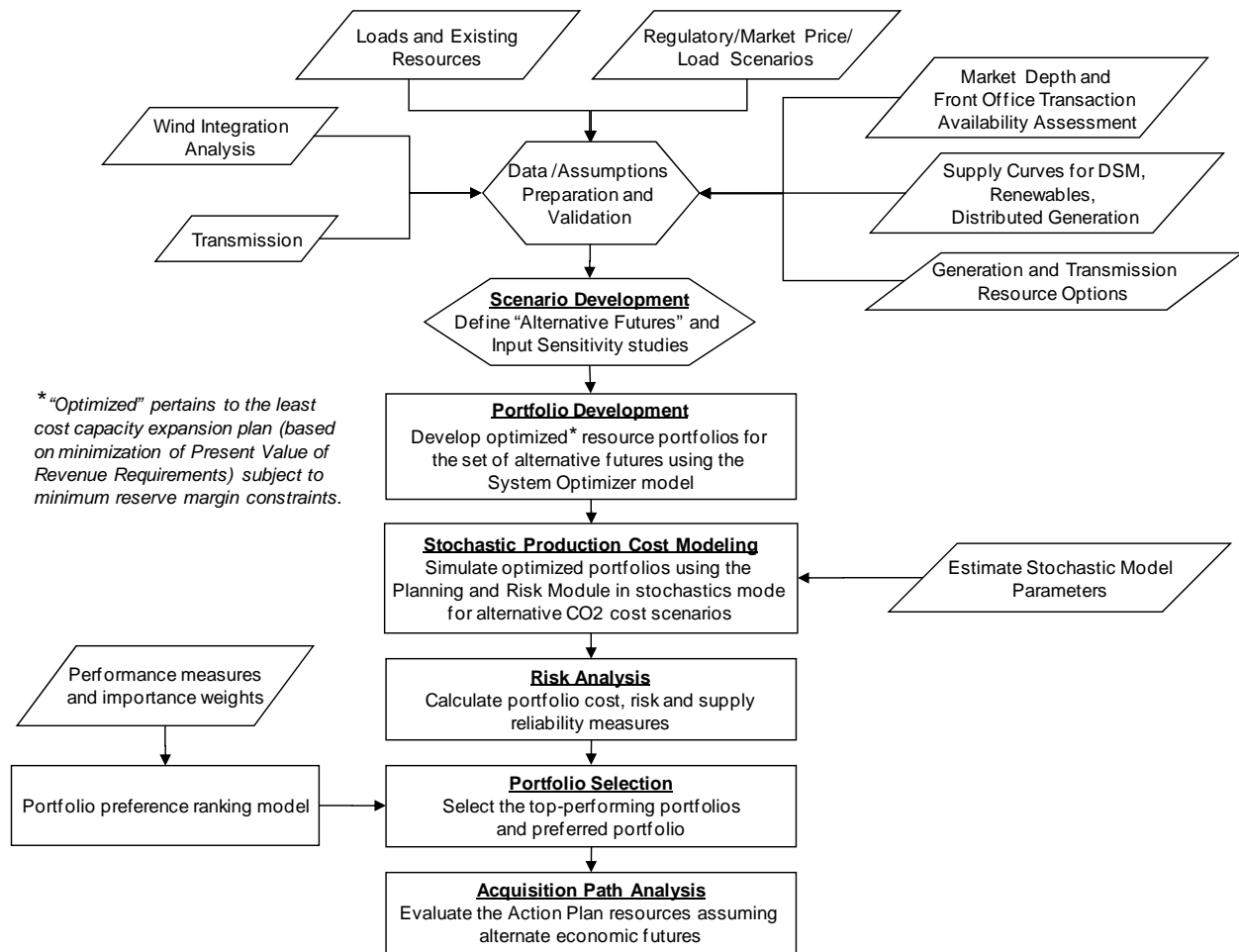
The modeling plan for the 2011 IRP represents refinement of the one used for the 2008 IRP. The main elements of the modeling plan include the following:

1. Revisit strategic assumptions (resource adequacy, market depth, carbon dioxide regulatory scenarios and cost adders, etc.) and update model data appropriately.
2. Implement modeling and methodology enhancements to improve the IRP process and address new analytic requirements from the state commissions or in response to public stakeholder recommendations.
3. Use PacifiCorp's modeling systems to define a set of least-cost candidate portfolios, and perform risk analysis by simulating them with a detailed stochastic production cost model. PacifiCorp will use Present Value of Revenue Requirements ("PVRR") as the cost-effectiveness measure for comparing portfolios.
4. Use a preference scoring methodology to rank portfolios based on a variety of portfolio performance measures and associated importance weights, as well as apply other evaluation criteria to help select the top performing portfolios and the preferred portfolio. Use the IRP models to evaluate the preferred portfolio's performance under alternative futures.

Figure 1 summarizes the inputs and major modeling steps under the IRP modeling plan. This plan is based on the use of two computer systems: *System Optimizer*, a Linear Programming-based optimization program designed for automated screening of resource addition options, and the *Planning and Risk* ("PaR") model, a market simulation tool integrated with the PROSYM chronological unit commitment/dispatch simulation engine and Monte Carlo modeling capabilities. Both modeling tools are proprietary software products from Ventyx Energy LLC.

Using existing resources and a representation of the Company's transmission system as the starting point, PacifiCorp will perform System Optimizer runs with a set of new resource options (supply-side, demand-side, and transmission). Each run will be defined with a combination of input variables based on low, medium, and high values. The input variables will include carbon dioxide ("CO₂") regulatory costs, natural gas/electricity prices and load growth. PacifiCorp will also develop additional CO₂ and renewable portfolio standard regulatory compliance scenarios to further analyze regulatory uncertainty as required by the state commissions. The purpose of the alternative future scenario analysis is to determine how portfolios and their associated resources perform under a variety of input assumptions, serving as an indicator of portfolio robustness.

