Gary A. Dodge, #0897
HATCH, JAMES & DODGE
10 West Broadway, Suite 400
Salt Lake City, UT 84101
Telephone: 801-363-6363
Facsimile: 801-363-6666
Email: gdodge@hjdlaw.com
Attorneys for UAE Intervention Group

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of PACIFICORP for Approval of its Proposed Electric Service Schedules and Electric Service Regulations	DOCKET NO. 04-035-42

PREFILED DIRECT TESTIMONY OF KEVIN C. HIGGINS

[COST OF SERVICE / RATE SPREAD / RATE DESIGN]

The UAE Intervention Group hereby submits the Prefiled Direct Testimony of Kevin C. Higgins on cost of service, rate spread and rate design issues.

DATED this 7th day of January, 2005.

_____
Gary A. Dodge,
Attorney for UAE Intervention Group

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was sent this 7th day of January, 2005, to the mail or email addresses listed below:

Edward A. Hunter
Jennifer Horan
STOEL RIVES LLP
201 South Main Street, Suite 1100
Salt Lake City, UT 84111
eahunter@stoel.com
jehoran@stoel.com
Attorneys for PacifiCorp

Michael Ginsberg
Patricia Schmid
ASSISTANT ATTORNEY GENERAL
500 Heber M. Wells Building
160 East 300 South
Salt Lake City, UT 84111
mginsberg@utah.gov
pschmid@utah.gov
Attorneys for Division of Public Utilities

Reed Warnick
Paul Proctor
ASSISTANT ATTORNEY GENERAL
160 East 300 South, 5th Floor
Salt Lake City, UT 84111
rwarnick@utah.gov
pproctor@utah.gov
Attorneys for Committee of Consumer Services

F. Robert Reeder
Vicki Baldwin
PARSONS BEHLE & LATIMER
One Utah Center
201 South Main Street, Suite 1800
P.O. Box 45898
Salt Lake City, UT 84145-0898
BobReeder@pblutah.com
Vbaldwin@pblutah.com
Attorneys for UIEC

Dale F. Gardiner
PARRY ANDERSON & GARDINER
60 East South Temple, #1200
Salt Lake City, Utah 84111
dfgardiner@parrylaw.com
Attorneys for AARP

Thomas W. Forsgren
2868 Jennie Lane
Holladay, Utah 84117
twforsgren@msn.com
Attorneys for AARP

Mr. James Howarth
OO-ALC/JAN
6026 Cedar Lane, Bldg 1278
Hill AFB, UT 84056
James.howarth@hill.af.mil
Attorneys for FEA

Major Craig Paulson.
AFLSA/ULT
Utility Litigation Team
139 Barnes Drive, Suite 1
Tyndall AFB, FL 32403
Craig.Paulson@tyndall.af.mil
Attorneys for FEA

Michael L. Kurtz
Kurt J. Boehm
BOEHM, KURTZ & LOWRY
36 East Seventh Street, Suite 1510
Cincinnati, Ohio 45202
Mkurtz@bkllawfirm.com
Attorneys for Kroger Company

Peter J. Mattheis
Shaun C. Mohler
BRICKFIELD, BURCHETTE, RITTS, STONE
1025 Thomas Jefferson Street, N.W.
800 West Tower
Washington, D.C. 20007
PJM@bbrslaw.com
Attorneys for Nucor Steel

Gerald H. Kinghorn
PARSONS KINGHORN HARRIS
111 East Broadway, 11th Floor
Salt Lake City, UT 84111
ghk@pkplawyers.com
Attorneys for Nucor Steel

Jerold G. Oldroyd
Angela W. Adams
BAALLARD SPAHR
201 South Main Street, Suite 600
Salt Lake City, UT 84111-2221
oldroydj@ballardspahr.com
Attorneys for Comcast Cable

Michael D. Woods
Comcast Cable Communications, LLC
183 Inverness Drive West, Suite 200
Englewood, Colorado 80112
Attorneys for Comcast Cable

J. Davidson Thomas
Genevieve D. Sapir
COLE, RAYWID & BRAVERMAN
1919 Pennsylvania Avenue, N.W.
Second Floor
Washington, D.C. 20006
Attorneys for Comcast Cable

Stephen R. Randle
RANDLE, DEAMER & LEE
139 East South Temple, Suite 330
Salt Lake City, UT 84111-1169
ulaw@xmission.com
Attorneys for Utah Farm Bureau Federation

_____

PREFILED DIRECT TESTIMONY

Of

KEVIN C. HIGGINS

[Cost of Service / Rate Spread / Rate Design]

On behalf of UAE Intervention Group

In the Matter of the Application of PACIFICORP for Approval of its Proposed Electric Service Schedules and Electric Service Regulations

Docket No. 04-035-42

January 7, 2005

I. Introduction and statement of qualifications

Q. Please state your name and business address.

A. Kevin C. Higgins, 39 Market Street, Suite 200, Salt Lake City, Utah, 84101.

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

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. On whose behalf are you testifying in this proceeding?

