Q. Please state your name and business address for the record.

A. My name is David Schunke and my business address is 472 West Washington Street, Boise, Idaho.

Q. By whom are you employed and in what capacity?

A. I am employed by the Idaho Public Utilities Commission as a Public Utilities Engineer.

Q. What is your educational and experience background?

A. I received my Bachelor of Science Degree in Civil Engineering at Montana State University in 1972. I have been licensed as a Registered Professional Engineer in Idaho since 1977. I have worked in various capacities, including a Cost and Materials Engineer with Morrison Knudsen Co., Inc. and a consulting engineer with Stevens, Thompson & Runyan (STRAAM Engineers). As a consultant, I worked as Project Engineer on numerous civil engineering projects in Idaho and Oregon for more than six years.

Since joining the Commission Staff as a Utilities Engineer in 1979, I have been continuously involved in rate design and regulatory matters with virtually all the water, gas and electric utilities regulated by the Commission. I served as the Engineering Section Supervisor from 1983 to 1991, Utilities Division Deputy Administrator from 1991 through 2000 and Engineer

Manager from 2001 to present.

Q. What is the purpose of your testimony?

A. In my testimony I address the issue of system allocation vs. situs assignment of the Monsanto load and revenue. I will discuss cost-of-service. In particular, the allocation of generation and transmission plant.

I will also discuss the appropriate range of the Monsanto interruptible contract rate, the term of the contract and the appropriateness of a single contract.

Q. Please summarize your testimony.

A. I am recommending that the method of allocating the Monsanto load between the jurisdictions not be changed at this time. The multi-state process (MSP) has been specifically established to deal with this and other jurisdictional allocation issues. Once a recommendation comes out of that process, it can be presented to the Commission in a general rate proceeding.

I support PacifiCorp's (the Company's) use of 12 coincident peaks (12 CP) in the allocation of generation plant and transmission plant.

I believe the appropriate range for the Monsanto interruptible contract rate is between 2.3 cents/kWh and 2.7 cents/kWh. I agree with Monsanto that a single contract for a five (5) year period is appropriate.

JURISDICTIONAL ALLOCATION – SYSTEM VS SITUS

Q. What is the Multi-State Process (MSP)?

A. On March 5, 2002, PacifiCorp petitioned the Idaho Public Utilities Commission to initiate an investigation of inter-jurisdictional issues affecting the Company as a consequence of its status as a multi-jurisdictional utility subject to the jurisdiction of six state regulatory commissions. The Idaho Commission, in Order No. 28978, established a docket for investigation (Case No.PAC-E-02-3), and approved the establishment of a multi-state process for analyzing inter-jurisdictional issues. The jurisdictional allocation of special contracts is one of the issues being considered in the MSP.

Q. How is the Monsanto load and revenue treated in the current jurisdictional allocation?

A. The current rates are based on a jurisdictional allocation model (JAM) that treats Monsanto as a system load. This results in costs being allocated across the system based on the remaining jurisdictional loads. Monsanto’s revenue is allocated to all the jurisdictions as a revenue credit to offset the costs.

Q. Has the Monsanto load ever been assigned situs?

A. No. Since the UP&L-PP&L merger in 1989, Monsanto has been treated as a system load for

jurisdictional allocation.

Q. Are there concerns raised by the Company and other jurisdictions pertaining to the current treatment of special contracts as system loads?

A. Yes. Mr. Taylor discusses three concerns that the Company has if Monsanto is treated as a system load. The first concern is that other jurisdictions may not assume the allocated cost of the special contract. I believe this is a valid concern and I expect it is the Company's primary concern. While special contracts for industrial customers are approved by the state commission where that customer resides, the cost to serve that customer is shared by all the jurisdictions. If the approved rate is set below the actual cost-of-service, all the jurisdictions end up subsidizing that special contract customer.

Q. If the special contract rate is set at full cost-of-service, does this concern go away?

A. Yes, I believe it does. If rates are set at full cost-of-service, including a reasonable discount for interruptibility, there is no subsidy. The costs allocated to each jurisdiction would be offset by the revenue credit.

The difficulty is in establishing a rate that everyone can agree covers the cost-of-service and properly

values the interruptibility. Cost-of-service for firm load customers is an imprecise science and establishing the cost-of-service for an interruptible load is even more difficult, requiring considerable judgment.

