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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
MARC SPITZER
WILLIAM A. MUNDELL
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR AN EMERGENCY INTERIM RATE INCREASE AND FOR AN INTERIM AMENDMENT TO DECISION NO. 67744	DOCKET NO. E-01345A-06-0009 **NOTICE OF FILING OF THE DIRECT TESTIMONY AND EXHIBITS OF KEVIN C. HIGGINS ON BEHALF OF PHELPS DODGE MINING COMPANY AND ARIZONANS FOR ELECTRIC CHOICE AND COMPETITION**

Phelps Dodge Mining Company and Arizonans for Electric Choice and Competition, through undersigned counsel, hereby provide notice of filing the Direct Testimony and Exhibits of their witness, Kevin C. Higgins, in the above-captioned docket.

RESPECTFULLY SUBMITTED this 28th day of February 2006.

FENNEMORE CRAIG, P.C.

By
C. Webb Crockett
Patrick J. Black
3003 N. Central Avenue, Ste. 2600
Phoenix, AZ 85012-2913

Attorneys for Phelps Dodge Mining Company and Arizonans for Electric Choice and Competition

ORIGINAL and **13 COPIES** of the foregoing **FILED** this 28th day of February 2006 with:

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this 28TH day of February 2006 to:

LYN FARMER
CHIEF ADMINISTRATIVE LAW JUDGE
HEARING DIVISION
ARIZONA CORPORATION COMMISSION
1200 WEST WASHINGTON
PHOENIX, ARIZONA 85007

THOMAS L. MUMAW (Thomas.Mumaw@pinnaclewest.com)
PINNACLE WEST CAPITAL CORPORATION
P.O. Box 53999, MS 8695
PHOENIX AZ 85072-3999

DEBORAH R. SCOTT (DRScott@swlaw.com)
SNELL & WILMER
ONE ARIZONA CENTER
400 E. VAN BUREN STREET
PHOENIX AZ 85004-2202

BARBARA A. KLEMSTINE (Barbara.Klemstine@APS.com)
MANAGER, REGULATORY AFFAIRS
ARIZONA PUBLIC SERVICE
MAIL STATION 9909
P.O. BOX 53999
PHOENIX, AZ 850972-3999

WILLIAM L. KURTZ
BOEHM, KURTZ & LOWRY
36 E. SEVENTH STREET, STE. 210
CINCINNATI OH 45202

SCOTT WAKEFIELD
RUCO
1110 W. WASHINGTON STREET, STE. 220
PHOENIX AZ 85007

WALTER W. MEEK
AUIA
2100 N. CENTRAL AVENUE, STE. 210
PHOENIX AZ 85067

NICHOLAS J. ENOCH
LUBIN & ENOCH
349 N. FOURTH AVENUE
PHOENIX AZ 85003
(IBEW Locals 387, 640, and 769)

BILL MURPHY
MURPHY CONSULTING
2422 E. PALO VERDE DRIVE
PHOENIX AZ 85016

CYNTHIA ZWICK
ARIZONA COMMUNITY
ACTION ASSOCIATION
2700 N 3RD STREET, STE. 3040
PHOENIX AZ 85004

JAMES M. VAN NOSTRAND
STOEL RIVES
900 SW FIFTH AVENUE, STE. 2600
PORTLAND OR 97204

GREG PATTERSON
ARIZONA COMPETITIVE POWER ALLIANCE
916 WEST ADAMS, STE. 3
PHOENIX AZ 85007

S. DAVID CHILDERS
LOW & CHILDERS, P.C.
2999 N. 44TH STREET, SUITE 250
PHOENIX AZ 85018
(Arizona Competitive Power Alliance)

MICHAEL A. CURTIS
CURTIS, GOODWIN, SULLIVAN, UDALL &
SCHWAB PLC
2712 N. SEVENTH STREET
PHOENIX AZ 85006-1090
(Town of Wickenburg)

KAREN S. WHITE, LT. COL., USAF
CHIEF, AIR FORCE
UTILITY LITIGATION TEAM
AFLSA/JACL-ULT
139 BARNES DRIVE
TYNDALL AFB, FL 32403
(Federal Executive Agencies)