A. My testimony is being sponsored by the Utah Association of Energy Users Intervention Group (UAE).

Q. What is the purpose of your testimony in this phase of the proceeding?

A. I have been asked to evaluate three topics pertaining to the general rate case filing made by PacifiCorp: (1) cost-of-service; (2) rate spread; and (3) rate design for Schedules 8 and 9. I also have been asked to propose any adjustments that might be necessary to ensure results that are just and reasonable.

Q. Please describe your qualifications.

A. My academic background is in economics, and I have completed all course work and field examinations toward a Ph.D. in Economics at the University of Utah. In addition, I have served on the adjunct faculties of both the University of Utah and Westminster College, where I have taught undergraduate and graduate courses in economics. I joined Energy Strategies in 1995, where I assist private and public sector

clients in the areas of energy-related economic and policy analysis, including evaluation of electric and gas utility rate matters.

Prior to joining Energy Strategies, I held policy positions in state and local government. From 1983 to 1990, I was economist, then assistant director, for the Utah Energy Office, where I helped develop and implement state energy policy. From 1991 to 1994, I was chief of staff to the chairman of the Salt Lake County Commission, where I was responsible for development and implementation of a broad spectrum of public policy at the local government level.

Q. Have you previously testified before this Commission?

Yes. Since 1984, I have testified at least fifteen times before the Utah Public Service Commission on electricity and natural gas matters.

Q. Have you testified before utility regulatory commissions in other states?

A. Yes. I have testified on the subject of electric utility ratemaking before state utility regulators in Alaska, Arizona, Colorado, Georgia, Idaho, Indiana, Michigan, Nevada, Ohio, Oregon, New York, South Carolina, Washington, and Wyoming.

A more detailed description of my qualifications is contained in UAE Exhibit 3.1 (KCH-1), attached to this testimony.

II. Overview of Conclusions and Recommendations

Q. What general conclusions have you reached regarding PacifiCorp's cost-of-service analyses in this proceeding?

A. There are several problems with the Company's analysis. One of the most challenging problems concerns the proper depiction of class cost-of-service in the context of the stipulated "rate mitigation caps" associated with the Revised MSP Protocol, through which the impact of the MSP on Utah is constrained. I find PacifiCorp's class cost-of-service approach in the "constrained MSP" case to be highly flawed, as it results in unwarranted changes to cost-of-service allocations to Utah for functions such as Distribution when moving from "Rolled-in" to MSP. Such a result is clearly incorrect, because MSP does not impact Distribution costs. I offer an alternative approach to analyzing class cost-of-service under the "constrained MSP" case that does not result in material changes to functions that are not affected by MSP.

In addition, I am concerned that the Company's current cost-of-service approach overstates the rate of return indices of temperature-sensitive classes, and understates the returns from classes whose loads are relatively insensitive to temperature. This occurs because the Company's approach ignores the differences in class cost responsibility associated with planning margin when allocating production costs. I propose an alternative approach that incorporates a planning margin adjustment for the more temperature-sensitive classes.

I also correct some spreadsheet errors, as well as two unexplained and unjustified inconsistencies between the Company's Rolled-in and MSP cost of service studies.

Q. What general conclusions have you reached regarding PacifiCorp's proposed rate spread?

A. As explained by other UAE witnesses, UAE disagrees with the level of revenues proposed by PacifiCorp in this proceeding. However, I agree with PacifiCorp's proposal to spread any remaining revenue requirement increase on an equal percentage basis to the major rate schedules (1, 6, 8, 9, 23), after giving Schedules 7, 11, 12 and 13 above-average increases, with the qualification that irrigation customers should also be in this latter group.

Q. What general conclusions have you reached regarding PacifiCorp's proposed rate design for Schedules 8 and 9 in this proceeding?

A. The most prominent change that PacifiCorp has proposed is mandatory time-differentiated ("TOU") rates for Schedules 8 and 9. UAE participated actively in the task force that investigated TOU rates. I believe that PacifiCorp's TOU proposal is generally reasonable, and I support its adoption, with one suggested improvement. I believe the proposed TOU program would have a greater chance of benefiting from customer responsiveness if the on-peak period in both summer and winter is a consistent eight hours per day, rather than eight hours per day in summer and sixteen hours per day in winter, as proposed by PacifiCorp.

