### BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE FILING BY	)
PACIFICORP DBA ROCKY MOUNTAIN	) CASE NO. PAC-E-09-06
POWER OF ITS 2009 ELECTRIC	
INTEGRATED RESOURCE PLAN (IRP)	) ACCEPTANCE OF FILING
	)

#### PACIFICORP 2009 INTEGRATED RESOURCE PLAN

On May 29, 2009, PacifiCorp dba Rocky Mountain Power (PacifiCorp; Company) filed its 2009 electric Integrated Resource Plan (IRP) with the Idaho Public Utilities Commission (Commission). PacifiCorp is a multi-jurisdictional utility and provides electric service to over 69,000 customers in eastern Idaho. The Company's filing is a biennial planning document that sets forth how the Company intends to meet the energy requirements of its customers over the next 10 years. In Order No. 22299, Case No. U-1500-165, the Commission directed PacifiCorp to file a biennial resource management report (now IRP or Integrated Resource Plan) that analyzes its customer base, load growth, supply-side resources, and demand-side management (DSM) resources and describes the status of the Company's electric resource planning. The Company's IRP was developed through a collaborative public process with involvement from regulatory staff, advocacy groups and other interested parties and provides a framework of future actions to ensure PacifiCorp continues to provide reliable service at a reasonable cost with manageable risk to its customers.

The key elements of the PacifiCorp 2009 IRP include a finding of resource need, focusing on the 10-year period 2009-2018, a preferred portfolio of supply-side and demand-side resources to meet this need, and an action plan that identifies the steps the Company will take during the next 2 to 4 years to implement the plan. The resources identified in the 2009 IRP preferred portfolio are considered proxy resources that guide procurement efforts, and do not constitute the actual resources that would be acquired as part of future procurement initiatives.

Significant changes reflected in this IRP relative to the 2007 IRP include:

• A decrease in resource need: The system becomes short on capacity in 2011 rather than 2010 due to lower forecasted loads and new resource additions.

- Acquisition of the 520 megawatt (MW) Chehalis gas plant and 175 MW of additional wind resources added in 2008.
- New IRP guidelines issued by the Oregon Public Utility Commission on the treatment of carbon dioxide (CO2) regulatory risk.
- Incorporation of the Energy Gateway Transmission Project in the portfolio analysis.
- State commission 2007 IRP acknowledgement orders calling for modeling methodology changes and the expansion of resource options to consider, including energy efficiency measures (Class 2 Demand-Side Management programs) and additional renewable energy technologies such as solar and geothermal.

### THE INTEGRATED RESOURCE PLANNING ENVIRONMENT

For capital expenditure planning, PacifiCorp states its challenge has been to minimize customer rate impacts in light of a substantial capital spending requirement needed to address customer load growth, support government environmental and energy policies, and maintain transmission grid reliability. To address this challenge, the Company is scrutinizing capital projects for cost reductions or deferrals that make economic sense in today's market environment.

An additional planning challenge for the Company has been to respond to and predict the demand response impacts of the economic recession and financial crisis. The Company states that it is currently seeing a continuation of significant industrial and commercial sector demand reduction. This will translate, it states, into a reduction of resource need for the nearterm. Volatile economic conditions and commodity prices are requiring the Company to continuously re-evaluate input assumptions and resource acquisition strategies. Significant price drops in fuels and forward wholesale power in late 2008 and early 2009 signal near-term opportunities to lower power supply costs through market purchases before the Company needs to commit to a large new thermal power plant. If construction markets continue to soften as several experts predict, this will create additional cost-saving opportunities through lower plant prices.

The 2009 IRP also reflects evolution of PacifiCorp's corporate resource planning approach. The Company has embarked on a strategy to more closely align IRP development activities and the annual 10-year business planning process. The purpose of the alignment is to

adopt consistent planning assumptions, to ensure that business planning is informed by the IRP portfolio analysis and that the IRP accounts for near-term resource affordability, and to improve resource planning transparency for public stakeholders.