Q. What is the second issue of concern that the Company has raised with respect to treating Monsanto as a system load?

A. Mr. Taylor states in his direct testimony on page 7, line 2:

> Second, market prices and the Company's avoided costs now make the contribution to fixed cost standard much harder to meet. In nearly every case prices under the contribution to fixed costs standard would be higher than full embedded costs.

I recognize that the Company is now in a condition of resource deficit, incremental costs are above average embedded cost and market prices are volatile. These conditions make an embedded cost analysis more appropriate than a contribution to fixed cost analysis.

Mr. Taylor's statement seems to imply that the special contract customer should be served from the incremental or marginal resource, and I don't think that is appropriate. The special contract rate, for a native load customer, should be based on average cost of embedded resources.

Q. What is the third issue of concern?

A. Mr. Taylor states in his direct testimony on page 7, line 5:

> Third, including a price discount for interruptibility in an electric service agreement assigns a fixed value to the interruptibility over the term of the agreement. However, the drastic changes in the wholesale market over the last couple of years have shown that interruptibility can have very different values at different points in time.

I believe that these observations are true; however, I don't agree with Mr. Taylor's conclusion:

> Recognition of those different values can best be dealt with in separate, shorter-term agreements.

In fact it would seem to me that a long-term interruptible contract would displace some power purchases at those volatile market prices, reducing the risk to the Company. PacifiCorp has also already committed to long-term contracts to acquire peaking resources. Furthermore, I believe that price certainty is of importance to Monsanto. Therefore, it appears to me that a long-term contract would make sense.

Q. Does PacifiCorp serve other special contracts in Idaho?

A. Yes. Nu West is served under a special contract.

Q. Is the Nu West load assigned (situs) to the Idaho jurisdiction?

A. Yes.

Q. What makes the Monsanto contract different?

A. The fact that the Monsanto contract is interruptible and that it is such a large load makes it different from the Nu West contract.

Q. Is the Monsanto contract unique?

A. Yes. The size of Monsanto's load, about 200 MW, and its percentage of the state jurisdictional load, nearly half, make it unique. Even though there are interruptible contracts in other jurisdictions and Utah has the greatest number, Monsanto is the largest single customer of PacifiCorp served under a special contract. Furthermore, on a percentage basis, Idaho has far more special contract load than any other jurisdiction. If Monsanto were assigned situs, nearly half of Idaho's load would be served under a special contract.

Q. What are the concerns with situs assignment of interruptible loads?

A. It is difficult to represent interruptible contract loads in an embedded cost-of-service study. If the contract load is included as a firm load in the state jurisdiction and allocation factors are determined on a situs basis, then cost responsibility to that jurisdiction is overstated. I believe this is the point that Mr. Taylor discussed in his direct testimony on page 5, lines

5 to 16:

> It is very difficult to accurately reflect the cost responsibility of an interruptible customer in the context of an embedded cost allocation . . . If the interruptible customer's load is included in the jurisdictional and class allocation, the costs associated with that customer are overstated. (Emphasis added)

Q. Is situs assignment a bigger issue for Idaho than for other jurisdictions?

A. Larger jurisdictions, with only a small percentage of their load included in special contracts, can absorb the revenue effects of situs assignment more easily within the jurisdiction. However, for Idaho, where the Monsanto load would make up such a large percentage of the total, establishing special contract rates below cost-of-service places an excessive burden on the remaining jurisdictional customer base. Historically, these interruptible customers were removed from the jurisdictional revenue requirement calculation. They were treated as a system load as they provide unique system benefits. As Mr. Taylor states in his direct testimony on page 6, lines 6 through 12:

> Had this not been done, the full-embedded costs associated with the interruptible customer would be allocated to the host jurisdiction, but the revenue from these customers would be lower than embedded costs and other

customers in the state would be harmed. Under this situation, keeping the customer on the system was a benefit to the total system but a detriment to the host state.