III. Cost-of-Service

Q. What is the purpose of cost-of-service analysis?

A. Cost-of-service analysis is conducted to assist in the determination of appropriate rates for each customer class. It involves the assignment of revenues, expenses, and rate base to each customer class, and includes the following steps:

- Separating the utility's costs in accordance with the various *functions* of its system (e.g., production, transmission, distribution);
- *Classifying* the utility's costs with respect to the manner in which they are incurred by customers (e.g., customer-related costs, demand-related costs, and energy-related costs); and
- *Allocating* responsibility for causing the utility's costs to the various customer classes.

Q. What basic approach to cost-of-service analysis does PacifiCorp utilize for allocating generation costs?

A. In this proceeding, PacifiCorp has presented two cost-of-service studies: one corresponding to the Rolled-in interjurisdictional allocation methodology and a second one corresponding to the MSP interjurisdictional allocation methodology. The two cost-of-service studies are presented because the Stipulation for the use of the MSP Revised Protocol in Utah, which was recently approved by the Commission, requires that the revenue requirement impact on Utah from adopting the MSP method be capped at 101.5 percent of the "Rolled-in" revenue requirement in this rate case. Because of this rate mitigation cap, both the MSP and Rolled-in approaches are relevant in the analysis of class cost-of-service in Utah.

Both the Rolled-in and MSP approaches utilize a 12 CP (coincident peak) cost allocation for most resources, with fixed production and transmission costs classified as 75 percent demand and 25 percent energy. Under the MSP approach, however, certain resources are categorized as "seasonal," with the allocation treatment of seasonal

resources deviating somewhat from the 12 CP method as employed in the Rolled-in approach.

While there are a number of other differences between the Rolled-in and MSP interjurisdictional allocation approaches, the primary difference is the treatment of certain hydro resources. In the interjurisdictional cost allocation, the MSP "hydro adjustment" appears as an increase in the allocation of generation expense to Utah.

Q. Did you participate in the MSP process?

A. Yes, I did, on behalf of UAE. I ultimately testified before the Commission in support of the MSP Stipulation.

Q. What is your assessment of PacifiCorp's analysis of class cost-of-service in this proceeding?

A. There are several serious problems with the Company's analysis. At the most basic level, there are some spreadsheet errors, which I point out and correct. In addition, there are two unexplained and unjustified inconsistencies between the Rolled-in and MSP studies. I presume these inconsistencies to be inadvertent; in any case, they are arbitrary and impede understanding, rather than enhance it, so I correct them, too.

A more challenging problem concerns the proper depiction of class cost-of-service in the context of the "rate mitigation caps" in the MSP Stipulation. The rate mitigation caps are intended to reduce or constrain the impact of the additional generation costs that are otherwise allocated to Utah under the MSP Revised Protocol. PacifiCorp's cost-of-service approach in the "constrained MSP" case is highly flawed and results in unwarranted changes to cost-of-service allocations to Utah for functions such as

Distribution. Such a change is inappropriate, given that MSP does not change or impact Distribution costs. I offer an alternative approach to analyzing class cost-of-service under the "constrained MSP" case that does not result in material changes to functions that are not affected by MSP.

Finally, I am concerned that the Company's current cost-of-service approach overstates the rate of return indices for temperature-sensitive classes, and seriously understates the return for classes whose loads are relatively insensitive to temperature. This occurs because the Company's approach ignores the differences in class cost responsibility associated with planning margin when allocating production costs.

A. Planning Margin

Q. Let us begin with your concern regarding the treatment of planning margin. Please explain your concern.

A. PacifiCorp's revenue requirement calculations properly use temperature-adjusted data. PacifiCorp also uses temperature-adjusted data in performing its load forecast and in allocating cost responsibility among classes. However, the amount of generation that PacifiCorp acquires as part of its planning process is greater than the amount needed to meet its peak demand in a normal weather year. This additional generation, known as "planning margin," is acquired to provide a buffer against contingencies, including abnormal weather. PacifiCorp has stated that it needs a planning margin equal to 15 percent of system peak demand in order to ensure adequate resources.

If all classes were equally sensitive to weather there would be no serious cost-of-service bias in ignoring the weather-related portion of planning reserve. But not all classes are equally sensitive to weather. Industrial load, for example, tends to be relatively insensitive to temperature changes, while Utah residential load tends to be much more responsive to it, particularly in light of the state's growing residential air conditioning load. Ignoring the role of weather-related planning margin systematically understates the cost responsibility attributable to temperature-sensitive classes.

Q. What is the potential impact of ignoring the role of weather-related planning margin on PacifiCorp's cost-of-service analysis?

