BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF ROCKY MOUNTAIN POWER FOR APPROVAL OF CHANGES TO ITS ELECTRIC SERVICE SCHEDULES AND A PRICE INCREASE OF $32.7 MILLION, OR APPROXIMATELY 15.0 PERCENT	)	**CASE NO. PAC-E-11-12**
	)	**Direct Testimony of Paul H. Clements**
	)	**Redacted**

ROCKY MOUNTAIN POWER

CASE NO. PAC-E-11-12

May 2011

Q. Please state your name, business address and present position with Rocky Mountain Power (the "Company"), a division of PacifiCorp.

A. My name is Paul H. Clements. My business address is 201 S. Main, Suite 2300, Salt Lake City, Utah 84111. My position is Originator/Power Marketer for PacifiCorp Energy. PacifiCorp Energy, like Rocky Mountain Power, is a division of PacifiCorp.

Q. How long have you been in your present position?

A. I have been in my present position since December 2004.

Q. Please describe your education and business experience.

A. I have a B.S. in Business Management from Brigham Young University. I worked in the merchant energy sector for approximately seven years in pricing and structuring, origination, and trading roles for Illinova and Duke Energy. I have been employed by the Company since 2004 as an originator/power marketer responsible for negotiating interruptible retail special contracts, negotiating qualifying facility contracts, and managing wholesale or market-based energy and capacity contracts with other utilities and power marketers. I was the Company representative who negotiated the 2006 and the 2007 through 2010 electric service agreements with Monsanto, as well as the interim electric service agreements in 2011. I have managed all Monsanto contract-related issues since late 2004.

Purpose and Summary of Testimony

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide the analysis and recommendation

regarding the economic valuation of the interruptible products offered by Monsanto to determine the interruptible credit amount for inclusion in a Monsanto electric service agreement. My testimony will address the following areas:

- provide a summary of how the Company updated the valuation of the Monsanto interruptible products consistent with the Commission findings in Order No. 32196 when determining its recommended credit value in this proceeding;
- provide a comparison of the Company's recommended credit value in this proceeding to the value established by the Commission in Case No. PAC-E-10-07 (the "2010 General Rate Case"); and
- provide a recommendation on an interruptible credit value to be included in a Monsanto contract.

Q. Why is Rocky Mountain Power filing testimony on the value of the Monsanto interruptible products in conjunction with this general rate case filing?

A. In its Order No. 32224 dated April 18, 2011, the Commission stated the following regarding the value of the Monsanto interruptible credit:

> "...we find that it is both reasonable and appropriate that the value of the Monsanto interruptible credit remain subject to adjustment commensurate with the Commission-approved adjustments of the Company's firm power and energy charges over time."[1]

Since the Company is proposing a change to Monsanto's firm power and energy charges as part of this general rate case filing, the Company is also providing a

[1]Order No. 32224 in Case No. PAC-E-10-07, page 7.

recommended value and supporting evidence regarding the Monsanto interruptible credit.

Q. Has the Commission recently issued findings regarding the value of Monsanto's interruptible products?

A. Yes. In Confidential Attachment C of Order No. 32196 in the 2010 General Rate Case, the Commission established the interruptible product value for each of the interruptible products provided by Monsanto. In its detailed findings in that Order, the Commission provided an explanation of how the recommended values were derived. In most instances, the Commission's recommended values were established using selected results from the various models and methodologies proposed by the different parties in the proceeding.

Valuation of Monsanto's Interruptible Products

Q. What approach did the Company utilize for the valuation of Monsanto's interruptible products when determining its recommended interruptible credit for this proceeding?

A. The Company reviewed the detailed Commission findings addressing Monsanto interruptible value in the 2010 General Rate Case. Based on those findings the Company utilized the same models and methodologies with updated assumptions to reflect current market conditions to establish recommended interruptible product values in this proceeding.

Q. Please explain how the Company utilized the models and methodologies consistent with the Commission findings to determine a recommended value for each Monsanto interruptible product.

