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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

In the Matter of the Application of PacifiCorp d/b/a Utah Power & Light Company for Approval of Interim Provisions for the Supply of Electric Service to Monsanto Company	PACIFICORP'S POST-HEARING BRIEF PAC-E-01-16

INTRODUCTION

PacifiCorp, d/b/a Utah Power & Light Company ("PacifiCorp" or the "Company"), requests approval of rates, terms and conditions for the provision of electric service to, and the purchase of interruptibility options from, Monsanto Company ("Monsanto"). The Commission once observed that "[t]he determination of a fair rate for Monsanto is more complicated than for any other customer in the Idaho system."[1] The history of this proceeding supports that observation. Nevertheless, the rates included in PacifiCorp's final proposal not only satisfy the Commission's statutory just and reasonable standard, they also are the *only* rates before the Commission that are not preferential to Monsanto or discriminatory or otherwise disadvantageous to other Idaho customers. Accordingly, for the reasons stated in PacifiCorp's testimony and in this Brief, the Commission should reject Monsanto's efforts to shift costs away from itself to the detriment of other Idaho customers and approve the rates, terms and conditions the Company has proposed.

[1] *Re Utah Power and Light Company*, Case No. UPL-E-89-7, Order No. 22976 (Feb. 13, 1990).

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BACKGROUND

PacifiCorp has been serving Monsanto's electric needs pursuant to special contract for over fifty years. (Tr. 331.) Most recently, PacifiCorp has provided electric service to Monsanto under an interruptible power supply agreement that was approved in 1995 and, in the Company's view, terminated December 31, 2001 ("1995 Agreement").[2] (Tr. 28.) Beginning as early as 1999 and continuing throughout 2000 and 2001, PacifiCorp and Monsanto tried—albeit unsuccessfully—to negotiate a new power supply arrangement. (Tr. 31.) Because the termination date of the 1995 Agreement was imminent, on December 7, 2001, PacifiCorp filed an Application with the Commission requesting that the Commission approve interim provisions for the supply of electric service to Monsanto. (Tr. 33.)

PacifiCorp initially proposed in this proceeding to provide Monsanto's full service requirements in a firm power supply agreement and to separately negotiate and purchase interruptibility and/or load curtailment. (Tr. 31-33.) Monsanto objected to PacifiCorp's proposed power supply arrangement on the basis that it did not meet Monsanto's "critical needs of price certainty, price stability and reduced risk." (Tr. 413.) Discussing what it viewed as the "four primary areas of disagreement" between the parties, Monsanto listed the following requirements with respect to specific contract terms necessary to achieve its critical needs:

1. That PacifiCorp continue to supply electric service to Monsanto pursuant to a single integrated contract providing both firm and interruptible service;
2. That the contract reflect a single integrated price for firm and interruptible service that is certain for the term of the contract;
3. That the term of the contract be at least five years; and

[2] The termination of the 1995 Agreement is currently being litigated in the U.S. District Court for the District of Idaho, Case No. CV-01-607-E-BLW. (Tr. 340.)

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4. That the purchase of curtailment options be included in the single integrated contract and be factored into the determination of the single integrated contract price. (Tr. 416-17.)

PacifiCorp's final proposal includes the following elements:

1. PacifiCorp will continue to supply electric service to Monsanto pursuant to a single contract providing firm, interruptible and replacement power service;

2. The contract will contain separate pricing components but, when the components are combined, they will reflect a net cost to Monsanto for firm, interruptible and replacement power service;

3. The contract will be for a fixed term ending December 31, 2006 (5 years from December 31, 2001, the date PacifiCorp contends the last contract ended); and

4. The contract will include the purchase of curtailment options and sale of replacement power, but will not include a single integrated price.

As demonstrated by the foregoing, PacifiCorp's final proposal substantially satisfies three out of Monsanto's four contract requirements. In addition, PacifiCorp's final proposal is the only proposal before the Commission that is cost justified and provides the price stability, certainty and reduced risk that are "critical" both to Monsanto and to the economic well-being of the southeastern Idaho community.

LEGAL STANDARD

The rates adopted for Monsanto must meet the statutory just and reasonable standard.[3] In addition, Monsanto's rates cannot be preferential, discriminatory, or otherwise prejudicial or disadvantageous.[4] As demonstrated below, PacifiCorp's final proposal results in prices that are

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[3] *See* Idaho Code §§ 61-301, 61-502, 61-622.

[4] *See* Idaho Code §§ 61-315, 61-502.

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fair, just and reasonable in that they are: 1) cost justified; 2) supported by the evidence; and 3) mutually beneficial to both parties. Unlike Monsanto's proposal, PacifiCorp's proposal does not shift costs to other customer classes and, therefore, is neither preferential toward Monsanto nor disadvantageous to other Idaho customers.

PACIFICORP'S FINAL PROPOSAL

PacifiCorp's final proposal, based on changes Monsanto made in its rebuttal testimony, can be summarized as follows:

1. A single electric service agreement providing both firm and interruptible service;
2. Although priced separately, the bill to Monsanto will incorporate all charges for firm, interruptible and replacement power service;
3. The term of the contract will commence on the date established by the Commission and will end December 31, 2006;
4. For firm electric service, PacifiCorp will charge Monsanto each month a customer charge of $282.89, a demand charge of $9.51 per kW-month and an energy charge of $16.31 per MWh, based on PacifiCorp's embedded costs of service;
5. The cost-of-service for firm electric service will be allocated on a situs basis to the Idaho jurisdiction;
6. The rates for firm electric service may be adjusted during the term by the Commission, subject to the standards applicable to tariffs;
7. Monsanto will receive monthly credits for three interruptible or curtailment options: System Integrity; non-spin contingency Operating Reserves; and an Economic Curtailment option with a buy-through provision;
8. PacifiCorp will purchase from Monsanto the right to interrupt all three furnaces for System Integrity, for up to 12 hours per year. The monthly credit for this right will be $40,500;
9. PacifiCorp will purchase from Monsanto 95 MW of Operating Reserves for 288 hours per year. The monthly credit for this product will be $326,849.41, based on a two-tiered firm rate structure and an energy charge of $16.31, prorated for changes in furnace availability;

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10. The Operating Reserves component of the agreement will be subject to reopening if Western Electricity Coordinating Council non-spinning operating reserve criteria change;

11. PacifiCorp will purchase from Monsanto 67 MW of Economic Curtailment, available for 500 hours per year. The monthly credit for this product will be $335,455.75, based on a two-tiered firm rate structure and an energy charge (or "strike price") of $16.31, prorated for changes in furnace availability;

12. Monsanto will have the option to buy through the Economic Curtailment ("replacement power"). The replacement power cost for Monsanto will be calculated by multiplying the curtailed load by the duration of the curtailment multiplied by the hourly-shaped daily Dow Jones Palo Verde Firm On-Peak Price;

13. The monthly credits for System Integrity, Operating Reserves, and Economic Curtailment will be allocated on a system-wide basis;

14. In the event Idaho statutes are amended to provide customers with the ability to choose an electric supplier, either party may terminate the agreement within 90 days of direct access implementation;

15. The agreement would not include: an annual price adjustment, a "most favored nations" clause, or a clause allowing Monsanto to modify the contract based on "significant changes" in the industry;

16. The termination clause of the contract will be modified to do away with the current ambiguity over when the contract terminates and what notice is required.

A revised PacifiCorp Ex. 10 containing PacifiCorp's final proposed prices, terms and conditions for service to Monsanto is attached to this brief as Attachment A.

ARGUMENT

A. Price for Firm Electric Service.

1. PacifiCorp Proposal (Supported by Staff).

The Company's proposal with respect to valuation of the firm rate for provision of electric service to Monsanto has remained the same throughout this proceeding and is supported

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by Commission Staff.[5] (Tr. 719-20.) Using an embedded cost-of-service study, PacifiCorp has determined that 31.4 mills per kWh is the appropriate rate for firm electric service to Monsanto. (Tr. 214.) Full cost-of-service is the appropriate "starting point" for determining Monsanto's firm service rate because it ensures that, like other Idaho customers, Monsanto is paying its full and fair share of PacifiCorp's costs to provide service.[6] (Tr. 230.) Moreover, at PacifiCorp's proposed firm rate, standard electric service to Monsanto will provide the same return on investment as is expected of other PacifiCorp customers in Idaho under similar terms and conditions. (Tr. 214.)

2. Monsanto Proposal.

In its rebuttal testimony, Monsanto concedes that cost-of-service is the appropriate valuation methodology to apply. (Tr. 565.) Using that methodology, Monsanto witness Kathryn Iverson proposes that $29.30 per MWh be the "maximum" firm rate applied to PacifiCorp's provision of electric service to Monsanto. (*Id.*) Notwithstanding her acknowledgement that both Staff and the Irrigators support PacifiCorp's application of its cost-of-service methodology, Ms. Iverson maintains that in her view, use of the Company's cost study would "create new precedent." (Tr. 567-71.) Ms. Iverson also contends that the 1998 test year results should be applied because the 1999 test year used by the Company "has not been audited by the Commission." (Tr. 571-72.) Finally, Ms. Iverson argues that even if $31.40 per MWh is

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[5] Initially, Anthony Yankel, witness for the Idaho Irrigation Pumpers Association (the "Irrigators"), also supported the Company's cost-of-service methodology and the resulting firm rate of $31.40. (Tr. 764-65.) In response to Monsanto's rebuttal testimony, Mr. Yankel continued to support PacifiCorp's proposed cost-of-service methodology, except that he also considered Monsanto's proposed firm rate of $29.30 (derived using PacifiCorp's methodology but capped at the current 8.418% overall rate of return for Idaho) to be reasonable. (Tr. 772.)