A. I have estimated this impact by re-running PacifiCorp's Rolled-in and MSP cost-of-service analyses with an adjustment that allocates 50 percent of the 15 percent planning margin to the CP (at input) for those rate schedules whose loads are traditionally temperature-adjusted by the Company, on the grounds these rate schedules represent the customer groups whose loads are the most weather sensitive. The results of this analysis are presented in UAE Exhibit 3.2 (KCH-2) and summarized in Table KCH-1, below. These results show significant changes in rate of return indices for some classes. Please note that in order to isolate the impact of the planning margin adjustment on PacifiCorp's cost-of-service analysis, I do not include In Table KCH-1 [nor in UAE Exhibit 3.2 (KCH-2)] any of the other corrections to the Company's cost-of-service analysis that I introduce later in my testimony.

Table KCH-1
Impact of Planning Margin Adjustment on Rate of Return Indices for Major Rate Schedules

Schedule	PacifiCorp Rolled-in	Rolled-in w/ Plan Margin Adjustment	PacifiCorp MSP	MSP w/ Plan Margin Adjustment
1 (Res.)	1.17	1.08	1.21	1.11
6 (GS - Large)	0.94	0.94	0.93	0.93
8 (GS>1 MW)	0.99	0.96	0.98	0.94
9 (GS - HV)	0.98	1.24	0.90	1.19
23 (GS - Sm)	1.09	1.11	1.11	1.13

Q. Why did you select 50 percent as the share of planning margin to be allocated to weather sensitive rate schedules?

A. I believe 50 percent is a reasonable estimate of the share of planning margin that is attributable to weather-sensitive loads. Planning margin provides a buffer against increases in load due to weather-related events, but is also needed for other reasons, such as assurance of reliability during unscheduled facility outages. I removed 50 percent of the planning margin to account for these other purposes.

Q. Are you proposing that a planning margin adjustment be adopted?

A. Yes. I propose that, in approving a cost-of-service analysis, the Commission expressly recognize the need to make an adjustment to the CP measurement to incorporate the planning margin impact of temperature-sensitive loads. I also propose that the Commission adopt my recommended approach of allocating 50 percent of the planning margin for this purpose in the present case. Later in my testimony, I will propose that rates be spread generally on an equal percentage basis to the major classes, similar to the Company's proposal. If this proposal is adopted by the Commission, my

proposed adjustment will not ultimately impact rates in this case. Nevertheless, it will confirm the need for proper recognition of cost-causation associated with temperature-sensitivity.

I also recommend that the Commission initiate a consensus-building process, such as a workshop, to analyze this issue in more detail before the next rate case. A number of determinations should be made regarding the proper parameters of a planning margin adjustment, including a determination of the portion of the planning margin that is temperature-related and the allocation of planning margin cost responsibility among temperature-sensitive rates schedules.

Q. What recommendations do you make to the Commission based on your analysis of the role of the planning margin in PacifiCorp's cost-of-service studies?

A. Ignoring temperature-related costs in a class cost-of-service analysis systematically biases the results against those classes whose loads are not temperature sensitive, such as Schedule 9, and favors classes that are temperature-sensitive, such as Schedule 1. This bias is built into the PacifiCorp cost-of-service results filed in this proceeding. This problem is exacerbated as the system is expanded to accommodate the classes with rapidly growing summer peak demands, such as residential. Therefore, I strongly caution against reliance, for rate spread purposes, on the rate of return indices for the major rate schedules that emerge from PacifiCorp's analysis.

The impacts of my adjustments, in combination with the correction of several errors in the Company's analysis, are shown in UAE Exhibit 3.4 (KCH-4), Schedule 2, and presented in Table KCH-4 later in my testimony.

I also note that it is widely acknowledged that growth in Utah residential summer peak demand is a major cause of the need for additional generation resources and distribution infrastructure. This assertion is consistent with the testimony of PacifiCorp witness Reed C. Davis,[1] who notes the implications for summer peak demand of larger home sizes and increasing ownership of central air conditioners in Utah, as well as findings published by the Utah Foundation in January 2004, which indicates that Utah residential demand has grown at an annual growth rate of 7.4 percent since 1996. Given that new generation and distribution facilities are typically associated with increased marginal costs, one would expect that a class cost analysis would allocate a greater-than-proportionate share of any revenue deficiency to the class that is believed to be largely responsible for causing the increased costs to be incurred, all other things being equal. Put another way, given that growth in residential peak demand is a major contributor to the need for new facilities to serve Utah, one would expect the rate of return index of the residential class to be deteriorating over time. Contrary to expectations, however, PacifiCorp's analysis has not shown such a trend. In fact, according to PacifiCorp's cost-of-service analyses, the rate of return index of the residential class has actually increased over the last three rate cases.