MICHAEL L. KURTZ
BOEHM, KURTZ & LOWRY
36 E. 7TH STREET, STE. 2110
CINCINNATI OH 45202

J. WILLIAM MOORE
1144 E. JEFFERSON
PHOENIX AZ 85034

LAWRENCE V. ROBERTSON, JR.
MUNGER CHADWICH
333 N. WILMOT, STE. 300
TUCSON AZ 85711

ROBERT W. GEAKE
ARIZONA WATER COMPANY
PO BOX 29006
PHOENIX AZ 85038

ANDREW W. BETTWY
SOUTHWEST GAS
5241 SPRING MOUNTAIN ROAD
LAS VEGAS NV 89150

TIMOTHY H. HOGAN
ARIZONA CENTER FOR
LAW IN THE PUBLIC INTEREST
202 E. MCDOWELL ROAD, STE. 153
PHOENIX AZ 85004

DAVID BERRY
WESTERN RESOURCE ADVOCATES
P. O. BOX 1064
SCOTTSDALE, AZ 85252-1064

ERIC C. GUIDRY
WESTERN RESOURCE ADVOCATES
2260 BASELINE ROAD, STE. 200
BOULDER, COLORADO 80302

MICHAEL PATTEN
ROSHKA DeWULF & PATTEN
400 E. VAN BUREN, STE. 800
PHOENIX AZ 85004

MICHELLE LIVENGOOD
UNISOURCE ENERGY SERVICES
ONE SOUTH CHURCH STREET, STE. 200
TUCSON AZ 85702

JON POSTON
AARP ELECTRIC RATE PROJECT
6733 EAST DALE LANE
CAVE CREEK AZ 85331

CORALETTE HANNON
HARP DEPARTMENT OF STATE AFFAIRS
6705 REEDY CREEK ROAD
CHARLOTTE NC 28215

MARVIN S COHEN
SACKS TIERNEY
4250 NORTH DRINKWATER BLVD., 4TH FLOOR
SCOTTSDALE AZ 85251-3693

JAY I. MOYES
Moyes Storey
1850 N. CENTRAL AVENUE, STE. 1100
PHOENIX AZ 85004

KENNETH R. SALINE, P.E.
K. R. SALINE & ASSOC., PLC
160 N. PASADENA, STE. 101
MESA, AZ 952-1

JESS A. DILLON
PPL SERVICES CORPORATION
TWO N. NINTH STREET
ALLENTOWN PA 18101

JEFF SCHLEGEL
SWEEP ARIZONA REPRESENTATIVE
1167 W. SAMALAYUCA DRIVE
TUCSON AZ 85704

PAUL R. MICHAUD
MICHAUD LAW FIRM
46 EASTHAM BRIDGE RD.
EAST HAMPTON, CT. 06424-1375)

ROBERT ANNAN
ANNAN GROUP
6605 E. EVENING FLOW DRIVE
PHOENIX AZ 85262

DOUGLAS V. FANT
AZCONGEN ASSOC.
80 E. COLUMBUS
PHOENIX AZ 85012

RAYMOND S. HEYMAN
UNISOURCE ENERGY CORPORATION
ONE SOUTH CHURCH, STE. 1820
TUCSON AZ 85701

DONNA M. BRONSKI
CITY OF SCOTTSDALE
3939 DRINKWATER BLVD.
SCOTTSDALE AZ 85251

CHRISTOPHER KEMPLEY, CHIEF COUNSEL
LEGAL DIVISION
ARIZONA CORPORATION COMMISSION
1200 WEST WASHINGTON STREET
PHOENIX, AZ 85007

ERNEST G. JOHNSON, DIRECTOR
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION
1200 WEST WASHINGTON STREET
PHOENIX, AZ 85007

By: Mary Bollington

BEFORE THE ARIZONA CORPORATION COMMISSION

In the Matter of the Application of Arizona Public Service Company for an Emergency Interim Rate Increase and for an Interim Amendment to Decision No. 67744	))))	**Docket No. E-01345A-06-0009**