Q. Does the Monsanto's interruptible load provide a system benefit?

A. Yes. If the Monsanto contract provides for interruption of a significant portion of that load, it has a system benefit. System benefits from an interruptible customer vary based on the level of interruption, response time for interruption and other factors. When not being interrupted the load available for interruption provides non-spinning reserves often reducing the need for additional purchases. With economic interruption capabilities the system will benefit from reduced purchased power costs in periods of high prices. Large interruptible customers flatten the load, not only by reducing the load in peak periods when they are interrupted but increase the load in shoulder and non-peak periods when resources are available. These are greater benefits than what could be utilized in Idaho alone.

Q. At the time the last Monsanto contract was signed, how were rates set?

A. Monsanto's rates and other interruptible special contracts, signed at that time, were set to cover the variable cost to serve them plus some contribution to the

fixed cost. For jurisdictional allocation their load was treated as a system load.

Q. Is this an appropriate method to set the rate for Monsanto today?

A. No, I believe that Monsanto's rate should reflect the value to the system that its interruptibility provides, but I don't believe that "contribution to fixed" is an appropriate method to use to compute Monsanto's rate. As I stated earlier, the Company is now in a condition of resource deficit, incremental costs are above average embedded cost and market prices are volatile. These conditions make an embedded cost analysis more appropriate than a contribution to fixed cost analysis.

Q. What would be the rate impact on the Idaho Jurisdiction if the Monsanto load were assigned situs as a firm load?

A. If you use a 1998 test year, the last year that was audited and the Company's proposed cost-of-service study, revenues would have to increase by about $15 million if Monsanto's load were assigned situs as a firm load at present rates. Using an unaudited test year ending in March 2001, the required increase would be about $18 million.

Absent a Monsanto rate increase this would amount to an increase in revenue requirement for the

remaining customers in the Idaho jurisdiction of 10% to 12%.

Q. What would Monsanto's rate be in cents/kWh if it were required to pay this entire amount?

A. For $15 million and $18 million, respectively, the increase to Monsanto would be 1.2 cents/kWh and 1.5 cents/kWh. Adding this amount to the 1.85 cents/kWh results in 3.05 to 3.35 cents/kWh, which is essential the rate that results from the Company's cost-of-service study for Monsanto as a firm load (3.14 cents/kWh).

Q. What is your recommendation regarding system vs. situs allocation of the Monsanto load?

A. The Commission should establish the contract rate and other terms of the contract agreement. However, the question of how to jurisdictionally allocate the Monsanto load need not be determined at this time. The MSP was established for the express purpose of dealing with jurisdictional allocation issues like this one. This Commission has agreed to participate in the MSP, and the issue of allocation of interruptible contracts is being debated in that process. Whether a workable resolution will come forth from this group is yet to be seen; however, it is premature to circumvent that process by making a change in allocation methodology in this case. Once a recommendation is made from that group, the

Commission can consider it in a general rate case.

Q. What other scenario do you see for the possible resolutions to this allocation issue?

A. I see a number of possible scenarios. None of them remove the risk to the Company that it may not receive full cost recovery.

1. Monsanto would remain a system load; the Idaho Commission would establish a rate that it determines to be fair and reasonable. Each Commission in the other jurisdictions would then review that rate in a general rate proceeding and determine if the rate is reasonable. If any commission disallows a portion of the discount from the firm cost-of-service rate (or imputes revenue above the rate that was established), the Company would have the option of appeal to that commission or return to the Idaho Commission and request recovery of the short fall.

2. Monsanto would remain a system load and the Idaho Commission would set an interim interruptible rate that would remain in effect until the MSP made its recommendations. At that time, the Idaho Commission could consider those recommendations along with the record in this case and establish a permanent rate.

3. Monsanto’s load would become situs assigned. The Idaho Commission would set the rate that may or may not recover the Company’s estimation of the

full cost-of-service.

CLASS COST-OF-SERVICE

Q. Have you prepared a class cost-of-service study for the Idaho jurisdiction?

A. No, I do not intend to present a detailed analysis of the class cost-of-service study. The Company is not asking for any rate adjustments for any of the other customer classes at this time and none of the parties in this case are recommending any. Furthermore, there are a number of jurisdictional allocation issues that are on the table in the MSP at this time that will have a bearing on class cost-of-service. It is my intention to address only the issue of allocation of generation and transmission (GT) plant on a general basis and as it relates to the allocation of costs to Monsanto.