These results are counter-intuitive, to say the least. While counter-intuitive results are not, by themselves, a sufficient basis for rejecting a methodological approach, a pattern of counter-intuitive results does raise some important questions, such as whether the method employed for measuring cost impacts is appropriate for the task. Allocation

[1] Pre-filed direct testimony of Reed C. Davis, p. 15, line 11 – p. 16, line 13.

of a portion of the planning reserve margin to temperature-sensitive classes as I propose is one way to begin to improve the quality of the cost information generated by current allocation methodologies.

B. Cost-of-Service under "Rolled-in"

Q. Turning now to PacifiCorp's cost-of-service study using the Rolled-in method, do you have any additional changes that you would recommend, besides the planning margin adjustment?

A. Yes. In functionalizing costs, PacifiCorp treats "customer assistance" costs differently between its Rolled-in analysis and its MSP analysis. In its Rolled-in analysis, $1.8 million of "customer assistance" costs are functionalized as "Miscellaneous." In its MSP analysis, "customer assistance" costs are functionalized as "Retail." I can think of no reason for this different treatment, and I assume it is an oversight. This apparent error has no material impact on class cost allocation, but the inconsistent treatment obscures the comparison between Rolled-in and MSP methods when examining the functionalized cost-of-service. That is, the Miscellaneous cost function allocated to Utah has an otherwise unexplained reduction in PacifiCorp's MSP analysis, which is offset by an equal increase in the "Retail" function.[2]

In my opinion, PacifiCorp's treatment of this matter in its MSP analysis – i.e., functionalizing "customer assistance" as "Retail" – is the more appropriate. The most

[2] Compare Exhibit UP&L__(DLT-6), page 2, line 15, cols. J-K to Exhibit UP&L__ (DLT-8), page 1, line 15, cols. J-K. This $1.8 million change in functionalization does not explain the full difference between the two tables with respect to Miscellaneous cost-of-service. The explanation and correction of the remainder of the difference is addressed later in my testimony.

important issue here, though, is consistency. Inconsistent treatment masks the true differences between Rolled-in and MSP. Therefore, in the interest of clarity, I recommend re-functionalizing "customer assistance" in the Rolled-in analysis as "Retail," to be consistent with the approach the Company has taken in its MSP analysis. I make this change in UAE Exhibit 3.3 (KCH-3), which is described more fully below.

In addition, the Company's analysis inadvertently omits about $10 million in revenue attributable to Schedule 8, due to an apparent mix-up in which formulas associated with the Street Lighting class were applied to Schedule 8. This error is also corrected in UAE Exhibit 3.3 (KCH-3).

C. Cost-of-Service under MSP

Q. Let us turn, then, to PacifiCorp's cost-of-service study using the MSP allocation. Do you have any additional changes that you would recommend, besides the planning margin adjustment?

A. Yes, I do.

Q. Please explain your proposed changes.

A. The changes are of three types.

The first type of change corrects the Company's spreadsheet error in which approximately $10 million in revenue was not properly attributed to Schedule 8, as discussed above. This error is corrected in Schedules 1 and 2 of UAE Exhibit 3.3 (KCH-3).

The second type of change involves the correction of an additional inconsistency in the Company's treatment of Rolled-in and MSP methods, similar to the issue of customer-assistance costs, discussed above.

The third type of change involves the proper conceptual representation of the rate mitigation cap on Utah rate increases.

Q. Please explain your correction regarding the second type of change, which addresses an additional inconsistent treatment between the Rolled-in and MSP approaches.

A. In the MSP analysis, PacifiCorp shifts $2.2 million in revenue credits from Generation to Miscellaneous without explanation. As there appears to be no basis for this shift, I recommend that it be rejected. Instead, the functionalization of these revenue credits should remain consistent with the Rolled-in treatment. I make this correction in Schedule 2 of UAE Exhibit 3.3 (KCH-3).

Q. Please describe the results of the analysis shown in UAE Exhibit 3.3 (KCH-3).

A. This Exhibit makes a three-way comparison: Corrected Rolled-in vs. Corrected "Unconstrained" MSP vs. Uncorrected (i.e., PacifiCorp) "Unconstrained" MSP.