Direct Testimony of Kevin C. Higgins

on behalf of

Phelps Dodge Mining Company and

Arizonans for Electric Choice & Competition

February 28, 2006

TABLE OF CONTENTS

Table of Contents.....i
Introduction.....1
Overview and Conclusions.....3
Need for Emergency Increase.....5
New Base Energy Rate vs. Credit to the PSA Annual Tracking Account.....12
Rate Design.....13
ATTACHMENTS
KCH-1.....Qualifications
KCH-2.....Emergency Increase Needed to Achieve 18% FFO/Debt Ratio in 2006
KCH-3.....Impact of APS Proposal on Commercial and Industrial Customers

DIRECT TESTIMONY OF KEVIN C. HIGGINS

Introduction

Q. Please state your name and business address.

A. Kevin C. Higgins, 215 South State Street, Suite 200, Salt Lake City, Utah, 84111.

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 Phelps Dodge Mining Company ("Phelps Dodge") and Arizonans for Electric Choice and Competition ("AECC"). AECC is a business coalition that advocates on behalf of retail electric customers in Arizona. Phelps Dodge and AECC (hereafter "AECC") are parties to the APS Settlement Agreement that was approved by the Commission, with some modification, in 2005.

Q. Were you personally involved in the negotiations that resulted in the APS Settlement Agreement?

A. Yes, I was closely involved in the negotiations on behalf of AECC.

Q. Please describe your professional experience and qualifications.

A. My academic background is in economics, and I have completed all coursework and field examinations toward the 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 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?

A. Yes. I have testified in a number of proceedings before this Commission, including the generic proceeding on retail electric competition (1998),[1] the hearings on the Arizona Public Service Company ("APS") Settlement Agreement (1999),[2] the hearings on the TEP Settlement Agreement (1999),[3] the AEPCO transition charge hearings (1999),[4] the Commission's Track A proceeding (2002),[5] the APS adjustment mechanism proceeding (2003),[6] the Arizona ISA proceeding (2003),[7] the APS Rate Case (2004),[8] and the Trico Rate Case (2005).[9]

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[1] Docket No. RE-00000C-94-0165.
[2] Docket Nos. RE-00000C-94-0165, E-01345A-98-0471, and E-01345A-98-0473.
[3] Docket Nos. RE-00000C-94-0165, E-01933A-97-0772, and E-01933A-97-0773.
[4] Docket No. E-01773A-98-0470.
[5] Docket Nos. E-00000A-02-0051; E-01345A-01-0822; E-00000A-01-0630; E-01933A-02-0069; E-01933A-98-0471.
[6] Docket No. E-01345A-02-0403.
[7] Docket No. E-00000A-01-0630.
[8] Docket No. E-01345A-03-0437.

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

2 A. Yes. I have testified numerous times on the subjects of electric utility rates
3 and regulatory policy before state utility regulators in Alaska, Colorado, Georgia,
4 Idaho, Indiana, Kansas, Michigan, Nevada, New York, Ohio, Oregon, South
5 Carolina, Utah, Washington, and Wyoming. I have also participated in various
6 Pricing Processes conducted by the Salt River Project Board.

7 A more detailed description of my qualifications is contained in
8 Attachment KCH-1, attached to this testimony.

9

10 **Overview and Conclusions**

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

12 A. My testimony addresses APS's request for an emergency interim rate
13 increase and recommends adjustments to the Company's proposal that I believe
14 are necessary to ensure results that are just and reasonable.

15 **Q. What conclusions have you reached in your analysis?**

16 A. (1) In light of rising fuel and purchased power costs and the recent credit downgrade
17 experienced by APS, some emergency rate relief is warranted; specifically, I
18 believe it is appropriate to allow an emergency interim rate increase sufficient to
19 permit APS to attain a FFO/Debt Ratio of 18 percent in 2006. I calculate that this
20 ratio can be attained through an emergency and interim rate increase of $126
21 million in calendar-year 2006. If implemented on May 1, 2006, this incremental

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[9] Docket No. E-01461A-04-0607.

revenue can be collected with an emergency and interim rate increase of approximately 7.8 percent (as measured against rates exclusive of PSA charges).