Q. What is your opinion of witness Iverson's proposed allocation of GT plant?

A. Ms. Iverson states:

> By allocating 100% of the generation and transmission demand-related rate base and expenses on the basis of coincident peak demands, all firm customers will receive equal shares of the cost of constructing the investment on a per kW basis. All customers then will share proportionately in the cost of the generation and transmission investments based on their contribution to the monthly coincident peak demand.
>
> What Ms. Iverson is advocating is to allocate

all (100%) of generation and transmission (GT) plant on the basis of demand. There would be no split between demand and energy, so none of the GT plant would be allocated on the basis of an energy allocator. GT plant would be allocated based on one's monthly coincident peak load only. However, I do not believe this is appropriate.

It is generally recognized that generation plants produce energy and transmission lines carry energy. They are designed to meet the peak demand but they are operated to serve both energy and capacity needs.

Albeit an imprecise division, the 75/25 split, used in the Company JAM, is intended to recognize the fact that generation and transmission perform the function of producing and transporting energy as well as providing capacity. This is especially true for a system, like PacifiCorp's, that includes hydroelectric generation. The ability of GT to provide both energy and capacity can perhaps best be demonstrated by considering a hydroelectric generation plant that includes some storage. The plant output is limited by the water behind the dam. It can produce a lot of energy and a little capacity, or a little energy with a lot of capacity, or some combination. However, if the water is consumed in the production of energy it will not be able to produce additional capacity. Admittedly for thermal generation this argument is not as

strong, which is why the 75/25 split is weighted more heavily toward the capacity (demand) than the energy.

Idaho Power has a greater reliance on hydro and for years has been energy constrained, not capacity constrained. While I am not comparing Idaho Power to PacifiCorp, I am using Idaho Power to illustrate that, depending on the makeup of the utility, energy can be even more critical than capacity.

Suffice it to say that a 100% allocation of GT costs based on demand, as suggested by Ms. Iverson, ignores the fact that these facilities are also designed and operated to provide energy.

The 75/25 split has a long history; it has been accepted in seven jurisdictions for allocation of PacifiCorp GT plant. When this issue has been addressed in the jurisdictional allocation group, the tendency is to increase the percentage that goes to energy, not the other way around. Currently there is general agreement that the 75/25 split is appropriate in all the PacifiCorp jurisdictions. I support the 75/25 split for both jurisdictional and customer class cost-of-service allocation of generation and transmission plant.

Q. Do you agree with Ms. Iverson's discussion on the demand allocator?

A. In general, I agree with her discussion but not

her conclusion.

Q. Would you please comment on the demand allocator (12 CP vs. 8 CP).

A. I believe that generation and transmission plant should be allocated on the basis of twelve monthly system coincident peaks (12 CP). A 12 CP generation and transmission allocator better represents the actual system operation. It recognizes that each of the monthly peaks is of importance. An 8 CP in effect weights four of the months with zero importance. This misrepresents the importance of the "shoulder" months on the UP&L system. In months when loads are typically low, the Company schedules plant maintenance. When a base load plant is down for maintenance, the Company is required to operate its more expensive units. During this time, the Company may actually have less net reserve margin than in a peak period.

Prior to the UPL/PPL merger the Company did a detailed analysis of the system stress factors to determine which months were critical and, therefore, most appropriate for demand allocation of GT plant. Mr. Taylor discussed the system stress factor analysis in the UPL-E-90-1 case. He stated the following:

> The results of the stress factor analysis done by Utah Power prior to the merger indicated that the capacity needs during four months of the year (March, April, May, and October) were less stressful relative to the Company's needs than during the other eight months. Based on these results, Utah Power used eight monthly peak loads (8 CP) to develop capacity allocation factors.
>
> The results of the stress factor analysis done for the merged company shows that monthly firm peak loads and the probability of contribution to peak stress factors do not vary significantly throughout the year. This supports the use of the 12 CP capacity allocation factor. The other four stress factors, including loss of load hours, indicated the highest stress during the Spring runoff period. **The high stress indicated during the spring period for these factors is created by the Company's maintenance practices,** which are driven by economic considerations. (Emphasis added)

Q. Which of the months is given zero weighting in the 8 CP method?

A. For the 1999 test year, April, May, September and October had the lowest loads and would be excluded with the 8 CP allocator.

Q. Are these always the months with the lowest system peaks?

A. Not necessarily. Depending on the test year, March, October and November can also be included with the lowest four months.