Schedule 1, page 1, of this exhibit presents a summary of PacifiCorp's Rolled-in cost-of-service analysis, with the "customer assistance" and Schedule 8 revenue corrections included. Please note that for the comparisons intended by this exhibit, I did *not* include my planning margin adjustment. (I incorporate this change with the corrections described here later in my testimony.[3])

Schedule 2, page 1 of this exhibit presents PacifiCorp's MSP cost-of-service analysis, absent the MSP Stipulation rate mitigation cap, corrected for the $2.2 million

revenue credit adjustment and the Schedule 8 revenue corrections discussed above. (This "unconstrained MSP" analysis is important, because its *uncorrected* version is the true source of the rate of return indices PacifiCorp shows in its MSP cost-of-service exhibits, e.g., UP&L__(DLT-6), page 2. I address this matter on page 16, below.)

It is instructive to compare the cost-of-service results by function on page 1 of Schedules 1 and 2 of UAE Exhibit 3.3 (KCH-3), reproduced in Table KCH-2, below.

Table KCH-2

Total Utah Cost-of-Service by Function,
Allocated by Alternative Methods
($ millions)

Function	PacifiCorp Rolled-in	PacifiCorp Constrained MSP	Corrected Rolled-in	Corrected Unconstrained MSP
Utah Total	1,223.4	1,242.1	1,223.4	1,254.7
Generation	739.6	767.0	739.6	771.0
Transmission	98.1	96.9	98.1	98.1
Distribution	331.9	327.6	331.9	331.9
Retail	43.6	45.4	45.4	45.4
Misc.	10.2	5.2	8.4	8.4

This comparison shows that by making the two types of corrections identified above, plus constraining the model to properly keep the earned return and tax responsibility for Distribution, Transmission, Retail, and Miscellaneous the same between Rolled-in and "unconstrained MSP", the cost-of-service results for Distribution, Transmission, Retail, and Miscellaneous are virtually identical between Rolled-in and MSP. (The small remaining difference is partly attributable to changes in overhead allocators.) This result is notably *unlike* PacifiCorp's cost-of-service presentation, in

[3] The planning margin adjustment is included in UAE Exhibit 3.4 (KCH-4), Schedule 2.

which the cost-of-service for all non-generation functions changes significantly – and incongruously – between Rolled-in and MSP. As the only material difference between Rolled-in and MSP is related to generation costs, only the generation cost-of-service should change when moving from Rolled-in to MSP.

To the extent that the results of the "unconstrained MSP" analysis are used at all in this proceeding, only the corrected version shown in Schedule 2 should be considered.

Q. Please describe what is in Schedule 3 of UAE Exhibit 3.3 (KCH-3).

A. Schedule 3 represents the third point of comparison I mentioned above. Schedule 3 shows the uncorrected version (i.e., PacifiCorp version) of the "unconstrained MSP" cost-of-service analysis. I label this analysis the "PacifiCorp version," because the calculations in Schedule 3 appear to represent the source of the rate of return indices presented in PacifiCorp's "constrained MSP" analysis shown in UP&L Exhibit__(DLT-6), page 2, even though, strictly speaking, PacifiCorp never presents this exact analysis. It is incontrovertible that the rate of return indices presented in UP&L Exhibit__(DLT-6), page 2, were derived using the Company's requested return of 8.73 percent, as shown in Schedule 3 of UAE Exhibit 3.3 (KCH-3). The target return of 8.48 percent shown in UP&L Exhibit__(DLT-6), page 2 is simply a derived number. It is not the original source of the rate of return indices in UP&L Exhibit__(DLT-6), page 2.

The upshot here is that the rate of return indices shown in UP&L Exhibit__(DLT-6), page 2 should be rejected as a basis for evaluation of cost-of-service, as the PacifiCorp MSP cost of service presentation suffers from two distinct sets of serious flaws. The first set of flaws is comprised of the errors and inconsistencies I have

discussed above and corrected in Schedule 2 of UAE Exhibit 3.3 (KCH-3). The second set of flaws is related to the third type of change I am recommending, namely the proper conceptual representation of the rate mitigation cap applicable to Utah rate increases as required by the MSP Protocol.

To this matter I now turn.

Q. Please proceed.

A. Some additional background may be helpful.

As I have just noted, the MSP version of PacifiCorp's cost-of-service analysis presents rate of return indices for each class that are based on an "unconstrained MSP" cost allocation to Utah. That is, each class's relative return is determined by first allocating the full MSP cost to Utah, before consideration of the cap included in the MSP Stipulation. As the change in cost allocation to Utah under MSP is entirely generation-related, the "unconstrained MSP" allocation causes a relatively greater impact on classes for which generation is a relatively high proportion of costs, such as Schedule 9, which has almost no distribution costs. This impact is seen in the reduction in the rate of return index for Schedule 9 from 0.98 under "Rolled-in" to 0.94 in the corrected "unconstrained MSP" analysis, as shown in UAE Exhibit 3.3 (KCH-3), Schedules 1 and 2, page 1.