[6] The firm price for electric service has been referred to in this proceeding as the "starting point" in the sense that it produces an electricity bill against which credits for the value of interruptibility will be applied.

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Monsanto's "'true' cost-of-service," the Commission should use $29.30 per MWh instead because that rate "would bring Monsanto over 80% of the way to full cost-of-service." (Tr. 565.)

For the following reasons, the Commission should reject Monsanto's arguments about the Company's cost-of-service study and resulting firm rate.

a. Monsanto's proposed firm rate of $29.30 per MWh.

Ms. Iverson is critical of PacifiCorp's calculation of Monsanto's embedded cost-of-service firm rate because, she claims, that rate will increase the Idaho jurisdictional rate of return from 8.418% to 8.867%. (Tr. 543.) Ms. Iverson contends that instead, the increase to Monsanto's firm rate should be limited to the overall increase necessary to maintain the current overall Idaho rate of return, 8.418%. Working backward from the current Idaho return, Ms. Iverson determines that Monsanto's firm rate should be $29.30 per MWh, producing a rate of return for Monsanto of 6.88%. (Tr. 544.)

Limiting Monsanto's rate increase and thereby "freezing" its rate of return at a level that is below both the state average and a reasonable utility return for a term of five years (the minimum contract term Monsanto is proposing) will result in a rate subsidy to Monsanto for the duration of the contract. (Tr. 235.) The effect of such a freeze is to shift costs away from Monsanto and toward residential, small business, agricultural, and other industrial customers. Not only does Ms. Iverson's adjustment shift costs toward other Idaho customers, it also denies them benefits to which they are due under the cost-of-service study in this case. In that study, all PacifiCorp special contracts throughout its system are assigned on a situs basis, with each state bearing the full embedded revenue requirement responsibility for all special contract customers in that state. The revenue shortfall from these contracts was previously allocated to all states, with Idaho bearing its share of the system-wide revenue shortfall. The effect of switching to situs allocation of these contracts in this cost-of-service study is to reduce the jurisdictional cost-of-service for Idaho. This benefit belongs to all Idaho customers. By holding the overall rate of return for Idaho constant at 8.418%, Ms. Iverson arbitrarily allocates to Monsanto Idaho's entire share of that benefit and uses it to lower Monsanto's contract rate rather than distributing it among all Idaho customers. (Tr. 235-36.) If this treatment is accepted by the Commission, other Idaho customers will be denied this benefit in future rate cases.[7]

Under PacifiCorp's proposal, all Idaho customer groups will benefit from special contract situs treatment. In addition, PacifiCorp's proposed treatment is fair and nondiscriminatory in that Monsanto will be expected to pay rates that reflect a reasonable rate of return, just as other customers do. This is not a general rate case, and the Commission does not have the ability to bring all rates up to reasonable rate of return. That fact does not entitle Monsanto to a 6.88% rate of return. It only means that Monsanto is being set at a current rate of return at a different time than other customers. This is not unreasonable or discriminatory, given that (1) Monsanto's rate has been below embedded cost-of-service throughout the 1995 contract and (2) Monsanto is asking for a fixed price for a five-year term. Although it is true that PacifiCorp's overall Idaho rate of return will increase slightly under the Company's proposal, the resulting 0.449 percent increase in rate of return will not raise the equity portion above PacifiCorp's currently authorized Idaho return on equity or any return on equity recently approved for PacifiCorp by any other jurisdiction. In short, unlike Monsanto's proposal respecting its firm service rate, PacifiCorp's proposal does not shift costs to, or benefits from, other Idaho customers.[8]

b. 75/25 classification methodology.

Ms. Iverson's arguments respecting the "precedent" set by PacifiCorp's cost-of-service classification methodology likewise should be rejected. Both Staff witness David Schunke and

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[7] Because Monsanto proposes that its rates be fixed for a five-year term, the Commission would not have the ability to reallocate this benefit in a later rate case.

[8] For the same reasons, Ms. Iverson's contention that a proposed firm rate of $29.30 per MWh would bring Monsanto more than 80 percent of the way to full cost-of-service cannot be accepted. Under the embedded cost analysis Ms. Iverson agrees should apply, any rate less than Monsanto's full embedded costs results in a rate subsidy for Monsanto paid for by other Idaho customers.

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Mr. Yankel support the 75/25 demand/energy classification PacifiCorp proposes for generation and transmission fixed costs. Mr. Schunke and Mr. Yankel agree that the 75/25 classification methodology is consistent with the undisputed fact that generation and transmission facilities are designed and operated to provide both capacity and energy. (Tr. 723-24, Tr. 765). By contrast, Ms. Iverson's suggestion that generation and transmission fixed costs should be allocated as 100 percent demand related completely ignores that reality. Although the Commission in Order No. 23508 (PacifiCorp Ex. 26) chose not to address the validity of an allocator based on energy, that decision was based in part on the fact that the order was issued just after the Pacific Power/Utah Power merger, a time when PacifiCorp's system was not yet centrally dispatched. As Mr. Schunke points out, it is especially appropriate to recognize an energy allocator when considering an integrated system, like PacifiCorp's, that includes hydroelectric generation. (Tr. 723.) In light of the changes that have occurred since Order No. 23508 was issued 12 years ago, the Commission's decision in that order should not affect the classification it applies in this case.

c. 1999 cost-of-service data.

Ms. Iverson proposes using 1998 cost data as opposed to the 1999 data used by the Company because, she claims, the 1998 test year was audited by the Staff and the 1999 test year data was not. While it is true that the 1998 test year was audited by Staff, these audits are not official. Neither the 1998 nor the 1999 cost-of-service study has been formally reviewed or approved by the Commission. In fact, Idaho's cost-of-service study has not been reviewed by the Commission since 1990. Simply put, the 1998 test year Ms. Iverson would use to support her proposed maximum increase to Monsanto's rate is an arbitrary choice and not the most recent Idaho cost-of-service data available. Mr. Schunke's view that the Company's operating costs

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and expenses likely have increased over the last five years supports the reasonableness of using the most recent cost data on file with the Commission, *i.e.,* the 1999 data.[9] (Tr. 738-42.)

d. Firm rate design.

Both PacifiCorp and Monsanto agree that the Commission-authorized firm rate design is critical to the valuation of interruptibility and economic curtailment. (Tr. 823-24; Tr. 562.) PacifiCorp proposes a firm rate design that includes the following cost-of-service components: (1) a monthly customer charge; (2) a demand charge; and (3) an energy charge. (PacifiCorp Ex. 10.) Monsanto, by contrast, "prefers that the rate design be a flat all-in energy rate." (Tr. 562.) PacifiCorp believes that its rate design is a better reflection of the cost-of-service components associated with service to Monsanto, will properly match Monsanto's incentives with PacifiCorp's costs and will provide a better matching of costs and revenues should Monsanto's usage characteristics change during the contract term. If Monsanto adds a furnace, idles a furnace or otherwise alters its usage characteristics, the separate demand and energy charges will capture these changes more accurately than an all-in energy rate.

Irrespective of the rate design adopted by the Commission, it is important to keep in mind the impact that rate design has on the valuation of interruptibility and curtailment. As Mr. Watters explained, the calculation of lost retail revenues in deriving the payment for Operating Reserves and the calculation of the "strike price" in deriving the payment for Economic Curtailment are based on Monsanto's energy charge. (Tr. 195-97; *see, e.g.,* PacifiCorp Ex. 27.) The results change significantly depending on whether these calculations are done using an energy-only charge of $16.31 per MWh or an all-in energy charge of $31.40 per MWh. For purposes of the following discussion, PacifiCorp assumes that the Commission adopts its

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[9] *See also Re Utah Power & Light Co.,* Case No. UPL-E-90-1, Order No. 23508 at 8 (PacifiCorp Ex. 26) (Commission will not make ratemaking decisions based on "stale" cost-of-service data).

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proposed demand/energy rate design and these calculations are done using the energy-only charge of $16.31 per MWh.

B. Valuation of Interruptibility.

1. PacifiCorp Proposal.

Based upon the information provided in Monsanto witness Daniel Schettler's direct testimony, PacifiCorp identified three forms of interruptibility or curtailment products to offer: system integrity benefit ("System Integrity"); non-spinning operating reserves ("Operating Reserves"); and economic curtailment with a buy-through option ("Economic Curtailment"). (Tr. 147.) PacifiCorp presented specific terms of interruption and values for each form of interruptibility or curtailment that would provide PacifiCorp with the products it needs and the greatest overall value to Monsanto. (Tr. 148-49.) Monsanto then changed its proposal in Mr. Schettler's rebuttal testimony to a single offer of Economic Curtailment on all three furnaces (162 MW) of up to 1,000 hours per year. (Tr. 427; Monsanto Ex. 243.) Because this proposal is not consistent with Monsanto's "critical needs of price certainty, price stability and reduced risk" or responsive to PacifiCorp's desire for System Integrity and Operating Reserves products, PacifiCorp continues to support the three separate interruptibility products.

a. System Integrity.

