

DECISION MEMORANDUM

TO: COMMISSIONER KJELLANDER
COMMISSIONER SMITH
COMMISSIONER REDFORD
COMMISSION SECRETARY
COMMISSION STAFF
LEGAL

FROM: NEIL PRICE

DATE: JUNE 18, 2007

SUBJECT: PACIFICORP'S 2007 ELECTRIC INTEGRATED RESOURCE PLAN (IRP); CASE NO. PAC-E-07-11

INTRODUCTION AND BACKGROUND

On May 30, 2007, PacifiCorp filed its 2007 Integrated Resource Plan (IRP) with the Commission pursuant to the biennial filing requirement mandated in Order No. 22299, as modified in Order No. 30262.

PacifiCorp (dba Rocky Mountain Power in Idaho) serves approximately 1.6 million retail energy customers over a service area encompassing portions of six western states: Utah, Oregon, Wyoming, Washington, Idaho and California. Rocky Mountain Power serves approximately 68,000 customers in southeastern Idaho. PacifiCorp filed its last IRP with the Commission on January 1, 2005. In 2006, the Company was acquired by MidAmerican Energy Holdings Company ("MEHC"), a global energy resource production company and resource supplier.

PROPOSED INTEGRATED RESOURCE PLAN

PacifiCorp states that its purpose in preparing the IRP is to: "(1) determine future long term resource needs and develop an informed and comprehensive assessment of the cost and risk implications of alternatives for meeting those needs, and (2) develop a framework of future actions to ensure PacifiCorp continues to provide reliable, least-cost service with manageable and reasonable risk to its customers." *Transmittal Letter* at 1-2. PacifiCorp cites the contemporary development of regulatory policies targeted at reducing the "carbon footprint of

utilities” and the increased emphasis on the development of renewable energy as specific challenges it is facing. *Id.*

Prior to submitting its IRP, the Company studied twelve (12) separate portfolios in order to identify a portfolio that demonstrated, through projected statistical analysis, superior performance in terms of estimated cost, customer rate impact, cost versus risk balance across five different CO₂ cost adder levels and supply reliability. *See PacifiCorp 2007 IRP* at 6, 139. Ultimately, the Company settled upon a preferred portfolio that would include the acquisition of the following energy resources:

- 2,000 MW of renewable resources by 2013
- 100 MW of load controls beginning in 2010
- West-side combined cycle combustion turbine (“CCCT”) in 2011
- High-capacity-factor baseload resources to PacifiCorp’s eastern system in 2012 and 2014
- Eastern system CCCT’s in 2012 and 2016
- Firm market purchases to meet system needs beginning in 2010
- Transmission Additions/Upgrades between 2010-2014 to support resources

See Id. at 7.

A. Forecast Load Growth

PacifiCorp estimates that customer loads will grow at an average rate of 2.5% annually from 2007 to 2016. *See Id.* at 4 (Figure 1.1). PacifiCorp’s eastern system (Idaho, Utah and Wyoming) continues to display a significantly higher rate of energy growth than its western system, with an annual average energy growth rate of 3.2% and 0.8%, respectively. The annual growth for the Idaho service area over that same 10-year period is estimated to be 1.3%. *See Id.* at 3 (Table 1.1).

The Company currently forecasts a summer peak resource deficit beginning in 2008 to 2010 depending on whether a 12% or 15% planning reserve (“PR”) margin is used. *Id.* In 2009, the Company will become energy deficient on an annual basis, based on a 12% planning reserve margin. *Id.* Beginning in 2010, its system will operate at a 791 MW deficiency, again based upon a 12% PR margin. *Id.* The energy resource deficit will increase to 2,400 MW by the year 2012 and 3,000 MW by 2016. *Id.*

B. Modeling and Risk Analysis

1. IRP Modeling

PacifiCorp employed two distinct modeling tools during its portfolio analysis: (1) Capacity Expansion Module (CEM); and (2) Planning and Risk (PaR) Module. *See Id.* at 5. The two analytical models assisted the Company in arriving at the “least-cost optimization [of] resource options” and “develop risk-adjusted portfolio performance measures.” *Id.* The Company’s modeling approach consisted of “resource screening, risk analysis portfolio development and detailed production cost and stochastic risk analysis.” *Id.*

In order to predict the most desirable resource options, PacifiCorp used the CEM to develop and analyze 16 separate “alternative future scenarios” involving a mixture of several variables, including potential CO₂ regulatory costs, natural gas prices, wholesale electricity prices, retail load growth and the scope of renewable portfolio standards. *Id.* at 6, 139. The Company views the preferred resource portfolio as one that manifests itself under a “reasonably wide range of potential future” scenarios. *Id.* Once those resource option portfolios were effectively identified, the PaR Module was then used to simulate the potential risk and cost of each through a random sampling process of the following variables: loads, commodity natural gas prices, wholesale power prices, hydro energy availability and thermal unit availability. *See Id.*