Q. Ms. Iverson stated, “In the Idaho COS study, the 8 CP method is more justified than in the JAM study.” Do you agree with her?

A. If generation and transmission plant were being designed for a stand-alone Idaho system, she would be correct. Idaho does have a very sharp summer peak lasting only three months. Furthermore, the difference between the peak period and the off-peak period is very significant. The monthly load in the nine off-peak months is only about 60% of the load in the three-peak months. Again if Idaho were a stand-alone system, one could make a good case for using as few as 3 CPs; however, PacifiCorp is an integrated system and the GT plant is designed to meet the peaks of the entire system.

If you were to look at Idaho’s December load and you were designing an Idaho system, you would probably not include December as one of the critical peak months for allocation, because load in December is only about 60% of the highest peak summer month. However, if you were designing a system to serve Washington, Oregon, Wyoming, Utah and Idaho, you would add all the December loads together and find that they were equal to about 98% of the system peak and, therefore, a critical month in allocating cost.

I also believe that the jurisdictional

allocation and the class cost-of-service allocation should employ similar methodologies. Costs come to Idaho through the jurisdictional allocation. It makes sense to be consistent in the allocation methodology and assign costs to the customer classes in the same way they are assigned to the jurisdiction. There can be a disconnect if one uses a different method of allocating cost in the customer class cost-of-service.

Q. Can you provide an example of what you mean by disconnect?

A. Yes. Assume the jurisdictional allocation model (JAM) uses a 12 CP demand allocator and the class cost-of-service model (COS) used an 8 CP demand allocator. If a large customer increases its load in the four shoulder months that are not included in the Company's 8 CP, but are included in the JAM 12 CP. Idaho's JAM allocator increases but the 8 CP allocator for that customer does not change because the increased load occurred in the shoulder months. This results in increased costs being allocated to Idaho with no change in the percentage of cost being allocated to that customer.

INTERRUPTIBLE RATE

Q. What do you consider a reasonable range for Monsanto's interruptible rate?

A. Depending on the amount of interruptibility

offered, I believe a reasonable range for the Monsanto interruptible rate is from 2.3 cents/kWh to 2.7 cents/kWh.

Q. How did you arrive at this range?

A. The low end of the range was calculated by increasing the available interruptibility to the levels provided in the 1992 Monsanto contract. It also represents the effective rate that is currently in place. Under no circumstances do I believe the Monsanto interruptible rate should be set below this amount, 2.3 cents/kWh.

The upper end of the range was calculated using Monsanto's proposed levels of interruptibility.

I accepted the Company's calculation of 3.14 cents/kWh as a reasonable firm rate. I then calculated the interruptible credit using two different avoided resources at the two different levels of availability; the level proposed by Monsanto and the level included in the 1992 contract.

Q. What did you consider as the avoided resource?

A. I considered both market purchases (taken from GNR-E-02-01) and a potential peaking resource (taken from the RAMPP-6) as avoidable resources. PacifiCorp relies on market purchases to meet its peak but has also recently committed to both the Gadsby and the West Valley projects. I assumed that some combination of these resources could

be avoided through an interruptible contract with Monsanto.

Q. Please describe how you calculated the interruptible credit and resulting rate in row A of your Exhibit No. 101.

A. From the firm rate of 3.14 cents/kWh, I subtracted the cost of a potential peaking resource listed in RAMPP-6, $78.43/MWh. I used this as a surrogate for the avoidable peaking plant. The amount of interruptibility was assumed to be the amount proposed by Monsanto, 800 hours per year. Since the RAMPP-6 Peaker assumes a capacity factor of 15%, or 1314 hours per year, I recognize the proposed interruptibility is less than the availability of the RAMPP-6 Peaker, although I made no specific adjustment for this.

If the unadjusted value of the Peaker is applied to Monsanto proposed interruptibility (116 MW of interruptible load for 300 hours and 67 MW for 500 hours), it would have an effective value of 0.43 cents/kWh when spread over 166 MW of total power running at an 85% capacity factor. Subtracting this interruptibility credit of 0.43 cent/kWh from the Company's calculated firm rate of 3.14 cents produces a rate of 2.71 cents/kWh. Exhibit No. 101 shows this calculation of the interruptible rate in row A and a similar calculation using short-term

purchases as the avoided resource in row B. Both of these calculations are then repeated at greater amounts of interruptibility and shown in rows C and D.