The System Integrity product is an option that would override other interruptibility or curtailment products and allow PacifiCorp to interrupt service to Monsanto in order to stabilize its electrical system in a system emergency condition. (*See* PacifiCorp Ex. 12; Tr. 148.) PacifiCorp proposes to pay Monsanto $486,000 per year for the option to interrupt all three of Monsanto's furnaces (162 MW) for System Integrity. This is an option that is important to PacifiCorp to maintain the integrity of its electrical system and should be included in any terms and conditions adopted by the Commission. Monsanto accepted this form of interruption in its 1992 and 1995 contracts and has not expressed any objection in this proceeding to either this product or its price.

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In pricing this option, PacifiCorp assumed that the system emergency occurs in the hour that all wholesale prices in the Western Electricity Coordinating Council ("WECC") reach the FERC price cap of $250/MWh. Because wholesale prices are not expected to exceed this cap, but will at most times be lower, this assumption gives Monsanto the highest value for this option. (Tr. 812.)

b. Operating Reserves.

The WECC requires each Control Area Operator to acquire or operate resources to provide a level of Contingency Reserves sufficient to account for errors in load forecasting, generation loss, transmission unavailability and regulating requirements. Contingency Reserves must be either Spinning or Non-Spinning. PacifiCorp is a Control Area Operator and is required to meet this standard. The Operating Reserves that have been purchased from Monsanto in the past are characterized as Contingency Reserves – Non-Spinning. (Tr. 144.) The requirements of Contingency Reserves – Non-Spinning are described by Mr. Watters. They include:

- Reduce specified furnace loads within seven (7) minutes of a call from PacifiCorp requesting reserves;[10]
- Maintain the stated amount of Reserves for up to 60 minutes subsequent to call;
- Return to the non-contingency consumption upon instructions from PacifiCorp;
- Allow real-time telemetry of the real power output of each resource providing reserves;
- Allow approved data communication service between Monsanto's control room and PacifiCorp; and
- Allow approved voice communication service to provide both primary and alternate voice communications between PacifiCorp and Monsanto's operator controlling the resource. (Tr. 145; *see also,* PacifiCorp Ex. 12.)

[10] PacifiCorp's proposal for Operating Reserves provides for six (6) minutes notice. Monsanto has not objected to this notice provision.

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As Mr. Watters testified, the WECC is considering changes to the quantity of Contingency Reserves – Non-Spinning required. (Tr. 145-46.) If a change in this requirement is made, PacifiCorp could potentially meet its Contingency Reserves - Non-Spinning as a zero-cost option on the Company's own resources, without purchasing additional reserves from Monsanto or others. (Tr. 147.) Because of this potential which is both outside PacifiCorp's control and critical to fair and equitable valuation of this product, Mr. Watters stated:

> [W]e either need the ability to change the agreement based on the value of the product, shorten the term of the agreement to provide more certainty that our payment will match the value we receive, or have the option to convert the operating reserve agreement to another interruptible product of equivalent value to both parties. (Tr. 147.)

Reflecting Mr. Schettler's direct testimony and Exhibit A to his proposed contract (Monsanto Ex. 210), PacifiCorp proposed in its rebuttal testimony to purchase Non-Spinning Operating Reserves on two Monsanto furnaces (95 MW) and pay Monsanto $3,112,200 per year. (Tr. 148; PacifiCorp Ex. 13.) Because the System Integrity and Operating Reserves products overlap (that is, if the System Integrity option is exercised and service to Monsanto's three furnaces is interrupted, the Operating Reserves will not be available), in calculating the payment for Operating Reserves PacifiCorp has deducted the 12 hours per year of System Integrity interruption from the 300 hours per calendar year of Operating Reserves offered by Monsanto. Thus, the payment for Operating Reserves is based on 288 hours per year.

PacifiCorp initially priced Operating Reserves at $2.73 per kilowatt-month ("kW-mo") based on an assumed all-energy rate of $31.40 per MWh, the proposed price for firm service to Monsanto for purposes of calculating lost retail revenues. (PacifiCorp Ex. 13.) PacifiCorp corrected this lost revenue assumption in Mr. Watters' live rebuttal testimony because the Company is proposing a two-tiered retail price for Monsanto that includes a demand charge and an energy charge. (Tr. 195-96.) Under this retail pricing structure, when PacifiCorp interrupts Monsanto the Company will lose retail revenue at the rate of $16.31 per MWh, the amount of the energy charge only, because the demand charge is not avoidable. With this lower lost revenue offset, the price for Operating Reserves increased to $3.44052 per kW-mo and the total annual payment increased to $3,922,193. (PacifiCorp Ex. 27 and 32.)

Monsanto has not disputed either the terms or the amount of payment PacifiCorp has proposed for Operating Reserves. Monsanto has, however, proposed to eliminate its 300 hours of Operating Reserves in favor of a total of 1,000 hours of Economic Curtailment. (Tr. 427.) PacifiCorp wishes to retain the Operating Reserves option rather than trade it for hours of Economic Curtailment. Operating Reserves provide PacifiCorp with the right to interrupt up to 95 MW of Monsanto load (two furnaces) on six minutes notice and can be designed to meet WECC criteria for Control Area Operators, while Economic Curtailment requires 120 minutes notice (as proposed by PacifiCorp) and does not meet WECC criteria.

Operating Reserves also offer advantages to Monsanto and southeastern Idaho, because PacifiCorp will only interrupt service to Monsanto for Operating Reserves when these reserves are needed to meet WECC operating criteria. On the other hand, because Economic Curtailment is essentially a financial product, PacifiCorp will exercise Economic Curtailment whenever the market value of power exceeds Monsanto's energy rate, regardless of load requirements. It is likely, therefore, that Operating Reserves will be called on less often than an equivalent amount of Economic Curtailment. This distinction results in less risk of curtailment to Monsanto's furnace operations and less risk of employment disruption in southeastern Idaho.[11]

In Exhibit A to its proposed contract (Monsanto Ex. 210), Monsanto states that it will agree to six minutes notice for Economic Curtailment, apparently attempting to meet the notice requirement for Operating Reserves. Monsanto also proposes, however, that it have the right to

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[11] PacifiCorp recognizes that Economic Curtailment as proposed in this case would entitle Monsanto to buy through replacement power to maintain its furnace operations. This option carries its own risks, because the replacement power must be purchased at market prices. Mr. Schettler testified that if market prices did not meet Monsanto's operational requirements, Monsanto would curtail its operations. (Tr. 448-49.)

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buy through to replace the interruption. (Monsanto Ex. 210, Exhibit A.) This buy-through option would disqualify the interruptibility from meeting the requirements of Operating Reserves, because the customer has the right to continue taking service and the physical load/resource balance has not been improved by the desired 95 MW. A customer's right to buy through is incompatible with the criteria for Operating Reserves. (Tr. 142-43.) For this reason, it is unnecessary and of little value for Economic Curtailment to be exercisable on less than the two hours notice proposed by PacifiCorp.

c. **Economic Curtailment.**

Economic Curtailment allows PacifiCorp to curtail service to a customer for any reason whatsoever, including the opportunity for more profitable transactions with other parties. Previous Economic Curtailment agreements with Monsanto and others have included the customer's option to buy through the curtailment; that is, to require PacifiCorp to continue to plan and physically serve the load at a pre-agreed price or pricing formula. Because daily market index values are published and hourly market index values are not, the standard proposed for the buy-through option is at the applicable daily market index shaped to reflect hourly market prices. Typical terms for super-peak period and all-hours products are shown in PacifiCorp Exhibit 12. The objective of Economic Curtailment is for PacifiCorp to obtain the economic value of the difference between market price and Monsanto's contract energy price on the amount of curtailed energy. Monsanto does not have to pay PacifiCorp its contract energy price for the amount of curtailed energy, but it bears the economic risk of either curtailing its operations or buying replacement power at then current market prices.

The terms and value of Economic Curtailment have been the most contentious and difficult issues in this proceeding. Based on Monsanto's direct testimony and Exhibit A to its proposed contract (Monsanto Ex. 210), PacifiCorp initially proposed Economic Curtailment of 500 hours for 46 MW of load (one furnace) in exchange for an annual payment of $2,340,000. (PacifiCorp Ex. 14.) Monsanto responded that its Furnace No. 9 would be available for

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Economic Curtailment, based on PacifiCorp's identification of Furnaces No. 7 and 8 for Operating Reserves (95 MW), thereby increasing the available load for Economic Curtailment to 67 MW. (Tr. 426.) Monsanto also pointed out that the lost revenue offset for Economic Curtailment was incorrectly calculated at $31.40 per MWh, the assumed all-inclusive energy price, while PacifiCorp is proposing a two-tiered demand and energy rate structure with an energy price of $16.31 per MWh. Monsanto testified that PacifiCorp's lost revenue should be calculated on the basis of the energy-only charge of $16.31 per MWh, because the demand payment is not avoidable. (Tr. 561.)