However, there is a significant conceptual problem with the Company's approach to MSP cost allocation, because the cost allocation to Utah is *not* the unconstrained MSP, but rather MSP constrained to no greater than 101.5 percent of Rolled-in; that is, the actual cost allocation to Utah is a *constrained* MSP. PacifiCorp's use of the rate of return index derived from an "unconstrained MSP" analysis, when the actual allocation is a

"constrained MSP," overstates the allocation of costs to classes for which generation is a relatively high proportion of costs.

Q. Doesn't PacifiCorp's MSP cost allocation make an adjustment for the rate mitigation cap?

A. Yes, but only after the rate of return indices are first established using the "unconstrained MSP" approach. In an effort to reflect the rate mitigation cap, PacifiCorp reduces the effective return on rate base from its requested 8.73 percent to 8.48 percent.[4] This, in turn, causes a reduction in Utah's cost-of-service for all functions, including Utah's *distribution* cost-of-service. This latter result makes no sense, as Utah's distribution cost-of-service is the same under both Rolled-in and MSP. Rather, it is the *generation* cost to Utah that is constrained by the cap, because it is only the generation cost to Utah that is increased by MSP in the first place.

Because the various Utah rate classes do not bear the same share of generation costs as they do distribution costs, PacifiCorp's approach of first allocating class cost responsibility based on unconstrained MSP generation costs and then incorporating the cap by reducing costs for all functions, including Distribution, results in a distorted depiction of class cost responsibility under the constrained MSP.

Q. How can this problem be corrected?

A. This problem can be corrected by recognizing that, for cost-of-service purposes, the "constrained MSP" *limits the generation expense* that would otherwise flow to Utah via the MSP interjurisdictional cost allocation. To properly reflect class cost-of-service

[4] See Exhibit UP&L__(DLT-6), p.2.

under the "constrained MSP" scenario, I reduced the "unconstrained MSP" generation expense adjustment to Utah by the exact amount necessary (approximately $12 million) to reach the allowed revenue adjustment (101.5 percent of "Rolled-in") while retaining the Company's requested return of 8.73 percent on rate base.

The result of this analysis is presented in UAE Exhibit 3.4 (KCH-4), Schedule 1, and is summarized in Table KCH-3, below.

Table KCH-3

Rate of Return Indices for Major Rate Schedules
Using Corrected "Constrained" MSP Method

Schedule	PacifiCorp MSP	Corrected Constrained MSP
1 (Res.)	1.21	1.18
6 (GS - Large)	0.93	0.94
8 (GS>1 MW)	0.98	0.99
9 (GS - HV)	0.90	0.96
23 (GS - Sm)	1.11	1.09

In my opinion, this representation is the proper basis for evaluating class cost-of-service using an MSP framework, so long as the MSP interjurisdictional allocation to Utah is constrained by the MSP Stipulation.

Q. Have you also prepared a fully corrected "constrained MSP" analysis that corrects the errors and incorporates the planning margin adjustment you discussed earlier in your testimony?

A. Yes, I have. These results are presented in UAE Exhibit 3.4 (KCH-4), Schedule 2, and are summarized in Table KCH-4, below.

Table KCH-4

**Rate of Return Indices for Major Rate Schedules
Using Corrected "Constrained" MSP Method,
With Planning Margin Adjustment**

Schedule	Corrected Constrained MSP w/out PM adj.	Corrected Constrained MSP w/ PM adj.
1 (Res.)	1.18	1.09
6 (GS - Large)	0.94	0.93
8 (GS>1 MW)	0.99	0.95
9 (GS - HV)	0.96	1.24
23 (GS - Sm)	1.09	1.12

D. Summary of Cost-of-Service Recommendations

Q. Please summarize your cost-of-service recommendations.

A. I offer the following primary cost-of-service recommendations:

- A planning margin adjustment should be incorporated into the class cost-of-service analysis to properly reflect the cost of generation acquired to respond to temperature-related demand from customers whose loads are responsive to temperature changes.
- The rate of return indices for the major rate schedules that emerge from PacifiCorp's analysis should not be used for any rate spread purposes.
- The Commission should adopt my proposed cost of service analysis, including the adjustments I have made to account for planning margin. The impact of these adjustments, in combination with the correction of several errors in the Company's analysis, are shown in UAE Exhibit 3.4 (KCH-4), Schedule 2, and presented in Table KCH-4.