A. In Order No. 32196, the Commission provided details regarding which models and methodologies were used to derive the recommended values for the three Monsanto interruptible products: (1) non-spinning operating reserves; (2) economic curtailment; and (3) system integrity. I will summarize the Commission findings for each of these products and the analysis the Company performed for this proceeding when calculating a recommended value that is consistent with those findings.

Non-Spinning Operating Reserves

For the non-spinning operating reserves product, the Company recommends using the average of the Front Office and GRID model results. Exhibit No. 39 provides an explanation of each of these models and how they are used to calculate the value of the various Monsanto interruptible products. This approach is consistent with the Commission findings regarding operating reserves:

> "The Commission believes that the energy value is most accurately established using the average of the GRID and Front Office Model runs as proposed by the Company and supported by Staff."[2]

To determine a recommended value for the non-spinning operating reserves product, the Company updated the Front Office and GRID models with current assumptions and then averaged the results.

[2]Order No. 32196 in Case No. PAC-E-10-07, page 56.

Next, the Company addressed the issue of additional capacity value for the non-spinning operating reserves product. In Order No. 32196, the Commission found the additional capacity value of the non-spinning operating reserves product to be $[redacted] million per year. This value was established by taking the average of the capacity costs of Currant Creek and the Aero-derivative unit proposed by Monsanto.[3] The Commission offered the following additional explanation as to the applicability of this incremental capacity value:

> "The Commission finds that this value properly blends the current condition with the longer term capacity view that corresponds with Monsanto's demonstrated long-term interruptible commitment..... This approach is also consistent with our desire and expectation that the parties will execute a five-year contract as opposed to the three contracts that have been the norm for the parties in the recent past. In addition to promoting greater price certainty and stability for Monsanto, a large industrial customer and employer in southeast Idaho, it would also allow the Company to plan more effectively into the future. Therefore, the Commission finds that an extended contract period would serve the public interest."[4]

Therefore, the Company recommends an additional capacity value of $[redacted] million in this proceeding.

Economic Curtailment

For the economic curtailment product, the Company recommends using the average of the Front Office and GRID model results. This approach is consistent with the Commission findings regarding economic curtailment value:

> "The Commission finds that the value proposed by RMP...and accepted by Staff is fair, just and reasonable... The differences in GRID and FO Model runs, with and without Monsanto Economic Curtailment, fairly estimate this value."[5]

[3]Order No. 32196 in Case No. PAC-E-10-07, pages 56-57.
[4]Order No. 32196 in Case No. PAC-E-10-07, page 57.
[5]Order No. 32196 in Case No. PAC-E-10-07, page 57.

To determine a recommended value for the economic curtailment product, the Company updated the Front Office and GRID models with current assumptions and then averaged the results.

System Integrity

In Order No. 32196, the Commission set the value of the system integrity product at $[redacted] million as a compromise between the parties' recommended values. The Commission provided the following justification for this compromise:

> "...all customers are subject to interruption to preserve system integrity, without reimbursement, with an understanding that interruption of a single large load customer like Monsanto in an emergency brings benefit to RMP and other customers."[6]

For the system integrity product, the Company recommends using the $[redacted] million value established by the Commission in Order No. 32196.

Summary of Results and Recommendation

Q. Please summarize the Company's recommendation for the value of Monsanto's interruptible products in this proceeding.

A. The Company performed an updated analysis using models and methodologies consistent with the Commission findings in Order No. 32196. The individual model results for the GRID and Front Office models for calendar year 2012 are summarized in the following table:[7]

[6]Order No. 32196 in Case No. PAC-E-10-07, page 57.

[7]For the System Integrity product, the Company used the Commission's recommended value in Order No. 32196 instead of the actual model results. The GRID and Front Office models were not used to calculate the additional capacity value amount of $[redacted] million. Instead, that value was derived from the Commission findings in Order No. 32196. The GRID model used a March 31, 2011 forward price curve and the Front Office model used a May 18, 2011 forward price curve.