PacifiCorp accepted both of Monsanto's corrections to its calculation of the Economic Curtailment payment. These corrections are contained in PacifiCorp Exhibit 27, which also increases the Economic Curtailment option to 1,000 hours per year. Exhibit 27 shows that for the right to Economic Curtailment of 67 MW of Monsanto load for 1,000 hours per year, with a lost retail revenue offset of $16.31 per MWh, PacifiCorp would pay Monsanto $2,927,230 per year. In his post-hearing rebuttal testimony, Mr. Klein made a correction to change the "strike price" for the Economic Curtailment option from $31.40 per MWh to $16.31 per MWh. (Tr. 808.) The term "strike price" refers to the fixed price at which PacifiCorp would exercise its right to curtail load under the Economic Curtailment option. The greater the difference between market price and the strike price, the more likely it is that PacifiCorp will exercise the Economic Curtailment option. PacifiCorp is more likely to exercise an option with a strike price of $16.31 per MWh than an option with a strike price of $31.40 per MWh, and is likely to exercise an option more frequently at the lower strike price. Mr. Klein also removed the lost retail revenue offset from this calculation of Economic Curtailment. These corrections to PacifiCorp Exhibit 27 are incorporated in PacifiCorp Exhibit 32 and result in a payment to Monsanto for Economic Curtailment of $4,643,950 per year (again based on 67 MW of Economic Curtailment for 1,000 hours per year). The other terms for System Integrity and Operating Reserves remain the same. (*Compare* PacifiCorp Ex. 27 and PacifiCorp Ex. 32.)

If Economic Curtailment is reduced to 500 hours per year, and the other terms remain the same (*e.g.*, the amount of Economic Curtailment remains at 67 MW and the lost retail revenue offset is removed), the payment to Monsanto would be $4,025,469 per year. (PacifiCorp Ex. 35, p. 2, top table.) Mr. Klein testified that Monsanto could choose either 500 hours or 1,000 hours of Economic Curtailment. (Tr. 846-48.) If Monsanto proposes a maximum of 1,000 hours for all forms of interruptibility, PacifiCorp still requests 300 hours in the form of System Integrity and Operating Reserves. This would leave 700 hours for Economic Curtailment, and the record does not contain a value for Economic Curtailment between 500 and 1,000 hours. PacifiCorp would be willing to calculate a value for 700 hours of Economic Curtailment and supplement the record with this calculation, if the Commission requests such a calculation.

PacifiCorp priced Monsanto's Economic Curtailment using the Black-Scholes model. This is an industry standard pricing model that explicitly estimates the value of an option. The developers of the model were awarded the Nobel Prize in economics in 1997 for their work in developing this model. The value of an option in this model is determined by: the underlying price of the commodity, the option strike price, the expiration date of the option, the option exercise or settlement structure, the volatility of the price of the underlying commodity, and the risk-free rate of interest. As an input, the model uses PacifiCorp's forward price curve to estimate the price that market participants are willing to buy or sell electricity (in this case, electricity at Palo Verde) for certain forward delivery periods. (Tr. 809-10.) Monsanto's Economic Curtailment option is not a product that is available in the wholesale market. (Tr. 812.)

2. Staff Proposal.

Staff witness Schunke calculated a range for the value of Monsanto interruptibility and the net price for service to Monsanto. The high end of the range was calculated using Monsanto's proposed levels of interruptibility, as contained in Monsanto's direct testimony, and

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the low end of the range was calculated by increasing the level of interruptibility to the levels provided in the 1992 Monsanto contract. (Tr. 729.)

Mr. Schunke then calculated the value of interruptibility using two different avoided resources: a potential peaking resource from the Company's RAMPP-6 integrated resource plan; and market purchases from Case No. GNR-E-02-01. (*Id.*)

Mr. Schunke determined that the value of the peaking resource is $78.43 per MWh, assuming a capacity factor of 15 percent, or 1,314 hours per year. He did not adjust his value downward to reflect the fact that Monsanto is offering less interruptibility than 1,314 hours. (Tr. 730.) Applying this value of a peaker resource to the level of interruptibility proposed by Monsanto produced an effective value of $4.34 per MWh when spread over 166 MW of total load at an 85 percent load factor. Mr. Schunke then subtracted this interruptibility value from the all-inclusive energy rate of $31.40 per MWh to arrive at a net price of $27.10 per MWh. (Tr. 730; Staff Ex. 101.) Mr. Schunke performed a similar calculation using market purchases as the avoided resource, resulting in an effective value for interruptibility of $1.86 per MWh and a net price of $29.50 per MWh. (Staff Ex. 101.)

Mr. Schunke repeated these calculations using the level of interruptibility provided in the 1992 Monsanto contract, instead of the level proposed by Monsanto in this case. These calculations resulted in values of interruptibility of $12.16 per MWh for the avoided peaker resource and $5.20 per MWh for the avoided market purchases and net prices of $19.20 per MWh for the avoided peaker resource and $26.20 per MWh for the avoided market purchases. (Tr. 731; Staff Ex. 101.) He testified that a peaker resource provides a more valuable resource than a market purchase, and therefore his recommendation was closer to the avoided peaker resource. He also recognized that an interruptible contract may not be as valuable as a peaker resource because the generating resource offers greater operational flexibility. (Tr. 731-32.) As noted below, a generating resource also offers the ability to make market sales of energy and

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ancillary services (e.g., spinning and non-spinning reserves) and to produce offsetting revenues when the resource is not needed to serve retail load.

Mr. Schunke concluded that if the interruptibility is limited to the amounts proposed by Monsanto in its direct testimony, the appropriate net price is $27.00 per MWh. He stated that if Monsanto were able to provide interruptibility similar to that provided in the 1992 Monsanto contract, a net price of about $23.00 per MWh could be justified. (Tr. 732.) He emphasized that Monsanto's net price should not be reduced below $23.00 per MWh, because current conditions are less favorable than they were in 1995 when the Monsanto contract was last negotiated. In 1995, market prices were very low and PacifiCorp had excess capacity, while today the Company has no excess capacity, production costs have increased and market prices are volatile. (Tr. 734.)

Mr. Schunke's net price range, then, is between a high of $27.00 and a low of $23.00 per MWh. Mr. Schunke admitted that greater interruptibility than offered in Monsanto's direct testimony would lower the upper range of his recommendation, but stated that Monsanto's proposed 1,000 hours of interruptibility was still lower than the level in the 1992 Monsanto contract – so it would not affect the lower end of his range. (Tr. 737.)

PacifiCorp witness Taylor generally agreed with Mr. Schunke's calculations, with one significant exception. He testified that Mr. Schunke used the total resource cost of the peaking resource in his analysis, which does not take into consideration the revenues from power sales that are provided by a generating resource. (Tr. 239.) Mr. Taylor recommended that the revenue production potential of the peaking resource be recognized by considering only the fixed costs of the combustion turbine, not the total resource cost. This modification would reduce the cost of the peaking resource to $55.92 per MWh, reduce the interruptibility discount to $3.10 and increase the net price to $28.29 per MWh. (Tr. 239; PacifiCorp Ex. 17.)

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With or without Mr. Taylor's adjustment, Staff's analysis demonstrates that PacifiCorp's estimate of the value of Monsanto's interruptibility is well within a range of reasonable values. Based on:

- 300 hours per calendar year of physical interruptibility for Operating Reserves (95 MW) and System Integrity Benefit (162 MW) combined;
- PacifiCorp's two-tiered pricing structure, which places the strike price for Economic Curtailment at $16.31 per MWh;
- Economic Curtailment of 67 MW; and
- Monsanto's actual year 2000 energy consumption and load shape of 1,342,563 MWh,

the Company projects that Monsanto's net cost for electric service would be between $25.62 per MWh for 500 hours per calendar year of Economic Curtailment (PacifiCorp Ex. 35, p. 2, top table) and $25.16 per MWh for 1,000 hours per year of Economic Curtailment (PacifiCorp Ex. 32).[12] These numbers are in the middle of Staff's range and below the rate of $26.00 per MWh that would have been in effect in 1996 under the 1992 Monsanto contract. (Tr. 734.)

3. Monsanto Proposal.

Monsanto initially proposed to offer emergency curtailment, 300 hours per year of Operating Reserves and 500 hours per year of Economic Curtailment with an option to buy through replacement power. (Monsanto Ex. 210, Exhibit A.) In his rebuttal testimony, Mr. Schettler revised Monsanto's proposal by eliminating the 300 hours of Operating Reserves

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[12] As noted above, PacifiCorp's Ex. 35 and 32 calculate the net price to Monsanto using the proposed two-tiered demand/energy retail rate structure and Monsanto's actual 2000 demand and energy consumption data. The $31.40/MWh all-in firm energy rate is based on 1999 cost-of-service data. The method used in PacifiCorp Ex. 35 and 32 produces a higher all-in firm energy rate. Because of this difference, converting the fixed dollar interruptibility credits to $/MWh and deducting the combined value from $31.40/MWh would not produce the same $/MWh net prices shown above. In the end, PacifiCorp's fixed dollar interruptibility credits will be applied to Monsanto's actual monthly demand and energy consumption and electricity bill. The net price values provided in this brief are for illustrative purposes.

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and offering 1,000 hours per year of Economic Curtailment on Monsanto's full three-furnace load, or 162 MW. (Tr. 427.) As discussed above, Monsanto has not contested PacifiCorp's terms or value for emergency curtailment under the System Integrity option.

Monsanto's principal approach for valuing the Economic Curtailment option is reflected in Dr. Alan Rosenberg's Exhibit 239, page 1. The value he derives would be deducted from Monsanto's proposed firm retail rate to arrive at an all-energy net rate. (Tr. 427.) At the hearing, Dr. Rosenberg admitted that he was proposing a value of over $17,000,000 for 1,000 hours of interruptibility, when Monsanto's net annual electricity bill under its expired (or expiring) contract is only $25,049,000. (Tr. 672.) Even under a new firm retail rate of $31.40, the 1,000 hours of interruptibility (11.42% of the year) would represent a discount of 41.42%.[13] Clearly, there is something wrong with Dr. Rosenberg's analysis.