Figure 1 – Modeling Process Flow Diagram, 2011 IRP



The second stage of IRP modeling consists of simulating the optimized portfolios from stage 1 using the PaR model. Monte Carlo sampling of load, electricity price, natural gas price, hydro availability, and thermal unit availability input variables will be used to perform 100 Monte Carlo simulation iterations. The Company will investigate the possibility of incorporating other stochastic variables, such as CO₂ prices and wind output. Portfolio costs are calculated as the mean PVRR of the 100 iterations plus the portfolio real-levelized fixed costs (capital and fixed operations and maintenance) from the associated System Optimizer run. This cost, along with worst-outcome (or upper-tail) costs and supply reliability risk measures, constitute the main metrics for determining the portfolio risk performance profile.

PacifiCorp will then identify the top-performing portfolios and select the preferred portfolio, primarily relying on a preference ranking model that incorporates a set of the portfolio performance measures and associated importance weights determined by the Company with input from public stakeholders.¹

PacifiCorp will also evaluate the preferred portfolio and associated resource acquisition strategies in the context of potential changes to planning assumptions and procurement risks, referred to as acquisition path analysis.

PLANNED MODELING ENHANCEMENTS AND ANALYSIS PROJECTS

PacifiCorp's 2011 IRP work plan accounts for the following key modeling and analysis projects that are planned or underway:

- Place into production an enhanced version of the System Optimizer model that enables representation of both federal and state-specific resource policies, including CO₂ emission hard caps, emission cap & trade programs, and renewable portfolio standards.
- Update the DSM resource supply curves based on a new potentials study to be completed in 2010. Distribution energy efficiency will be included as a resource option.
- Continue to evaluate the representation of DSM costs and benefits in light of the Northwest Power and Conservation Council's methodology. Also, investigate the comparative impact of modeling the DSM technical potential both adjusted and unadjusted for achievable potential, a Public Service Commission of Utah IRP requirement.²
- Conduct an analysis of coal plant retirement options based on assumed state and federal carbon emission goals.
- Evaluate if, and how, the 10-year business planning period should be modeled differently than the last 10 years of the IRP simulation period for portfolio development. Issues include (1) representation of future resource options, (2) appropriately reflecting near-term capital expenditure budgeting and other business planning constraints in the capacity expansion optimization modeling, and (3)

¹ The preference ranking model will be a topic at one of the IRP public input meetings to be held in 2010.

² Report and Order, "In the Matter of the Review of the Report Prepared for PacifiCorp entitled "Assessment of Long-Term System-Wide Potential for Demand-Side and Other Supplemental Resources", Docket No. 08-035-56, issued April 1, 2009.

addressing the influence of out-year resource optimization on the near-term resource decisions covered by the IRP action plan.

- Conduct a new wind integration study along with an accompanying public process.
- Investigate adding additional stochastic variables to the Monte Carlo production cost simulation modeling, including CO₂ prices and wind output.

ANTICIPATED TIMING AND EXTENT OF PUBLIC PARTICIPATION

The timeline for IRP public meetings is shown in Figure 2. The 2011 IRP meeting schedule will consist of a combination of general public meetings and status report conference calls. At least five public meetings will be held throughout the IRP development cycle, with additional ones scheduled if needed. PacifiCorp is also planning to set up state-specific stakeholder meetings during late May and June 2010 to discuss topics of regional interest—a practice that was instituted for the 2008 IRP. The first general public meeting, scheduled for April 14, 2010, represents the kick-off meeting for the 2011 IRP process, and will cover the IRP schedule, public process, modeling and analysis objectives, lessons learned from the 2008 IRP development process, and the 2008 IRP update report filed with the state commissions on March 31, 2010.

The Company is also conducting a parallel public process for its wind integration study, the first meeting of which was held February 16, 2010. A Web page devoted to the 2010 wind integration study has been added to PacifiCorp's IRP Web site.³

Figure 2 also shows the high-level 2008 IRP development schedule. Filing of the 2011 IRP is scheduled for March 31, 2011, in conformance with Washington Utilities and Transportation Commission Order 01, Docket UE-081475. PacifiCorp expects to issue a draft IRP for a 30-day public comment and review period in February 2011.

³ The hyperlink to the wind integration study Web page is http://www.pacificorp.com/es/irp/wind_integration.html.

Figure 2 – 2011 IRP Public Meeting and Development Schedule

	2010												2011		
	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Jan	Feb	March	
IRP Public Meetings*															
General Public Meetings			X				X	X		X				X	
State-specific public stakeholder meetings															
Wind integration study workshops	X						X								
Status report/issue resolution conference calls														To Be Determined	
IRP Development Schedule															
Wind Integration Cost Study															
IRP Model Preparation															
Portfolio Development															
Portfolio Risk Assessment															
Preferred Portfolio Selection and Analysis															
Action Plan Development/Contingency Planning															
IRP Report Preparation, 1st Draft															
Public Review of Draft IRP Report (30 days)															
IRP Report Preparation, Final Draft															
Commission Filing, 3/31/2010														X	

CONCLUSION

PacifiCorp’s work plan represents its current view as to the processes and activities needed to file an IRP by March 31, 2011 that meets state IRP standards and guidelines and aligns with the Company’s 2011 business plan. As discussed above, a pending state acknowledgment order and other factors may require adjustment to the schedule and public meeting dates.

PacifiCorp encourages Washington stakeholders to attend public meetings and actively be involved in this planning process. To join the IRP participants list, send an email request to IRP@PacifiCorp.com or call the PacifiCorp IRP phone line at (503) 813-5245.