(2) I disagree with APS's proposal to establish a new base energy rate in this proceeding, as this would allow APS to avoid having to absorb its 10 percent share of the cost differential between the current base energy rate and its new proposed energy rate. Instead, the base energy rate should remain at the level established in the last general rate case, and any revenues collected from the emergency surcharge should be applied as a credit against the PSA Annual Tracking Account. In this way, the surcharge could be set to recover the 90 percent cost-share assignable to customers, with the remaining 10 percent assigned to APS per the PSA mechanism. The new base energy rate would then be established in the upcoming general rate case.

(3) The design of APS's proposed interim surcharge is not reasonable in the context of an emergency filing. Although APS advertises its proposed increase as being "14 percent", the Company's proposal would actually raise rates for many industrial customers by well over 20 percent. In my opinion, it is inappropriate in the context of an emergency rate filing – with its limited record and restricted opportunity for analysis – to levy disproportionate increases on different customer groups. If an emergency increase is granted, the only appropriate rate design would be an <u>equal percentage increase</u> for all customer groups. This can be achieved through an equal percentage surcharge on total customer bills, exclusive of PSA charges.

1 **Need for Emergency Increase**

2 **Q. In your opinion, has APS demonstrated a need for an emergency increase?**

3 A. Yes. In light of rising fuel and purchased power costs and the recent credit
4 downgrade experienced by APS, some emergency rate relief is warranted. Higher
5 utility credit costs invariably have a negative impact on customers, and I believe it
6 is prudent to provide emergency relief to the extent that it is necessary to avoid
7 further downgrades.

8 **Q. What amount of emergency increase has APS requested?**

9 APS has requested emergency and interim relief in the amount of $299
10 million on an annualized basis, which corresponds to a rate increase of 14 percent
11 – although as I discuss later in this testimony the impact on many industrial
12 customers is well over 20 percent. I note that the 14 percent increase as described
13 by APS in its Application is based on pre-PSA Adjustor rates. With the
14 implementation of the PSA Adjustor on February 1, 2006, the $299 million
15 emergency request becomes a slightly smaller percentage of existing rates. To
16 avoid confusion, when I refer to percentage rate changes hereinafter in this
17 testimony, the reference will be to rates *exclusive* of the PSA Adjustor, and thus
18 comparable to APS's initial representations.

19 **Q. What criteria should be used in evaluating the emergency request?**

20 A. APS has emphasized that the Funds-from-Operations/Debt ratio
21 ("FFO/Debt ratio") is the key financial metric examined by the credit agencies in
22 establishing credit ratings.[10] APS has further indicated that a FFO/Debt ratio of 18

[10] Affidavit of Donald E. Brandt, p. 4, lines 9-14.

1 to 28 percent is necessary for a utility with APS's risk profile to maintain a BBB
2 credit rating from Standard & Poor's ("S&P"). I have verified this range through
3 discussions with S&P. While I note that BBB was APS's credit rating from S&P
4 prior to being downgraded to BBB- on December 21, 2005, my understanding of
5 S&P's FFO/Debt ratio range is that S&P does not provide a separate range for
6 BBB-. Based on APS's representations regarding the importance of the
7 FFO/Debt Ratio to its credit rating, I believe it is necessary to allow an emergency
8 interim rate increase sufficient to permit APS to attain a FFO/Debt ratio of 18
9 percent in 2006, in order to prevent a further credit downgrade. However, the
10 amount of relief needed in this proceeding to accomplish this is complicated
11 somewhat by the series of filings that APS has made in recent weeks and the
12 extent to which rate relief provided in those other proceedings will provide partial
13 mitigation of APS's current financial difficulties.
14 **Q. What other rate relief has APS received recently?**
15 A. On January 25, 2006, the Commission approved a $.004 per KWh PSA
16 Adjustor that took effect on February 1, 2006.
17 **Q. What other rate relief has APS requested recently?**
18 A. On February 2, 2006, APS requested approval of a two-part PSA
19 Surcharge. The first part would recover $15.3 million over 12 months and is
20 associated with fuel and purchased power costs in the "Paragraph 19(d) Balancing
21 Account" *not* associated with the 2005 unplanned outage at Palo Verde. I estimate
22 that if approved to go into effect by May 1, 2006, this portion of the PSA
23 Surcharge would collect about $11 million over the remainder of 2006.