Working from Exhibit 239, page 1, the elements of Dr. Rosenberg's analysis and PacifiCorp's responses are as follows:

1. Avoided Resource. Exhibit 239 uses a simple cycle combustion turbine (or peaker, as described by Mr. Schunke) generating resource from RAMPP-6 as the hypothetical avoided resource. This resource has a total fixed cost of $73.48/kW-year (this cost is not expressed in $/MWh, as used in Mr. Schunke's testimony). (Monsanto Ex. 239, p. 1, line 3.) Dr. Rosenberg argues that a Utah peaker should be used instead of the Oregon/Washington peaker used in RAMPP-6, and that a Utah peaker would have higher fixed costs. (Tr. 651-52.) Changing to a Utah peaking resource would not favor Monsanto. Mr. Taylor testified that although the West Valley, Utah peaker has higher fixed costs than the RAMPP-6 peaker, it is expected to operate at a higher capacity factor—due to a more efficient heat rate than the RAMPP-6 peaker—and would produce a smaller interruptibility credit for Monsanto. (Tr. 240.)

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[13] $31.40/MWh x 1,354,000 MWh = $42,651,000. $17,665,661 (value of interruptibility from Monsanto Ex. 239) ÷ $42,651,000 = 41.42%.

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Dr. Rosenberg does not adjust his total fixed cost value to reflect the fact that a peaking resource is available year-round and is expected to operate significantly more per year than 1,000 hours. In the case of PacifiCorp's new West Valley, Utah peaker, the resource can be operated year-round and is expected to be used 30% of the hours of the year, or 2,628 hours. (PacifiCorp Ex. 20.) Dr. Rosenberg argues that no adjustment is appropriate because interruptibility displaces capacity, not energy. This argument makes no sense, however, because the West Valley peaker can generate at least an additional 1,628 hours and produce more energy than Monsanto's interruptibility can free up. This additional energy can be sold in the market or used to meet load to generate revenue, which can be used to offset the fixed costs of the resource. (Tr. 239.) This is what any operator of a generating resource would do – use the resource to make economic sales and apply the margin on the sales to reduce fixed costs. Also, Monsanto can only be interrupted in increments of full furnaces, which does not provide (1) ramping flexibility or (2) the ability for use in automatic generation control, both of which PacifiCorp gets with a peaking generating unit. In addition, a generating resource can provide spinning reserves, which Monsanto interruptibility cannot provide. (Tr. 450, 805.) Disregarding the additional revenues, operational flexibility and ancillary services that a peaker offers significantly overvalues Monsanto's interruptibility.

2. Kilowatts Curtailed. On line 5, Dr. Rosenberg inflates the energy curtailed during the 1,000 hours of Economic Curtailment per year by 10% to reflect a 10% reserve margin. The problem with this adjustment is that Monsanto's interruptibility does not allow PacifiCorp to avoid its obligation to provide this reserve margin. Because Monsanto has the right to buy through replacement power, PacifiCorp cannot count on being able to physically interrupt the Monsanto load. (Tr. 806.) As Mr. Watters testified, Economic Curtailment with an option to buy through, from a utility's perspective, is a financial product and not a physical interruption product. PacifiCorp still must be prepared to serve the load. (Tr. 183-84.) The value to PacifiCorp of this form of interruptibility is that it shifts to Monsanto the financial risk of the

incremental cost of market power above the price at which PacifiCorp exercises the option. (Tr. 803-04.) While this form of interruptibility has value to PacifiCorp, it does not avoid reserve margin. (Tr. 805-06.) Thus, the kilowatts curtailed should be 162,500. Using the total fixed cost of the peaker of $73.48/kW, the value of avoided capacity on line 6 of Monsanto Ex. 239 should be $11,940,500. (Tr. 806.)

3. Total Variable Costs. Dr. Rosenberg calculated total variable costs of the avoided peaker at $22.52, based on the values for the resource contained in RAMPP-6. (Monsanto Ex. 239, p. 1, line 7.) This value does not include any offset for the revenues that could be produced from a peaking resource but cannot be produced from Monsanto's interruptibility. Mr. Klein estimated that the Palo Verde on-peak price for next year is approximately $42/MWh. This means that a peaker with total variable costs of $22.52 would be "in the money." Assuming total variable costs of $22.52/MWh and revenues from energy sales of $42/MWh, the margin on these sales would be a positive $19.48/MWh. For 162,500 MWh in the year, the avoided peaker would produce $3,165,500 in net revenues to offset the $73.48/kW in total fixed costs shown in line 3 of Monsanto Ex. 239. The value of avoided energy in line 9 should be a negative $3,165,500 (that is, a credit) instead of positive $3,659,500 (that is, a cost). (Tr. 807.) Deducting this $3,165,500 credit for energy sales from the fixed cost of $11,940,500 results in an avoided total cost of $8,775,000, the corrected number for line 10 of Monsanto Ex. 239. This number should not be adjusted for transmission losses, as Dr. Rosenberg does in line 11, because transmission losses are not avoided when Monsanto exercises its replacement power option. The replacement power option does not charge Monsanto separately for transmission services or losses on PacifiCorp's system. (*See* Attachment A to this brief, p. 5.)

4. Credit for Reserves. Mr. Klein testified that another advantage of a peaking resource that Monsanto's interruptibility does not provide is the ability to sell reserves from the unit for the rest of the year. Assuming 162,500 kW of capacity and a price for the reserves of $1.50/kW-mo, which is less than one-half the $3.44/kW-mo price PacifiCorp is proposing to pay

Monsanto for Operating Reserves, Mr. Klein estimated that the sale of reserves from the peaking resource could generate revenues of approximately $2.5 million per year. (Tr. 808.) This calculation was based on 500 hours per year of Economic Curtailment. Assuming 1,000 hours per year of Economic Curtailment, the peaking resource would be available to provide reserves approximately 6 months of the year. (Tr. 799, 807-08.) Substituting this assumption in Mr. Klein's calculation, the precise credit for sales of reserves would be $1,462,500 per year (6 months x $1.50/kW-mo x 162,500 = $1,462,500). This amount or more (if the reserves were sold for a price closer to the $3.44/kW-mo used to price Monsanto's Operating Reserves) would be available to reduce the fixed costs of the peaking resource.

5. Summary. Based on the foregoing adjustments to Dr. Rosenberg's Exhibit 239, the corrected value for Monsanto's 1,000 hours of Economic Curtailment, assuming Dr. Rosenberg's method, would be calculated as follows:

Total Fixed Costs $/kW-year	$73.48	
KW Curtailed	162,500	
Value of Avoided Capacity		$11,940,500
Total Variable Costs $/MWh	(19.48)	
MWh Curtailed	162,500	
Value of Avoided Energy		($3,165,500)
Total		$8,775,000
Adjustment for Losses (5.19%)		0
Revenues from Reserves		($1,462,500)
Value of Interruptibility		$7,312,500

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This number is close to the total value of interruptibility PacifiCorp proposed would apply for 1,000 hours of interruptibility. (Tr. 808.[14])

Applying his analysis respecting the value of Monsanto's proposed 1,000 hours of curtailment and using Ms. Iverson's firm price of $29.30 per MWh, Dr. Rosenberg concludes that Monsanto's net price would be $16.25 per MWh. (Tr. 639-40, Monsanto Ex. 239.) Using a firm price of $31.40 per MWh results in a net price of $18.34 per MWh. (Tr. 640, Monsanto Ex. 239.)[15] Accepting the adjustments to Dr. Rosenberg's Exhibit 239 discussed above, the resulting net price to Monsanto is $23.90 per MWh (using a $29.30 firm price) or $26 per MWh (using a $31.40 firm price). The net price PacifiCorp is proposing for interruptibility options, based on 1,000 hours per year of Economic Curtailment, is $25.16 per MWh (PacifiCorp Ex. 32), well within Dr. Rosenberg's range as corrected.

Ms. Iverson's analysis results in a value for 1,000 hours of curtailment (plus system integrity) that is less than Dr. Rosenberg's $17.6 million. (Tr. 563.) Ms. Iverson calculates the total value for 1,000 hours to be $11,356,368. (Tr. 563, Monsanto Ex. 237.) Under Ms. Iverson's approach, the net price to Monsanto for 1,000 hours per year of Economic Curtailment is $20.91 per MWh (using a $29.30 firm price) or $23.01 per MWh (using a $31.40 firm price). The problem with Ms. Iverson's analysis, however, is that she uses the same reservation fee PacifiCorp determined applies to 46 MW and 500 hours of Economic Curtailment to assign a value to the much greater amount of curtailment Monsanto proposed on rebuttal, 162 MW and 1,000 hours of Economic Curtailment. In other words, Ms. Iverson simply compounded the

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[14] At the hearing, Mr. Klein estimated PacifiCorp's the total value for 1,000 hours of interruptibility to be "somewhere between [$]7.3, [$]7.4 [million]." (Tr. 808.) Under PacifiCorp's final proposal, which would limit the number of hours of Economic Curtailment to 500 hours per year, the total value of interruptibility to Monsanto is $8,433,662. (PacifiCorp Ex. 35, p. 2, top table.)