2. CO₂ Emissions

PacifiCorp’s IRP also addressed the potential costs/effects of CO₂ emission compliance. *See Id.* at 6. According to the Company, the costs associated with CO₂ emission compliance are not normally amenable to statistical analysis. *Id.* Thus, rather than attempting to ascertain a specific cost, the Company elected to treat the potential emission costs as “a scenario risk” in its overall IRP analysis. *Id.* The initial risk/analysis portfolios were analyzed under five different CO₂ cost adder levels – \$0/ton, \$8/ton, \$15/ton, \$38/ton, and \$61/ton (adjusted for projected 2008 dollars) – in order to determine which portfolio was most prevalent across a “reasonably wide range of potential futures.” *Id.*

C. Action Plan

Prior to the 2011-2012 period, PacifiCorp plans to address its projected resource deficits through the procurement of additional renewable resources, demand side programs and market purchases. *See Id.* at 3. The Company has made requests for proposal (“RFP”) for

additional base load resources, renewable resources and demand side resource programs benefiting the eastern portion of its service area. *Id.*

Faced with the likelihood of energy deficiencies, PacifiCorp has taken recent steps toward increasing its resource production. In June 2006, PacifiCorp converted its Currant Creek facility from a single cycle combustion turbine to a combined cycle combustion turbine (“CCCT”). *See Id.* at 61. It will add another CCCT to its Lake Side facility this month. *Id.* These additions will be offset by the expiration of two resource procurement contracts, a 400 MW agreement with TransAlta Energy Marketing and a 575 MW BPA peaking contract, in June 2007 and August 2011, respectively. *Id.*

The IRP professes the Company’s commitment to the following additional measures in order to meet future resource needs:

Wind Renewal:

- Continue to develop renewable resources, including wind power. PacifiCorp has acquired 346 MW of wind power toward the fulfillment of its 2004 IRP goal of procuring 400 MW by 2007. The Company states that it will continue to acquire additional renewable resources on its way toward procuring a total of 1,400 MW of renewable resources by the year 2010 and 2,000 MW by the year 2013. PacifiCorp has recently added two wind projects, Leaning Juniper 1 and Marengo.

Energy Efficiencies:

- Increase its commitment to so-called “energy efficiency” initiatives. The Company will continue to run programs to acquire 250 aMW of cost-effective energy efficiency and an additional 200 aMW if cost-effective initiatives can be identified.

Load Control:

- Expand upon its existing load control programs. PacifiCorp anticipates a system-wide average load growth of 2.5 percent per year from 2007 through 2016 throughout its service area. Average load growth from its Idaho customers should be around 1 percent per year. The Company anticipates further expansion of its existing 150 MW of irrigation and air conditioning load control program in Utah and Idaho. In 2010, a 100 MW irrigation load control program will be added and will be split between its eastern and western systems.

Integrated Environmental Issues:

- Continue to study and address contemporary environmental issues. The Company asserts that it will assume a leadership role in discussions with stakeholders involving global climate change issues; and continue to investigate the development of carbon reduction technology, specifically clean coal, sequestration and nuclear power.

Transmission:

- Address existing problems affecting transmission of resources to customers. The Company plans an expansion of its transmission system and an upgrade in its transmission infrastructure and flexible resources, such as natural gas, in order to meet the anticipated customer loads found in the preferred portfolio.

Diversification:

- Diversification of base load and intermediate load resources. The Company reiterated its desire to add approximately 1,700 MW of base load resources, a mix of thermal resources and market purchases, to its eastern system between 2012 and 2014. Further, it will seek to acquire an additional 200 to 1,300 MW of thermal and market purchase resources to benefit its western system between 2010 and 2014.

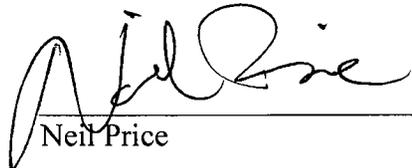
See Id. at 10, 221, 224-27(Table 8.2).

STAFF RECOMMENDATION

The Staff has reviewed PacifiCorp's proposed IRP and recommends that a notice of filing be prepared and that a comment period be established. Staff recommends a 60-day comment period.

COMMISSION DECISION

Staff recommends that PacifiCorp's 2007 Integrated Resource Plan filing be noticed and that a 60-day comment period be established. Does the Commission agree with the Staff's proposed procedure?



Neil Price

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