- The Company and interested parties should be directed to explore in greater detail the most appropriate way to incorporate the impact of temperature-sensitive loads on class allocations and to refine the calculation of the reserve margin adjustment I have proposed.
- PacifiCorp's representation of class cost-of-service under the "constrained MSP" as depicted in UP&L Exhibit__(DLT-6), page 2, should be rejected. The Company's approach is highly flawed, as it results in unwarranted changes to cost-of-service allocations to Utah for functions such as Distribution when moving from Rolled-in to MSP. This problem can be corrected by recognizing that, for cost-of-service purposes, the "constrained MSP" *limits the generation expense* that would otherwise flow to Utah via the MSP interjurisdictional cost allocation. I present a corrected analysis in UAE Exhibit 3.4 (KCH-4), Schedules 1 and 2. I recommend that the Commission adopt this corrected approach to evaluating class cost-of-service using an MSP framework, so long as the MSP interjurisdictional allocation to Utah is constrained by the MSP Stipulation.

IV. Rate Spread

Q. What has PacifiCorp proposed with respect to rate spread?

A. If there is a rate increase, PacifiCorp proposes that:

- Schedules 7, 11, 13, and Schedule 12 Street Lighting each receive 150 percent of the system average increase, on a percentage basis;
- Irrigation receive the system average increase; and

- The remaining rate schedules (including the major rate schedules by sales volume) receive an equal percentage increase sufficient to recover the balance of the approved revenue requirement, which would mathematically be slightly below the system average percentage increase.

Q. Do you agree with this approach?

A. Generally, I believe the Company's rate spread approach is reasonable, although the irrigation class is significantly below cost-of-service and is more appropriately grouped with classes that should receive 150 percent of the system average. In the event of a rate decrease, I recommend that it be spread on an equal percentage basis.

Q. Why do you believe the Company's proposed rate spread is generally reasonable, despite the corrections and other cost-of-service changes that you propose?

A. As shown in Table KCH-3, above, even without my proposed planning margin adjustment, none of the major rate schedules (i.e., 1, 6, 8, 9, 23) have rate of return indices below 0.94. Thus, there is no sound basis for raising any of the major rate schedules above the system average. Although Schedule 1's index is above 1.1, it should receive the same percentage increase as the other major rate schedules. As reflected in Table KCH-4, above, Schedule 1's index drops below 1.1 with my proposed planning reserve margin adjustment. Also, as discussed above, given that Schedule 1 is largely driving the need for summer peaking resources, it simply makes no sense to award that rate schedule a rate increase that is less than the other major rate schedules. While Schedule 9's rate of return index increases significantly to 1.24 with the planning margin adjustment, I nevertheless support an even percentage increase for all of the major classes

in this case. Under the circumstances, I believe that it is appropriate to give more attention to refining a sound cost of service approach – including the reserve margin adjustment that I propose – before cost-of-service results are used to drive different rate increases for the major classes.

V. Rate Design for Schedules 8 and 9

Q. PacifiCorp has recommended a mandatory TOU rate design for Schedules 8 and 9. Do you agree with the Company's proposed rate design?

A. I generally agree with what I believe to be the Company's TOU rate design proposal, although the status of the Company's proposal is not entirely clear. At the time I am filing this testimony, the record of this case does not provide a clear indication of the Company's current recommendation for Schedule 9. In its Response to UIEC Data Request 5.2, dated October 25, 2004, PacifiCorp admitted that its original rate design for Schedule 9 was in error. As part of that data response, the Company provided corrected rates. However, I am not aware of any amended filing or notice of correction duly served on the Parties in this case. Parties who did not happen to see the data response in question are presumably unaware of the Company's proposed changes and may have prepared testimony based on the filed case. Given this highly unusual notice process, no Party can be sure whether it is working with the latest Company proposal.

With this caveat, I generally agree with the Company's proposed rate design for Schedule 9 as amended in its Response to UIEC Data Request 5.2. UAE participated actively in the task force that studied and helped develop the TOU proposal, and supports

it in concept. UAE also supports continued study and analysis of TOU rates and further refinement in future rate cases, if warranted.

While I am in general agreement with the TOU proposal, I propose an adjustment to the on-peak period in the winter season. Under PacifiCorp's proposal, the on-peak period is sixteen hours per day during weekdays. This contrasts with eight hours per day in the summer. Based on my discussions with customers, I have concluded that industrial customers would be better able to restructure their operations in response to TOU rates if the operational parameters are consistent throughout the year. In designing a successful TOU program, it is not just the utility's cost perspective that is important – the realities of managing an industrial operation need to be considered as well. In my opinion, the proposed TOU program has a greater chance of benefiting from customer responsiveness if the on-peak period in both summer and winter is a consistent eight hours per day.

Q. Does this conclude your direct testimony?

A. Yes, it does.