The second part of the requested PSA Surcharge would recover $44.6 million over 12 months, and is associated with costs associated with the unplanned outage at Palo Verde in 2005. I estimate that if this charge went into effect July 1, 2006, it would collect about $24 million over the remainder of 2006.

Q. How would recovery of these surcharge revenues impact APS's FFO/Debt ratio in 2006?

A. As each of the rate proposals has a unique starting date, it is useful in addressing this question to differentiate between the annualized revenues and the calendar-year 2006 revenues associated with the APS rate increases that have been requested and/or granted. Based on APS's 2006 retail kWh forecast, I estimate the revenues from the various rate increases under consideration as follows:

Table KCH-1
Summary of Recent APS Rate Increase Requests
($ millions)

Rate proposal	Est. start date	Rate ($/kWh)	Annualized $	$ in 2006
PSA Adjustor	2/1/06	$.004000	111.6	103.2
PSA Surcharge I	5/1/06	$.000554	15.3	11.2
PSA Surcharge II	7/1/06	$.001611	44.6	24.3
Emergency Surch.	5/1/06	$.011161	298.7	226.3

For the purpose of identifying the amount of emergency increase needed for APS to attain an FFO/Debt ratio of 18 percent in 2006, I will assume that the Step I PSA Surcharge is implemented on May 1, 2006. I note that AECC believes such an action is appropriate under the PSA mechanism. If the Step I PSA

1 Surcharge is not implemented at that time, then the emergency increase would
2 need to be greater.
3 It appears likely that the Step II PSA Surcharge will take longer to resolve.
4 Given the uncertainty surrounding the timing and final outcome of that surcharge
5 request, I have excluded revenues from the Step II PSA Surcharge in formulating
6 my emergency increase recommendation, but note that approval of the Step II
7 PSA Surcharge would reduce the amount of the emergency increase that is
8 needed, and respectfully suggest that the amount of the emergency increase could
9 be adjusted upon resolution of the Step II PSA Surcharge matter.
10 **Q. Assuming the $11 million requested Step I PSA Surcharge goes into effect on**
11 **May 1, 2006, how much revenue would APS require from an emergency**
12 **increase to attain a FFO/Debt ratio of 18 percent in 2006?**
13 A. I calculate that this could be accomplished with an interim increase of
14 $126 million in calendar-year 2006, which can be implemented through an equal
15 percentage surcharge of approximately 7.8 percent. This figure is comparable to
16 the 14 percent, or $226 million in calendar-year 2006 ($299 million on an
17 annualized basis) that APS has requested. My calculations are shown in
18 Attachment KCH-2.
19 **Q. Why do you state that the rate increase necessary to raise $126 million in**
20 **additional revenues is *approximately* 7.8 percent?**
21 A. The calendar-year 2006 revenue increase I am recommending is 55.6
22 percent of the revenue that would be generated by APS's proposed increase of 14
23 percent, so it is accurate to state that my proposed increase is 55.6 percent of that

recommended by APS – and 7.8 percent is simply 55.6 percent of APS's proposed 14 percent increase. If APS and I were recommending identical surcharge mechanisms or if the period of analysis was a full twelve months, this apportioning would result in an exact derivation of the necessary rate increase. However, APS is proposing a flat kWh charge and I am recommending a percentage-of-bill rider, and the period of analysis is eight months (May – December) – not twelve. Because APS's kWh sales and retail revenues will not move in perfect proportion on a month-to-month basis, the 7.8 percent estimate I described above will not be an exact calculation for the May to December period. This calculation can be improved significantly simply by using APS's monthly revenue projections for 2006 as the basis of the percentage increase. However, I do not have this information at the present time, although I am in the process of requesting it from APS.