PacifiCorp's 2009 IRP accounts for the Energy Gateway Transmission project. For the 2009 IRP cycle, the Company treated the various planned transmission segments as existing resources for portfolio modeling purposes. Going forward, Gateway transmission segments will be re-evaluated from an integrated resource planning perspective during the IRP and annual business planning cycles.

### RESOURCE NEEDS AND PORTFOLIO MODELING

The resource need accounts for load growth, sales obligations, existing resources, and a 12% planning reserve margin. Based on a November 2008 load forecast, PacifiCorp experiences a capacity deficit beginning in 2011, when the system will be short by 498 MW. This deficit increases to 1,936 MW in 2012 and 3,528 MW by 2018. The capacity deficit is driven by a coincident system peak load growth rate of 2.5% for 2009-2018, and expiration of major power contracts such as the Bonneville Power Administration peaking contract in August 2011. On an energy basis, the system begins to experience summer short positions by 2012.

To determine how best to address the capacity deficits, PacifiCorp developed 57 resource portfolios using a capacity expansion model that optimizes resource choice according to a variety of input assumptions and capacity planning criteria. PacifiCorp's state utility commissions require the Company, through its IRP standards and guidelines, to develop a portfolio that is least-cost after accounting for risk, uncertainty, and the long-run public interest.

#### 2009 IRP PREFERRED PORTFOLIO

PacifiCorp's 2009 IRP preferred portfolio consists of a diverse mix of resources dominated by renewables, demand-side management including conservation, gas-fired resources, and firm market purchases. The major resources for the 2009-2018 planning period consist of the following:

• Renewables:

- Wind: 1,313 MW

- Geothermal: 35 MW

- Major hydroelectric upgrades: 75 MW in 2012-2014

• Demand-side management:

- Energy efficiency: 904 MW

– Dispatchable load control: 105-325 MW

• Gas-fired capacity: 831 MW in the 2014-2016 period

• Coal plant turbine upgrades: 170 MW of emissions-free capacity

• Firm market purchases: Ranging from 50 MW to 1,400 MW on an annual basis, contingent on the time and amounts of long-term resource acquisitions.

PacifiCorp is on pace to exceed the previous renewable resource amount identified in the Company's 2007 Renewable Energy Action Plan filed in May 2007 (1,400 MW by 2015), and the amount identified in the 2007 IRP update report filed in June 2008 (2,000 MW by 2013). Since 2005, the Company's projected renewable resource inventory has grown by 1,404 MW, accounting for existing resources and those under construction, contract, or included in the capital budget. The incremental renewables identified in the 2009 IRP preferred portfolio and action plan bring the target to about 2,040 MW by 2013. The projected renewable inventory exceeds 2,540 MW by 2018, which represents 18.5% of PacifiCorp's owned generation capability in that year.

#### 2009 IRP ACTION PLAN

The 2009 IRP action plan is based upon the latest and most accurate information available at the time of portfolio study completion. The current volatile economic and regulatory environment will likely require near-term alteration to resource plans as a response to specific events and improved clarity concerning the direction of the economy and government energy and environmental policies.

PacifiCorp's 2009 IRP action plan consists of the following:

Renewables: 2009-2018

Acquire an incremental 1,400 MW of renewable by 2018, in addition to the already planned 75 MW of major hydroelectric upgrades in 2012-2014; PacifiCorp's projected renewable resource inventory by 2018 exceeds 2,540 MW with these additions.

Firm Market Purchases: 2009-2013

Implement a bridging strategy to support acquisition deferral of long-term intermediate/base load resource(s) in the east control area until no sooner than the beginning of summer 2014.

Peaking/Intermediate/Base Load Supply-Side Resources: 2012-2016

Procure long-term firm capacity and energy resources for commercial services in the 2012-2016 time frame.

Plant Efficiency Improvements: 2009-2018

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 CO2 and other environmental compliance requirements.