[15] Applying Monsanto's original curtailment proposal of 500 hours, Dr. Rosenberg calculates Monsanto's net price to be $20.79 per MWh (using $29.30 as a firm price) and $22.88 per MWh (using $31.40 as a firm price). (Tr. 640.)

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value PacifiCorp assigned to Monsanto's original proposal. At the hearing, Ms. Iverson acknowledged that her approach is flawed. (Tr. 583-84.) As Mr. Watters explained on cross examination, the value he assigned to 500 hours of curtailment in his rebuttal testimony is based on market values and is tied to an ability to curtail during super-peak periods. (Tr. 157.) Although Mr. Watters had not, at that time, calculated the reservation fee that would apply to Monsanto's new proposal, he predicted that the value could not simply be doubled to account for 1,000 hours of curtailment. (Tr. 157-58, 162). Mr. Klein's exhibits accompanying his post-hearing rebuttal testimony confirm Mr. Watters' prediction. As demonstrated therein, doubling the value of 500 hours of Economic Curtailment is not a valid method to calculate the value of 1,000 hours of Economic Curtailment. (*Compare* PacifiCorp Ex. 35, p. 2, top table and Ex. 32.)

d. Size of Economic Curtailment.

PacifiCorp's calculations of Economic Curtailment have used the amount of 67 MW and 500 hours per year proposed by Monsanto in its direct testimony. In its rebuttal testimony, Monsanto changed this number to the full, three furnace load of 162 MW and increased the hours of Economic Curtailment to 1,000 hours. (Monsanto Ex. 243.) PacifiCorp opposes this substantial increase in Economic Curtailment and urges the Commission not to adopt it. Economic Curtailment does not provide the Operating Reserves PacifiCorp needs, nor is it an appropriate product to purchase from a customer in such large amounts. Monsanto presented extensive testimony on the importance of its Soda Springs operations to the economy of southeastern Idaho and has emphasized its needs for price certainty, price stability and reduced risk. Exposing Monsanto's full three-furnace load to 1,000 hours of Economic Curtailment per year is antithetical – even hostile – to these important interests.

Mr. Schettler testified that Monsanto would not automatically buy through; its decision on whether to buy replacement power would depend on the overall economics of the plant. (Tr. 447-48.) By definition, the price for replacement power will be higher than Monsanto's contract energy rate, and it could be much higher. Exposing Monsanto, its employees and all of southeastern Idaho to this kind of curtailment of Monsanto's plant simply trades lower retail electricity rates for higher electricity bills. This is not in the public interest. It is also not in PacifiCorp's or the Commission's interest. PacifiCorp's experience in other states is that large industrial customers whose retail prices are based on high wholesale market prices turn to their utility and state regulatory commission for relief. Monsanto's impact on the southeastern Idaho economy is too great for the Commission to turn a deaf ear. Where that is the situation, the Commission should not endorse such risk-taking.

PacifiCorp recommends that the Commission limit Monsanto's Economic Curtailment to 67 MW and 500 hours per year. This is an economical and relatively safe level of Economic Curtailment.

e. Buy-Through Terms.

Monsanto originally proposed that the price for buy-through replacement power be based on the published Mid-Columbia index plus $2 per MWh for transmission. (Monsanto Ex. 210, Exhibit A.) Mr. Watters objected to this market index as not representative of the wholesale market hub PacifiCorp would use to serve Monsanto. He said that Monsanto is within PacifiCorp's Eastern Control Area and is more closely aligned with the Palo Verde or Four Corners hub. He proposed using the Palo Verde hub, shaped to the actual hours of curtailment, because Palo Verde is the more liquid market hub and maintains higher trading volumes. PacifiCorp's proposed buy-through structure is contained in PacifiCorp Ex. 16 and Attachment A to this brief. Mr. Griswold explained that the shaping factors in PacifiCorp Ex. 16 exceed 100% because the Palo Verde on-peak prices are for a 16-hour period. Economic Curtailment allows interruption for only eight hours per day. Any buy-through would occur during the most

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expensive eight hours of the day (the "super-peak" hours). The shaping percentages adjust the Palo Verde on-peak prices to reflect the higher super-peak values.[16] (Tr. 831.)

In his rebuttal testimony, Monsanto witness Richard Anderson stated that the buy-through price for replacement power should be the "lowest cost of energy available." (Monsanto Ex. 243; Tr. 508-09.) This pricing approach is contrary to the concept of Economic Curtailment. If Monsanto's interruptibility is available for economic reasons, it is available for <u>any</u> transaction that is more economic to PacifiCorp. Dr. Rosenberg admitted this point, but then sought to evade the obvious consequence of it – that the replacement power cost would be the <u>highest</u> prevailing price. (Tr. 689.)

C. Issues Relating to Monsanto's Net Cost for Firm, Interruptible, and Replacement Power Service.

As previously shown, converting the monthly credits for the three interruptible options discussed *supra* to a $ per MWh basis and applying them to PacifiCorp's proposed firm rate results in a net cost to Monsanto for firm, interruptible and replacement power service of $25.62 per MWh for 500 hours of Economic Curtailment. When compared to the effective rate Monsanto would be paying for electric service today under the 1992 Agreement[17], PacifiCorp's proposal results in a 1.5% **decrease** from $26 per MWh (the end price under the 1992 Agreement) to $25.62 per MWh.

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[16] Shaping factors were used to value both Monsanto's Economic Curtailment and buy-through option. Therefore, any change in the shaping factors for replacement power would require changes in the shaping factors for calculating the payment for Economic Curtailment.

[17] What has been referred to in this case as the 1992 Agreement in fact was signed in 1991. (PacifiCorp Ex. 25.) This agreement was scheduled to run through June 30, 1997 with prices increasing to $26 per MWh for the last year. The agreement was terminated early because of changes in power markets and the Company's surplus capacity. (Tr. 246-47; PacifiCorp Ex. 16.)

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1. Monsanto's effective price under the 1995 Agreement.

In their direct testimony, the Monsanto witnesses consistently referred to the 1995 Agreement as the basis of comparison for the proposed 2002 contract. In its rebuttal testimony, however, PacifiCorp noted that the 1995 Agreement was developed under unique circumstances that did not exist when the pre-1995 contracts were approved and that do not exist today. (Tr. 246.) In 1995, PacifiCorp had excess capacity, power was trading in the wholesale market at prices below $20 per MWh, direct access appeared imminent in much of the Company's service territory, and Monsanto had viable alternatives to service from PacifiCorp. (Tr. 247.) For these reasons, the 1995 Agreement was priced based on the prices Monsanto could achieve by pursuing its competitive alternatives—principally, by transferring its service to the Soda Springs Municipal Electric Light & Power Department and buying through power from power marketers such as Illinova and Enron. (Monsanto Ex. 203, p. 3.) The 1995 Agreement was not an embedded cost-of-service contract; it was essentially a market price contract.

It is inconsistent to compare the currently proposed prices to prices under the 1995 Agreement because of the different pricing standards used: the 1995 Agreement was based on a market price comparison and a contribution to fixed cost standard for Commission approval, while PacifiCorp's proposed prices for Monsanto's new contract are based on an embedded cost-of-service standard. (Tr. 231.) For these reasons, PacifiCorp does not agree that the 1995 Agreement is a proper base line for comparing the price and terms of a new contract for Monsanto. (Tr. 231, 246.) Although Monsanto in its rebuttal testimony conceded that comparing the cost per MWh of the proposed 2002 contract with the cost per MWh of the 1995 Agreement is not an apples-to-apples comparison (Tr. 643), Monsanto witnesses continued to compare the two in support of their position that PacifiCorp's proposal "totally ignores the principle of gradualism." (Tr. 642-43.)

It is true that PacifiCorp is not proposing in this case to adopt an "escalating" rate structure so as to "transition" Monsanto to a full cost-of-service firm rate. (Tr. 115.) There are

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two reasons for this. First, as discussed above, any discount to Monsanto's firm service rate results in a cost-of-service subsidy for Monsanto at the expense of other Idaho customers. Second, when compared to the final year price under the 1992 Agreement, $26/MWh, the net price change proposed by the Company actually results in a slight price decrease. Even if, for the sake of argument, the effective rate Monsanto paid under the 1995 Agreement were used as a basis of comparison, the *maximum* increase to Monsanto's rate is only 11.39 percent over 6 years, or 1.9 percent a year ($23 to $25.62 per MWh). In the decision recently issued in Utah respecting PacifiCorp's special contract with Magnesium Corporation of America ("Magcorp"), the Utah Public Service Commission found that a rate that resulted in a 17 percent increase satisfied the principle of gradualism. (Monsanto Ex. 208.)

Monsanto disputes PacifiCorp's characterization of its price under the 1995 Agreement as $23 per MWh. According to Monsanto, its effective price under the 1995 Agreement should not include the $30 million it paid PacifiCorp to terminate the 1992 Agreement early and renegotiate its rate for purposes of what became the 1995 Agreement. (Tr. 640-42.) Monsanto contends that PacifiCorp's proposed net cost should be compared to the "actual rate" provided by the 1995 Agreement, $18.50 per MWh. (Tr. 642-43.)