Q. Please explain how you made your calculation of the additional $126 million needed by APS in 2006.

A. I started with APS workpaper DEB_WP21, which was referenced in APS Data Response STF 4.34, dated February 7, 2006. According to Data Response STF 4.34 and Workpaper DEB_21, if APS were to receive $132 million in combined PSA Adjustor/Surcharge revenues in 2006[11] and no interim increase, the Company's FFO/Debt ratio would be 16.0 percent in 2006. Using these assumptions, APS calculates that FFO in 2006 would be $520.6 million and

[11] The text of this APS data response indicates that APS assumed $133 million in PSA Adjustor/ Revenues. However, the spreadsheet attached to APS's Response to Staff Data Request No. 1-12 actually shows a combined PSA Adjustor/Surcharge revenue of $131.7 million in 2006. I use this latter figure in making my calculations rather than the $133 million that APS cites in the text of its data response.

Adjusted Average Total Debt would be $3.259 billion. These parameters are summarized below.

Table KCH-2

Key APS Assumptions and Calculations in Data Response STF 4.34 and DEB_WP21

Assumptions:	$132 million in PSA Adjustor[12]	
	No interim rate increase	
Calculations:	FFO:	$520,552,000
	Debt:	$3,259,115,000
	FFO/Debt:	16.0%

If APS were to receive an emergency increase, the Company's debt would not increase, all other things equal. (In fact, all things equal, APS debt would decline somewhat.) Therefore, for purposes of my calculation, I conservatively held APS's 2006 debt constant at $3.259 billion, and identified the FFO necessary to achieve a FFO/Debt ratio of 18 percent. This amount is $586.6 million, which is $66.1 million greater than the amount calculated by APS in DEB_WP21.

To derive the emergency increase necessary to achieve FFO of $586.6 million, it was necessary for me to adjust APS's assumption of $132 million in PSA Adjustor/Surcharge revenues to reflect adoption of the $.004 PSA Adjustor effective February 1, 2006 and to incorporate my assumption of adoption of the Step I PSA Adjustor on May 1, 2006. Under this scenario, the combined PSA Adjustor/Surcharge revenue is $114 million in 2006, $17 million less than APS had assumed in DEB__WP21.[13]

[12] Please see my Footnote 11.
[13] $131.7 million – 114.4 million = $17.3 million.

To achieve a target FFO of $586.6 million, it was necessary for me to first replace the $17 million differential in assumed PSA revenues with emergency increase revenues, and then to derive the additional emergency increase in 2006 needed to reach the target FFO, taking account of income tax effects. I calculate that the total emergency increase needed to reach the target FFO in 2006 is $126 million, which requires an emergency increase that I estimate to be approximately 7.8 percent.

My calculation is summarized in Table KCH-3, below.

Table KCH-3

Summary of AECC Emergency Increase Calculation
($000)
All $ refer to Calendar Year 2006 Amounts

APS Projected FFO	$520,552
Target FFO	$586,641
Debt Target:	$3,259,116
FFO/Debt Target:	18.0%

Adjust APS PSA Adjustor/Surcharge Revenue:
$114,383 - $131,723 = $(17,340)
Change to FFO (w/ tax effect) $(17,430)/1.6407 = $(10,569)

Incremental FFO needed to reach target:

$586,641 - $520,552 - $10,569 = $76,658

Incremental revenue needed to reach Target FFO (w/ tax effect):

$76,658 x 1.6407 = **$125,722** = Emergency increase

Q. What is your recommendation to the Commission with respect to the amount of the emergency interim rate increase?

A. As I indicated above, I recommend targeting a FFO/Debt ratio of 18 percent in 2006. To accomplish this, I recommend that the Commission approve an emergency and interim rate increase of $126 million for calendar year 2006, to be adopted in conjunction with the first part of the PSA Surcharge, effective May 1, 2006. If the second part of the requested PSA Surcharge is later approved effective July 1, 2006, it would reduce the amount of the emergency increase that is needed. In that event, I suggest that the amount of the emergency increase could be reduced at that time.