Q. Please describe the other methods listed in Exhibit No. 101.

A. The second method is the same as the first method except I used short-term market purchases as the avoided resource instead of a peaker unit. I then repeated both methods using the amount of interruptibility provided in the 1992 contract instead of the amount proposed by Monsanto in this proceeding.

Q. Please discuss the appropriateness of these methods.

A. I believe the appropriate rate results from using something between the peaker and market purchases. Market purchases are volatile and using them would tend to either under value or over value the interruptible credit. At the current market prices, I believe using them understates the value of interruptibility. I also believe that an interruptible contract would tend to be exercised when market prices are above the average and my analysis was based on average market prices.

An interruptible contract provides a reliable, fixed price resource which I believe is more valuable than a short term market purchase. Therefore, my recommended

rate is closer to that based on an avoided peaker although I recognize that an interruptible contract may not be as valuable as a peaker because the peaker may offer greater operational flexibility.

Q. What rate are you recommending?

A. If the interruptibility is restricted to the amounts proposed by Monsanto, I believe the appropriate rate is 27 mills/kWh.

If Monsanto were able to provide greater interruptibility a lower rate could be justified. If Monsanto were to provide interruptibility similar to that provided in the 1992 contract, then a rate of about 23 mills/kWh could be justified.

Q. How do these rates compare to current rates?

A. The 27 mills/kWh rate would be 17% higher than the current effective rate of 23 mills/kWh. If the greater interruptibility were provided, and a rate of 23 mills/kWh were set, there would be no increase to Monsanto's effective rate.

Q. Dr. Laura Nelson of the Utah Division of Public Utilities performed an analysis for the MagCorp contract interruptible rate. How do her findings compare with yours?

A. Dr. Nelson found that if the MagCorp contract provided four months, or 720 hours of interruptibility her

analysis produced a rate of 27.7 mills/kWh. At 800 hours of interruptibility I am recommending a rate of 27 mills/kWh for Monsanto.

Q. How has Monsanto's contract interruptibility changed since 1992?

A. In the 1992 contract, 154 MW were interruptible and up to 191,564 MWh per year. In 1995, that contract was replaced with a contract that allowed no economic interruption.

The contract proposed in this proceeding would limit economic interruptions to a maximum of 116.5 MW for up to 250 hours or 67 MW for 500 hours. It also allows for 116.5 MW to be interrupted for 300 hours to maintain reserves. This is about a third of the interruptible capacity that Monsanto provide in the 1995 contract.

Q. Earlier in your testimony you stated that if interruptibility was provided at the 1992 contract level, then a rate approaching the 1992 and 1995 contract rate, 23 or 24 mills/kWh, might be appropriate. Why do you think that rate should define the minimum rate?

A. I believe that the cost of firm service power and incremental power have increased since 1995. At the same time I believe the value of interruptibility has increased.

In 1995, the Company, Monsanto, the Commission

Staff and the Commission found the effective rate of 2.3 cents/kWh to be reasonable. This was a period when market prices were very low and the Company had excess capacity. Today the Company has no excess capacity, production costs have increased, and market prices are volatile. All these suggest to me that Monsanto's rate should not be reduced below the current rate of 2.3 cents/kWh.

I have prepared Exhibit No. 102 showing Monsanto's effective interruptible rate for all three furnaces from 1990 to the present. In 1990, they were paying about 2.06 cents/kWh. With the signing of the 1992 contract, this rate increased to 2.23 cents/kWh and that contract included a built-in escalator that increased rates to 2.4, 2.5 and 2.6 cents/kWh in 1993, 1995 and 1996, respectively. In 1995, that contract was bought out for $30 million and a new rate of 1.85 cents/kWh was established. In Monsanto's comments supporting approval of this new contract, Mr. Louis Racine stated:

> Amortizing the $30 million payment 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.

My proposal of 2.7 cents/kWh results in a 17% increase over the current effective rate of 2.3 cents/kWh and a 3.8% increase over the 2.6 cents/kWh rate that would

have been in effect had the contract not been modified.

Q. Does this conclude your direct testimony in this proceeding?

A. Yes, it does.