Monsanto's argument in this case respecting the $30 million payment contradicts the arguments it made to the Commission previously in support of the 1995 Agreement. In comments filed in support of the reasonableness of the rate provided by that agreement, Monsanto's counsel stated:

> The rate Monsanto pays for power [under the proposed 1995 Agreement] will include a one-time $30 million payment *and* an additional 1.85 cents/kWh for all energy delivered over the life of the Agreement.
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> * * * * *
>
> Amortizing the $30 million prepayment at the prime interest rate of 8.75% over the life of the Agreement, the average Monsanto rate, including the 1.85 cents / kWh energy charge, would be in excess of 2.3 cents / kWh. (PacifiCorp Ex. 24.)

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At least in 1995, Monsanto believed its effective price under the 1995 Agreement was $23 per MWh. In the event the Commission decides to compare the parties' proposals for the 2002 contract price to the price paid under the 1995 Agreement, $23 per MWh is the appropriate price to compare. However, for the reasons discussed above, the 1992 Agreement is a better comparison.

Mr. Taylor's Exhibit 22 presents in bar graph form all of the options for comparing the proposed all-in energy price, net of interruptibility credits, to the 1992 Agreement and the 1995 Agreement. (PacifiCorp Ex. 22.) For convenience, Exhibit 22 is attached to this brief as Attachment B. This Exhibit shows that the proposed net price is comparable to the final year price under the 1992 Agreement. It also show that it would be nonsensical to allocate the entire $30 million payment by Monsanto to the 1992 Agreement, as it would drive the prices in the final two years of that Agreement well above the contract prices. Monsanto would not pay more to buy out the 1992 Agreement than it would have paid under that Agreement. Allocating the $30 million payment to the 1995 Agreement produces the $23/MWh effective price for the 1995 Agreement shown in the yellow bars.

2. Other PacifiCorp special contract precedent.

Monsanto requested that the Commission use the Utah Commission's recent decision respecting PacifiCorp's special contract for electric service to Magcorp as precedent on the following specific issues: (1) approval of a single interruptible contract; (2) establishment of a contract term; (3) provision of defined terms respecting interruptibility; and (4) deferral of interjurisdictional allocation issues to the Multi-State Process. (Tr. 349.)

At the hearing, however, Monsanto witness James Smith clarified that Monsanto did not wish the Commission to use as precedent the two year Magcorp contract term approved by the Utah Commission. (Tr. 366.) In addition, when it was pointed out to Mr. Smith that the Utah Commission had concluded that the Magcorp contract terms and conditions relating to the value of interruptibility should be subject to reopener, Mr. Smith clarified that a similar reopener

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provision would not be acceptable to Monsanto. (*Id.*) Mr. Smith also acknowledged that on reconsideration, the Utah Commission had clarified that it would not defer the allocation issues related to the contract to the Multi-State Process, but would allocate the Magcorp contract as situs. (Tr. 367.) Ultimately, in response to questions from Commissioner Hansen, Mr. Smith agreed that "a comparison between what Magcorp received and what Monsanto is asking for is an apples and oranges comparison." (Tr. 383.)

Monsanto also suggested that the Commission consider relevant the circumstances surrounding PacifiCorp's negotiations for a new special contract with Geneva Steel Corporation ("Geneva"). (Tr. 348-49.) At the time Monsanto filed its direct testimony, Geneva had filed a petition with the Utah Commission requesting that the commission establish the rates, terms and conditions for PacifiCorp's service to Geneva. (Monsanto Ex. 209.) Since that time, however, PacifiCorp and Geneva had successfully concluded their negotiations and had submitted a signed agreement to the Utah Commission for approval. (PacifiCorp Ex. 23.) This agreement was approved by the Utah Commission on September 30, 2002.[18] Notably, as demonstrated by the following chart, the terms and conditions of the Geneva special contract approved by the Utah Commission are substantially similar to what PacifiCorp proposes in this case for its new contract with Monsanto.

[18] *Re Geneva Steel Corp.*, Docket No. 02-035-05 (Utah PSC Sept. 30, 2002).

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Terms and Conditions of Geneva 2002 Electric Service Agreement	PacifiCorp's Proposed Terms and Conditions for Monsanto's 2002 Electric Service Agreement
Load: 110 MW after Jan. 1, 2003, plus 120 MW beginning on or after Jan. '04 **total:** 230 MW	Load: 163 MW
Single electric service agreement	Single electric service agreement
Term: 5 years; both firm and interruptible service provisions subject to reopener annually	Term: ending December 31, 2006; limited reopener provision respecting Operating Reserves; firm service subject to tariff standards
Effective Price for Firm Electric Service: 1) Embedded cost-of-service based rate for existing load = $29.30 2)Tariff based rate for new load = $31.20 "Net" Cost for Firm Service = approx. $30	Effective Price for Firm Electric Service 1) Embedded cost-of-service based rate for all load = $31.40
Interruptible Service Options: 1) System Integrity: $29,000 monthly credit (total that will apply when both existing and new load are online) 2) Consideration of future interruptible options to be defined in separate agreement	Interruptible Service Options: 1) System Integrity: $40,500 monthly credit for 12 hours of interruptibility 2) Operating Reserves: $326,849.41 monthly credit based on 95 MW and 288 hours of interruptibility 3) Economic Curtailment: $335,455.75 monthly credit based on 67 MW and 500 hours per year of Economic Curtailment at a strike price of $16.31 per MWh
Net Cost for Firm and Interruptible Service: $29.72 per MWh	Net Cost for Firm and Interruptible Service: $25.62
Percent Rate Change: 4% increase (based on pre-bankruptcy usage)	Percent Rate change: 1) From 1992 Agreement: -1.5% decrease 2) From 1995 Agreement: 1.9% increase/year
Jurisdictional Allocation: Situs to Utah	Jurisdictional Allocation: 1) Firm Cost-of-Service: Situs to Idaho 2) Interruptible or Curtailment Options: System-wide

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Based on the foregoing, the terms and conditions contained in PacifiCorp's electric service agreement with Geneva are more appropriate as bases for comparison in this proceeding than the terms and conditions the Utah Commission approved for Magcorp's electric service.

D. Other Proposed Contract Terms and Conditions.

1. Contract term.

PacifiCorp proposes that the term for its single electric service agreement with Monsanto terminate on December 31, 2006, five years from December 31, 2001. PacifiCorp believes that this contract duration most appropriately balances the interests of the parties, *i.e.,* Monsanto's need for price certainty and stability and PacifiCorp's need for flexibility with respect to the cost of acquiring interruptibility or curtailment from Monsanto as a power resource. PacifiCorp emphasizes that the more the Commission exposes PacifiCorp to risk by increasing the hours or value of Economic Curtailment, the shorter the term should be. The Commission should also shorten the term if it is uncertain about the value of interruptibility. This is the approach the Utah Commission took in its Magcorp decision to allow for improvements in the methods for valuing interruptibility. (Monsanto Ex. 208.)

2. WECC reopener.

The WECC is proposing changes in its operating policies that could modify the quantity and requirements of both contingency reserves and frequency response reserves. (Tr. 145.) It is still unknown what the final requirements will be, and a decision is not anticipated until mid-2003. (Tr. 146.) Although PacifiCorp is willing to go forward with Operating Reserves as part of its electric service arrangement with Monsanto (Monsanto historically has provided a non-spinning Operating Reserves product), the Company is unwilling to take on the risk of buying a product for a fixed period of time that ultimately may not have value for its customers. Accordingly, PacifiCorp is proposing that this agreement be subject to a reopening if the WECC operating reserve criteria change during the contract term. The purpose of the reopener is to ensure that the value of the operating reserve product is accurately reflected in the contract for its duration.

3. Rate subject to tariff standards.

PacifiCorp is proposing that Monsanto's firm cost-of-service rate be subject to tariff standards, giving the Commission authority in a general rate case to change the rates, terms and conditions of the firm service portion of the agreement. This clause is PacifiCorp's proposed alternative to the annual cost-of-service rate adjustment the Company originally proposed be included in the contract. (Tr. 822.) By making Monsanto's rate for firm service subject to tariff standards, the Commission will have the opportunity to ensure that Monsanto's firm cost-of-service rate is consistent with the cost-of-service rates charged to other Idaho customers, and Monsanto will have the opportunity to oppose a rate increase *or support a rate decrease* on that same basis. Given the length of the contract term, PacifiCorp believes this provision is a reasonable compromise that appropriately balances the interests of Monsanto, other Idaho customers and PacifiCorp.

4. "Most favored nations" clause.

PacifiCorp opposes Monsanto's efforts to include a "most favored nations" clause in the new agreement. Under the most recent proposals made by both PacifiCorp and Monsanto, Monsanto's rate will be based on its share of embedded costs. Monsanto benefits from use of an embedded cost standard in this instance because the Company's incremental costs for the term of the contract are expected to be higher than embedded costs. (Tr. 231.) A most favored nations clause would give Monsanto the ability to reduce its price to match the lowest price on PacifiCorp's system at any time and from time to time during the term of the agreement. Mr. Schettler admitted that it would apply in circumstances similar to the current comparison with Magcorp. (Tr. 455-56.) The proposal is one-sided and unfair. It would give Monsanto the opportunity to toggle between cost-of-service and market rates at will, with no risk of its rates ever going up. It would also separate Monsanto from Commission jurisdiction over its rates during the term of the agreement. A rate that is just and reasonable for another customer on PacifiCorp's system would not necessarily be just and reasonable for Monsanto. As discussed in Section I above, allowing Monsanto to pay any less than its share of embedded costs results in a rate subsidy to Monsanto paid for by other Idaho customers.