[redacted]

Q. Please summarize the Company's recommendation for the value of Monsanto's interruptible products in this proceeding.

A. The Company recommends taking the average results of the Front Office and GRID models for the energy portion of the non-spinning operating reserves product and the economic curtailment product. Consistent with the Commission findings in Order No. 32196, the Company recommends applying $[redacted] million in additional capacity value to the non-spinning operating reserves product. The Company recommends using the Commission's recommended value from Order No. 32196 for the system integrity product.

The Company recommends a total interruptible credit to Monsanto for the three products of $[redacted] million. The table below summarizes the value by product type:

[redacted]

Q. Please provide a comparison of the Company's recommended interruptible product value in this proceeding to that ordered by the Commission in Case No. PAC-E-10-07.

A. The table below compares the Company's recommended Monsanto interruptible product value for this proceeding to the values found in Confidential Attachment C of Order No. 32196.

[redacted]

Q. How should the credit value of $[redacted] million be reflected in the Monsanto contract?

A. The credit value of $[redacted] million should be reflected as a per unit credit of $[redacted] per kW month applicable to the first 162 MW of measured demand in each month.

Q. Should other interruptible product terms of the contract change at this time?

A. No. The values recommended by the Company apply only if Monsanto provides the same interruptible products under the same terms and conditions as those found in the existing contract, with the assumption of 800 hours of economic curtailment per calendar year.

Q. Does the Company's recommended value of $[redacted] million impact the Company's general rate case filing?

A. No. The Monsanto interruptible credit value for the test period in question in the general rate case was set by the Commission in the 2010 General Rate Case. The $[redacted] million annual value set in that case will be in effect through calendar year 2011. The Company and Monsanto have agreed[8] to a new contract with a June 1, 2011, through December 31, 2011 term. The new contract includes an interruptible credit rate that equates to $[redacted] million per year. The Company recommends a rate effective date of January 1, 2012, for the interruptible credit amount of $[redacted] million recommended in this case.

Q. Does this conclude your direct testimony?

A. Yes.

[8]At the time of preparation of this filing, the Company and Monsanto had verbally agreed to a new contract under the terms described and were in the process of arranging for execution of the new agreement. Execution of a new agreement is expected prior to the expiration date of the interim agreement which terminates May 31, 2011.

Case No. PAC-E-11-12
Exhibit No. 39
Witness: Paul H. Clements

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Paul H. Clements

Overview of Monsanto's Curtailment Products

May 2011

Exhibit No. 39

Overview of the Models Used by the Company to

Value Monsanto's Interruptible Products

The Company primarily utilizes two models to calculate the cost of obtaining from other sources the same interruptible products that Monsanto offers. These two models are: 1) the Front Office model and 2) The Generation and Regulation Initiative Decision (GRID) model.

There are many different factors and inputs that influence the forward value of interruptible products. Each particular model utilized by the Company captures a reasonable majority of these factors and inputs in its analysis and, even if used alone, each model could be considered a fair assessor of value for the product it is pricing. However, each model has certain factors and inputs that it measures and analyzes with some level of precision and other factors and inputs that are not measured as well as they are in the other model. For example, one model used to value operating reserves may do a thorough job of analyzing the cost of holding reserves on the Company's existing resource portfolio, but that same model may not incorporate the Company's overall need for operating reserves in any given hour in its analysis. A second model may thoroughly incorporate the Company's need in any given hour but may not measure the value or cost with as much precision as the first model. Therefore, the Company believes a more balanced approach is to utilize both models in order to make sure all factors and inputs are appropriately considered when determining the value of

each interruptible product. Below is a summary of the models used by the Company:

Front Office Model

The Front Office model is an Excel based model that utilizes the Company's forward price curves, the operating characteristics and costs of the Company's current portfolio of generating assets, and other inputs to determine the marginal cost of obtaining curtailment products from Company generating resources and/or market purchases instead of purchasing those same products from Monsanto. The Front Office model can be used to value operating reserves, economic curtailment and system integrity.