Class 1 DSM: 2009-2018 – Dispatchable Load Reduction Programs e.g., residential air conditioning load control, dispatchable commercial curtailment, irrigation load control and commercial and industrial thermal energy storage.

Acquire at least 200-300 MW of cost-effective Class 1 demand-side management programs for implementation in the 2009-2018 time frame.

Class 2 DSM: 2009-2018 – Energy Efficiency and Conservation Measures e.g., residential/commercial cooling efficiency improvements, commercial lighting retrofits.

Acquire 900-1,000 MW of cost-effective Class 2 programs by 2018 (peak capacity), equivalent to about 430 to 480 MWa.

Class 3 DSM: 2009-2018 – Price Response Programs e.g., time of use (TOU), tiered rates, commercial/industrial demand buyback programs.

Acquire cost-effective Class 3 DSM programs by 2018.

Distributed Generation: 2009-2018

Pursue at least 100 MW of distributed generation resources by 2018.

Planning Process Improvements: 2009-2010

Portfolio modeling improvements.

Establish additional portfolio development scenarios for the business plan that will be completed by the end of 2009, and which will support the 2008 IRP update.

Transmission: 2009-2011

Obtain Certificates of Public Convenience and Necessity for Utah/Wyoming/Northwest segments of the Energy Gateway Transmission Project to support PacifiCorp load growth, regional resource expansion needs, access to markets, grid reliability, and congestion relief.

Transmission: 2010

Permit and build Utah/Idaho/Nevada segments of the Energy Gateway Transmission project to support PacifiCorp load growth, regional resource expansion needs, access to markets, grid reliability, and congestion relief.

On June 24, 2009, the Commission issued a Notice of Filing in Case No. PAC-E-09-06 and established a July 31, 2009, comment deadline. The Commission Staff was the only party to file comments. Staff recommends that the Commission acknowledge the Company's 2009 IRP filing.

### **STAFF ANALYSIS**

Staff believes that PacifiCorp has performed extensive analyses, given equivalent consideration of supply- and demand-side resources, provided acceptable opportunities for public input, and that the end result is representative of the Commission's directives toward integrated resource planning.

Staff commends the Company in its efforts to produce a sophisticated planning document amidst uncertain economic and political times. As previously acknowledged, Staff believes that the IRP filing for PacifiCorp is becoming increasingly constrained by state and federal initiatives, and conventional "least cost/least risk" portfolios are not necessarily the appropriate choice for the Company.

## Resource Options

PacifiCorp, Staff contends, continues to make strides in model flexibility toward resource selection. Staff commends the efforts of the Company for its diligence in reasonably portraying capital and O&M costs, plant characteristics, and associated emissions, among other resource attributes. The Company, Staff states, continues to refine its modeling of non-traditional supply-side resources, such as distributed generation, energy storage and geothermal by taking into consideration siting attributes like transmission savings and local investment credits.

The Company has also put forth an exceptional effort in modeling demand-side resources in its IRP. Staff particularly notes that the Company has improved its modeling of so-called Class 2 DSM, which consists primarily of energy efficiency and conservation measures, such as residential weatherization programs. Prior to the 2009 IRP, Class 2 DSM was modeled *a priori* and treated as a load decrement. The Company, Staff notes, has utilized a supply curve methodology in this IRP as it does with Class 1 DSM (dispatchable load reduction programs) and Class 3 DSM (efficiency pricing and "buy down" programs). Staff believes this treatment of demand-side measures, among other modeling improvements, signifies the Company's continued strides toward equal treatment of supply- and demand-side resources in portfolio selection.

For the 2009 IRP, Staff notes that the Company applies a discount factor of 7.4% to calculate the present value of future resources. This rate represents the after-tax weighted average cost of capital (WACC) and was chosen to comply with the Public Utility Commission of Oregon's guidelines from 2007. Staff recommends that the Company conduct sensitivity analyses on the choice of discount rates on resource timing and selection. A standard inflation Treasury bond rate, Staff contends, may serve as a potential lower bound, and the after-tax WACC may serve well as an upper bound.