5. "Significant changes" clause.

PacifiCorp also opposes Monsanto's proposal to include a clause allowing it to modify the contract based on significant industry changes. This clause would give Monsanto—but not PacifiCorp—the right to renegotiate the contract in the event of significant changes in either the elemental phosphorous industry or PacifiCorp's cost structure. (Monsanto Ex. 210, paragraph 2.3.) Like its proposal to include a most favored nations clause, this clause is also one-sided and unfair, benefiting Monsanto to the detriment of other Idaho customers and the Company.[19] It would be inappropriate to include such a clause in the new contract.

CONCLUSION

For all of the reasons stated in PacifiCorp's testimony at the hearing and in the foregoing brief, the Commission should approve PacifiCorp's final proposal respecting the rates, terms and conditions of its electric service agreement with Monsanto. A summary of these rates, terms and conditions is contained in Attachment A to this brief.

DATED: October 15, 2002.

Jim Fell by ES

James F. Fell
Erinn Kelley-Siel
Of Attorneys for PacifiCorp

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[19] Dr. Rosenberg himself acknowledged the one-sided nature of this clause on cross examination. (Tr. 660.)

CERTIFICATE OF SERVICE

I hereby certify that on the 15th day of October 2002, I caused to be served, via U.S. Mail, a true and correct copy of the foregoing PacifiCorp's Post-hearing Brief on the following:

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DATED: October 15, 2002

Tami Kruger

Tami L. Kruger, Legal Secretary

Monsanto
Proposed Electric Service
2002 - 2006

Supply of electric service to Monsanto for the entire facility provides firm, interruptible and replacement power service including:

Single electric service agreement (the "ESA") for the elemental phosphorous manufacturing plant (the "Plant") in Soda Springs, Idaho effective September 1, 2002 and terminating December 31, 2006. Price components for the electric service to the Plant are cost of service demand and energy components. The cost of service for delivered power will be retail load situs to Idaho jurisdiction.

Monsanto receives monthly credits for three interruptible or curtailment options including system integrity, non-spin contingency operating reserves and an economic curtailment option which has a buy-through provision for replacement power that Monsanto can exercise. Total allowed hours of interruption or curtailment are 800 hours per calendar year. The operating reserve component of the ESA would be subject to reopener for WECC operating reserve criteria changes. The interruptible options included in the ESA will be system allocated.

Summary

Term:	Effective through December 31, 2006
Delivered Power:	Monthly bill for delivered power based on cost of service components in ESA applied to actual metered usage for demand and energy
Interruptibility:	800 hours total
Credit for Interruptibility	
System Integrity:	Monthly credit of $ 40,500 based on 162MW. Hours for System Integrity included in 300 hours of Operating Reserves.
Operating Reserves:	Monthly credit of $ 326,849 based on 95MW minimum for 300 hours inclusive of System Integrity hours.
Economic Curtailment:	Monthly credit of $ 335,456 based on 67MW for 500 hours curtailed at a strike price of $16.31 per MWh.
TOTAL CREDIT	Monthly credit of $ 702,804

Proposed Terms for Electric Service to Monsanto

Electric Service Agreement

Term	Effective through December 31, 2006. No extension language.	
Delivered Power Charges	Customer Charge:	$ 282.89 per month
	Demand Charge:	$ 9.51 per kW month
	Energy Charge:	$ 16.31 per MWh
	Monsanto will be responsible to maintain at all times a power factor of 90% lagging, or higher, as determined by measurement. If the average power factor is found to be less than 90% lagging, the energy as recorded by PacifiCorp's meters will be increased by ¾ of 1% for every 1% that the power factor is less than 90%.	
Billing	All billing statements for power and energy shall show the amount due for the type and quantity of power and energy purchased and charged in accordance with this agreement and any charges permitted or required under the applicable Electric Service Rules and Regulations of Idaho. Credits for interruptibility identified and applied to monthly bills.	

Interruptibility

Product	System Integrity PacifiCorp may temporarily physically interrupt service to Monsanto's Interruptible Load at its Facility if PacifiCorp reasonably determines, pursuant to Prudent Utility Practice, that an interruption of Power and Energy to Monsanto is necessary to maintain System Integrity.
Interruptible Load	All defined interruptible plant load – up to three (3) furnaces and auxiliary load – 162MW
Availability	All hours HE 0100 through HE 2400. Allowable option days shall be each Monday through Sunday during the Term.
Duration of Interruption	As long as required to stabilize PacifiCorp's electrical system
Frequency	Limited to System Integrity only – available hours included in 300 hours of Operating Reserves total.
Notification	Except under emergency conditions, PacifiCorp shall give Monsanto as much advance notice as practicable, but not less than two (2) hours, of any required interruption, and at least one hour's advance notice of when interruption will be discontinued.
Monthly Payment	Monthly payment to Monsanto for the interruptibility for System Integrity is $ 40,500.

Proposed Terms for Electric Service to Monsanto

Product	Operating Reserves
	Day-of Call option for PacifiCorp's right to interrupt Monsanto's furnace load (capacity and associated energy use).
Interruptible Load	Minimum 95 MW
Availability	All hours HE 0001 through HE 2400. Allowable option days shall be each Monday through Sunday during the Term.
Duration	Up to one (1) hour continuous
Frequency	• Maximum three hundred (300) interruptions per calendar year. • Maximum of twenty-five (25) interruptions per month. • Maximum of three (3) interruptions in any four (4) hour period per day
Notification	PacifiCorp shall provide Monsanto at least 6 minutes notice prior to the beginning of the Load Interruption Period.
Monthly Payment	Monthly payment of $326,849 for 95MW minimum prorated for furnace availability as defined in previous operating reserve agreements transacted with Monsanto.
Liquidated Damages / Non-performance	NONE – Failure to interrupt load upon notification shall result in PacifiCorp invoking unilateral right to interrupt Monsanto load remotely. PacifiCorp shall utilize metering to verify that the noticed Interruptible Load was actually interrupted when PacifiCorp executed the option.

Product	Economic Curtailment
	Day-of Call option for PacifiCorp's right to interrupt Monsanto's furnace load at the defined Strike Price (capacity and associated energy use). Monsanto has option to buy-through the interruption pursuant to the Buy-through Provision at Replacement Power Price.
Interruptible Load	67MW
Availability	Hours HE 0700 through HE 2200 Mountain Prevailing Time. Allowable option days shall be each Monday through Sunday during the Term.
Duration of Interruption	Maximum of 500 hours based on one (1) furnace in calendar year • Up to eight (8) hours for one (1) 67MW furnace.
Frequency	Limited to one (1) interruption per day

Proposed Terms for Electric Service to Monsanto

Notification	PacifiCorp shall provide Monsanto at least 2 hours notice prior to the beginning of the curtailment period. For example, PacifiCorp shall notify Monsanto by hour ending 1400 for a curtailment period that begins hour ending 1600.
Strike Price	$16.31 per MWh
Monthly Payment	Monthly payment to Monsanto for the interruptibility for would be $335,456 per month. Payment to be prorated based on hours of availability on 67MW furnace when noticed.
Buy-through Provision	Monsanto shall have the right to decline the Day-of option and purchase power for the Curtailment Load for the Duration of Interruption for the day. ("Replacement Power").

Monsanto shall notify PacifiCorp by phone and/or fax of its decision to decline the Day-of option within one (1) hour after PacifiCorp provides notification to Monsanto for the Day-of option to curtail. *For example, if PacifiCorp notifies Monsanto by 11AM MPT, Monsanto must respond to PacifiCorp by 12PM MPT.* If Monsanto fails to notify PacifiCorp of its decision to decline the Day-of option within the one- (1) hour period, Monsanto will be obligated to physically provide Curtailment Load as agreed.

Replacement Power Price

Monsanto shall purchase daily Replacement Power for the Duration of Interruption from the PacifiCorp as calculated:

> *Hourly Shaped Market Price multiplied by the Interruptible Load multiplied by the Duration of Interruption (hours).*

Hourly Shaped Market Price shall be defined as daily Dow Jones™ Palo Verde Firm On-Peak Price, as reported at www.dowjones.com each Monday – Sunday multiplied by the following hourly shaping factors for each applicable month:

January	114%	May	122%	September	119%
February	114%	June	126%	October	113%
March	114%	July	130%	November	111%
April	110%	August	130%	December	116%

Holidays include only New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. When a holiday falls on a Saturday or Sunday, the Friday before the holiday (if the holiday falls on a Saturday) or the Monday following the holiday (if the holiday falls on a Sunday) will be considered a Holiday.

	Monthly Replacement Power shall equal the sum of daily Replacement Power for that month.

Agreement Reopeners

Direct Access	In the event that the statutes of the state of Idaho are amended to provide customers with the ability to choose an electric supplier other than PacifiCorp, either party may terminate this agreement within 90 days of the date open access commences by written notice delivered to the other party.
Interruptibility	Operating reserve component of the ESA subject to reopener if WECC operating reserve criteria changes
Cost of Service	Delivered Power Charges adjustment subject to tariff standards.

Other Provisions

Agreement Language	Remove favored nation clause from Agreement Remove significant changes clause from Agreement Modify termination clause to clarify terms and conditions. Update operations sections to reflect any new power quality standards based on prudent industry practice. Power factor correction changed to comply with other tariff customers. Update to address cooperation in operation for safety issues.

Monsanto Contract Price History