New Base Energy Rate vs. Credit to the PSA Annual Tracking Account

Q. How should any emergency rate increase be treated with respect to APS's currently-approved rates and PSA mechanism?

A. I recommend a treatment that differs from APS's proposal. Currently, APS's base rate level of fuel and purchased power expenses ("base energy rate") is $.020743 per kWh, as established in the 2004 Settlement Agreement, and approved by the Commission in Decision No. 67744. In its request for an emergency rate increase, APS is requesting that a surcharge be imposed that would establish a new base energy rate of $.031904 per kWh. Currently, the PSA Annual Tracking Account is calculated based on the difference between actual costs and the base energy rate, with APS responsible for absorbing 10 percent of the cost differential and customers responsible for the remaining 90 percent. If APS's approach to establishing a new base energy rate is approved, the PSA Annual Tracking Account would be calculated, on a going-forward basis, from

the Company's proposed new base energy rate of $.031904 per kWh. This would allow APS to avoid having to absorb its 10 percent share of the cost differential between the current base energy rate of $.020743 and $.031904, which the Company currently must absorb per the PSA mechanism.

In my opinion, this result would circumvent the 90/10 split in the PSA mechanism and should be rejected. While I believe that a new energy baseline should be established as part of any general rate case, "fast-forwarding" to a new base rate on an emergency basis – and sidestepping the 10 percent cost-share contained in the PSA mechanism – is not appropriate in this proceeding. Instead, the base energy rate should remain at the level established in the last general rate case, and any revenues collected from the emergency surcharge should be applied as a credit against the PSA Annual Tracking Account. In this way, customers would remain responsible for recovery of the 90 percent PSA cost-share assignable to them established in the Settlement Agreement, with the remaining 10 percent assigned to APS per the PSA mechanism. The new base energy rate would then be established in the upcoming general rate case.

Rate Design

Q. What rate design has APS proposed for its emergency increase?

A. APS has proposed a charge of 1.1161 cents per kWh on virtually all retail kWh.

Q. Do you believe the Company's proposal is a reasonable approach for an emergency rate increase?

1 A. No, I do not.

2 **Q. Why do you disagree with the Company's rate design?**

3 A. APS depicts its proposal as being a "14 percent" rate increase – which it
4 is, on *average*; however, the Company's proposal would actually raise rates for
5 many industrial customers by well over 20 percent. In my opinion, it is
6 inappropriate in the context of an emergency rate filing – with its limited record
7 and restricted opportunity for analysis – to levy disproportionate increases on
8 different customer groups. If an emergency increase is granted, the only
9 appropriate rate design would be an equal percentage increase for all customer
10 groups.

11 **Q. Please elaborate on your reasoning.**

12 A. APS has made an emergency filing seeking approval of interim rates. In
13 this circumstance, there is no record upon which to assign a relatively greater or
14 lesser burden to different customer groups to bear these increased costs. Indeed,
15 the Company's revised general rate case filing was just made on January 31,
16 2006, less than thirty days before pre-filed Staff and intervenor testimony is due
17 in this proceeding. The premise under which the emergency request has been
18 made is that the utility is currently subjected to financial hardship that requires
19 immediate action, without the benefit of a complete analysis as to revenue
20 requirement, cost classification, cost allocation, or rate design. The analysis
21 pertaining to these various topics is deferred until the general rate case.

22 Yet despite the lack of opportunity to properly determine differential cost
23 burdens, APS's approach would impose a significantly higher-than-average

increase on industrial customers and high-load factor commercial customers. This impact is shown in Attachment KCH-3, and summarized in Table KCH-4, below. For example, a 75 percent load factor E-34 customer would experience a base rate increase of nearly **24 percent** under APS's proposal – nearly 70 percent higher than the 14 percent average advertised by APS.