## Wind Integration

The Company, Staff notes, continues to improve upon its methods for representing diverse wind resources. The Company in this case has included a wind integration cost of \$11.75/MWh in its resource assumptions. The value is based on a study conducted by Portland General Electric. Staff agrees that integrating wind into its system does impose a cost, but does not necessarily agree with the value chosen by the Company. Given its geographic and resource diversity, Staff would put the chosen value on the high side compared to studies performed by utilities such as BC Hydro and entities like Bonneville Power Administration.

The \$11.75/MWh integration cost, Staff notes, is more than double what was used in the Company's 2007 IRP when the Company calculated a cost of \$5.10/MWh for penetration of 2,000 MW of wind. Staff believes that there is a range of wind integration costs that varies by utility and percentage of wind on a utility's system. Prior to its next IRP filing, Staff requests that the Company explain and justify why its integration costs have more than doubled. Staff

further recommends that the Company perform stochastic modeling to ascertain a value as part of its next IRP.

# Portfolio Modeling

In its IRP, PacifiCorp has incorporated current state renewable portfolio standards (RPS) as a constraint to portfolio selection. Staff does not believe that PacifiCorp has adequately quantified the cost associated with meeting an RPS. Staff believes comparing portfolios with and without RPS constraints may facilitate discussions regarding cost allocation and trading rules for renewable energy credits.

Staff notes that PacifiCorp created its 29 core and initial 19 sensitivity cases under the proposition that the Company would complete an expansion of its Lakeside combined-cycle combustion turbine (CCCT) facility. The Company has subsequently decided to defer construction of the project. Staff is uncertain how the selected portfolios would have fared in initial modeling had Lakeside II not been included. For both the initial and secondary portfolio screenings, eight metrics were used by the Company to score candidates for performance. The Company applied a weighting scheme to the metrics representing its view of relative importance. While the choice of metrics was clearly explained, Staff believes that the weighting scheme was devoid of substantial rationale. Staff is concerned that the weights were chosen arbitrarily and may ultimately impact the selection of one portfolio over another having equal or greater merit. Staff requests that the Company correct this discrepancy in future planning processes and document the weight deviation in the final plan.

### Portfolio Selection

The Company, Staff notes, has developed a plan that acknowledges the benefits of a diverse resource mix while adhering to imposed and impending environmental regulations. Unlike the Company's 2007 IRP, Staff notes that no additional transmission capacity was included in its selected portfolio, namely due to the fixed transmission resources (Gateway Project) included in the system optimizer model. Also, Staff finds it noteworthy that coal-fired generation did not appear in the chosen portfolio. Staff believes the select portfolio satisfactorily meets the Company's forecasted load requirements at the 12% planning reserve margin, but questions the methodology that led to the selection of the portfolio. Another anomaly in the modeling, Staff contends, is that portfolio 5 had been manually adjusted to include either a 570 MW wet-cooled CCCT or 536 MW dry-cooled CCCT with an online date of 2014. Other than

stating that this reflects the Company's CCCT deferral strategy, there is no other rationale used to support this "fixing" of resources. Staff is further confused as to why that particular portfolio was chosen for resource fixing, and not any or all of the others. The Company further adjusted the preferred portfolio by manually distributing the selected wind resources throughout the planning period in a manner differing from the system optimizer runs. The Company justifies doing so by stating that the "pattern, while optimal from the model's perspective, is not desirable from a business planning perspective." Staff finds merit in the Company's assertion, although this manual adjustment further evidences the deterministic aspect of the preferred portfolio.

# IRP - Filing with Commission

Staff in its comments provides prior Commission language regarding the import to be attributed to the Commission's "acknowledgement" or "acceptance for filing" of IRPs. Staff cites the following Commission language in Order No. 25260, Case No. GNR-E-93-3.