The GRID Model

The Generation and Regulation Initiative Decision (GRID) model is the deterministic hourly production dispatch model used to set the Company's net variable power costs. The GRID model incorporates in its analysis the Company's operating reserves requirements and determines the "avoided cost" of the curtailment products. The GRID Model can be used to value operating reserves and economic curtailment.

Below is a summary of how the models are used to calculate a value for each of the various interruptible products.

Operating Reserve Product Valuation

Front Office Model

The Company's Front Office model determines the marginal or incremental cost of providing operating reserves from the Company's existing

generating resource portfolio. This model determines, on an hourly basis, the most economic or least cost means by which the Company can provide operating reserves. From a customer's perspective, this method determines the replacement cost or opportunity cost of the operating reserve megawatt provided by Monsanto. The spread between the market price for energy and the highest cost, in-the-money resource from the reserve stack determines the opportunity cost of holding operating reserves. This represents what the Company would be willing to pay on behalf of customers for the next megawatt of operating reserves if it needed to acquire additional operating reserves.

GRID Model

The GRID model provides a system-wide view of both the need for operating reserves and the system incremental benefit of providing those operating reserves on an hour-by-hour basis. The GRID model includes the existing generating portfolio of Company resources, which includes Company owned physical assets, power purchase agreements, and contracts for interruptible products (such as operating reserves) with other industrial customers. GRID determines the amount of operating reserves the system requires and then allocates resources to meet that requirement. GRID allocates operating reserves on the plants that are highest cost to lowest cost because it is less expensive to carry reserves on higher cost resources.

To determine the value of Monsanto's operating reserve product, a base case GRID run without Monsanto's resource is performed. Then, Monsanto's operating reserve contract is added at "zero cost" and the model is rerun. The

difference between the two studies is the value of the operating reserve contract. This value represents the value of the highest cost, or most expensive, operating reserves that would no longer be required if Monsanto's operating reserve product is available instead. The Company uses the GRID model to determine net power costs in this rate case, including the cost of the Company's operating reserves. Since Monsanto's interruptible credit is included as a component of net power costs, it is logical to use the same model to determine the value of the interruptible products provided by Monsanto.

Economic Curtailment Product Valuation

Front Office Model

In the Front Office model, the economic curtailment product is priced off of the market value of energy over those hours in which curtailment is anticipated. Curtailment is expected to occur in the highest priced hours, which is determined by the current forward price curve and the Company's current hourly scalars. Monsanto is compensated with 100% of the market value of the energy during the hours in which curtailment is anticipated to occur. The model assumes the Company will be able to optimize the curtailment hours and always curtail during the highest priced hours.

GRID Model

The GRID model provides a system-wide view of the benefit of providing the economic curtailment product on an hour-by-hour basis. The GRID model includes the existing portfolio of Company resources, which includes Company owned physical assets, power purchase agreements, and contracts. To determine

the value of Monsanto's economic curtailment product, a base case GRID run without Monsanto's resource is performed. Then, Monsanto's economic curtailment contract is added at "zero cost" and the model is rerun. The difference between the two studies is the value of the economic curtailment contract. The Company uses the GRID model to determine net power costs in this rate case. Since Monsanto's interruptible credit is included as a component of net power costs, it is logical to use the same model to determine the value of the interruptible products provided by Monsanto.

System Integrity Product Valuation

Front Office Model

The system integrity product gives PacifiCorp the right to curtail Monsanto when a double contingency or voltage event occurs. The double contingency event is defined as two or more forced outages totaling 500 megawatts or more of capacity within 48 hours of each other and must overlap for at least an hour. As with the economic curtailment product, the customers benefit when PacifiCorp avoids market purchases to meet Monsanto's load during a system integrity event. The product is priced using an average annual heavy load hour (6x16) market price for energy, with the assumption that the probability of a system integrity event is constant throughout the year. The annual average market price is applied to capacity available for the product and for the full limit of hours for which the product is available. The GRID model is not capable of pricing this product.