POLICIES ADDRESSING INTEGRATED RESOURCE PLANNING. Each electric utility regulated by the Idaho Public Utilities Commission with retail sales exceeding 500,000 kilowatt hours in a calendar year shall employ integrated resource planning. Each electric utility's integrated resource plan must be updated on a regular basis (no later than biennially), must provide an opportunity for public participation and comment, and must be implemented. This plan constitutes the base line against which the utility's performance will ordinarily be measured. The requirement for implementation of a plan does not mean that the plan must be followed without deviation. The requirement of implementation of a plan means that an electric utility, having made an integrated resource plan to provide adequate and reliable service to its electric customers at the lowest system cost, may and should deviate from that plan when presented with responsible, reliable opportunities to further lower its planned system cost not anticipated or identified in new existing or earlier plans and not undermining the utility's reliability. In order to encourage prudent planning and prudent deviation from past planning when presented with opportunities for improving upon a plan, an electric utility's plan must be on file with the Commission and available for public inspection, but the filing of the plan does not constitute approval or disapproval of the plan having the force and effect of law, and the deviation from the plan would not constitute violation of the Commission's orders or rules. The prudence of a utility's plan and the utility's prudence in following or not following a plan are matters that may be considered in a general rate proceeding or other proceeding in which those issues have been noticed.

Furthermore, the Commission explicitly stated its role in the IRP process in Order No. 22299: ". . . the Resource Management Report (now the IRP) is not designed to turn the IPUC into a

planning agency nor shall the Report constitute pre-approval of a utility's proposed resource acquisitions." It is through these orders that Staff constitutes its view of "acknowledgement" or "acceptance of filing."

# Staff Conclusion

Staff recognizes the Company's IRP process to be a fluid one and commends the Company for keeping the Commission apprised of the dynamic planning environment. While not convinced that the preferred portfolio represents the lowest system cost portfolio when adjusted for risk, Staff nevertheless believes the Company did its due diligence in arriving at its conclusion. Staff reiterates its position from the 2007 IRP comments that resource procurement is relying less on least cost/least risk metrics, and more on political constraints. Staff believes that PacifiCorp and the IRP participants should evaluate the IRP process to identify the cost of jurisdictional mandates.

Staff believes that PacifiCorp has performed extensive analyses, given equivalent consideration of supply- and demand-side resources, provided acceptable opportunities for public input, and that the end result is representative of the Commission's directives toward integrated resource planning.

### **COMMISSION FINDINGS**

The Commission has reviewed the filings of record in Case No. PAC-E-09-06, including PacifiCorp's 2009 Integrated Resource Plan and the comments and recommendations of Staff. We find that the Company's IRP contains required information and is in the appropriate format as directed by the Commission in Order No. 22299. The IRP, we continue to note, is a utility planning document that incorporates assumptions and projections as of a point in time; it is the ongoing planning process that we acknowledge, not the conclusions or results. We recognize and commend the Company for the Plan that it has presented and for the public process that it used to produce the Plan. We note that the Commission Staff has raised questions and concerns that should be addressed by the Company in its future filings. Parties interested in the Company's planning for resources are encouraged to participate in the process.

#### **CONCLUSIONS OF LAW**

The Idaho Public Utilities Commission has jurisdiction over PacifiCorp dba Rocky Mountain Power, an electric utility, pursuant to Title 61 of the Idaho Code and the Commission's Rules of Procedure, IDAPA 31.01.01.000 *et seq*.

### **ACCEPTANCE OF FILING**

Based on our review, we find it reasonable to accept for filing and to acknowledge PacifiCorp's 2009 Electric Integrated Resource Plan. Our acceptance of the 2009 IRP should not be interpreted as an endorsement of any particular element of the Plan, nor does it constitute approval of any resource acquisition contained in the Plan.

DATED at Boise, Idaho this 15th

day of September 2009.

MARSHA H. SMITH, COMMISSIONER

MACK A. REDI

ATTEST:

Commission Secretary

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