Table KCH-4

Impact of APS Emergency Rate Design on Commercial and Industrial Customers

Rate schedule	Customer size (kW)	Load Factor	Rate Impact
E-32	100	35%	11.48%
E-32	100	55%	14.83%
E-32	100	75%	17.17%
E-32	500	35%	13.38%
E-32	500	55%	16.79%
E-32	500	75%	19.06%
E-32	1000	35%	13.66%
E-32	1000	55%	17.07%
E-32	1000	75%	19.32%
E-34	5000	55%	21.23%
E-34	5000	75%	23.69%
E-35	5000	55%	21.39%
E-35	5000	75%	24.06%

Q. Is the equal percentage approach you are recommending a typical design when base electric rates are increased on an interim basis?

A. Yes, it is very typical. In researching this issue for this proceeding, I have identified six instances in which state regulatory commissions have increased base

electric rates on an interim basis during 2004-05. In four of the cases, the state regulatory commissions adopted equal percentage increases. In the fifth case (Hawaii) the Commission adopted a percentage increase approach that was differentiated by customer class. The sixth case (Wisconsin) involved a fuel cost re-opener that was triggered when actual fuel costs exceeded a previously-approved maximum. This adjustment was applied on a kWh basis. These decisions are summarized in Table KCH-5, below.

Table KCH-5

Rate Designs Adopted for Interim Rate Increases
2004-05

Date	Utility	State	Docket	Rate Design
2/20/04	Detroit Edison	Michigan	U-13808	Equal % subject to statutory caps
7/2/04	GVEA	Alaska	U-04-33(5)	Equal % on demand & energy
6/30/05	Interstate P&L	Minnesota	GRE-05-748	Equal % increase
9/27/05	Hawaiian Electric	Hawaii	04-0113	% increase by class
12/6/05	Wisconsin P&L	Wisconsin	6680-UR-114	kwh – correction to fuel $ forecast
12/30/05	Xcel Energy	Minnesota	E-002/GR-05-1428	Equal % surcharge on all bills

Q. Have you testified in other proceedings in which base rates were adjusted on an interim basis?

A. Yes, I have.

Q. What interim rate designs have been adopted in the proceedings in which you have been involved?

A. In 2003-04, I testified in a Detroit Edison interim rate proceeding in Michigan (listed above). In that case, I recommended, as did others, that any interim increase should be levied on an across-the-board equal percentage basis – the same recommendation I am making here. The equal-percentage approach was

subsequently adopted by the Michigan Commission, subject to statutory rate caps for certain classes.[14]

In 2004, I participated in a rate proceeding in Alaska (also listed above), in which interim rates also were adopted. In that case, the interim increase was also collected through an equal percentage increase on all billing components, with the exception of the customer charge.[15]

Currently, I am participating in an Xcel Energy general rate proceeding in Minnesota (listed above). In that case, interim rates have been approved by the Minnesota Commission in the form of an across-the-board 7.25 percent surcharge on all customer bills.[16] The Minnesota Commission also made an interim adjustment to the energy charge which was netted against the utility's Fuel Clause Rider.

The consistency across these cases is clear: in awarding an interim rate increase, an equal percentage increase on all customers is very typical. Indeed, absent a record to properly determine that various customer groups should bear different burdens, it is the only reasonable approach to spreading an interim rate increase.

In my direct experience as an expert witness, the only material variation from this approach occurred as part of a settlement of a Puget Sound Energy

[14] "In the Matter of Application of the Detroit Edison Company to Increase Rates, Amend Its Rate Schedules Governing the Distribution and Supply of Electric Energy, etc.," Michigan Public Service Commission, Case No. U-13808.

[15] "In the Matter of the Application by Golden Valley Electric Association, Inc., for Authority to Implement Simplified Rate Filing Procedures and Adjust Rates," Regulatory Commission of Alaska, Docket No. U-4-33

[16] "In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota," Minnesota Public Utilities Commission, Docket No. E-002/GR-05-1428.

1 proceeding in 2001-02. In that case, the Washington Commission approved a
2 multi-party stipulation that resolved numerous issues in the concurrent general
3 rate case. That settlement incorporated an interim rate increase that increased all
4 billing components on an equal percentage basis after first allocating costs
5 between residential and non-residential customers.[17] However, even this variation
6 contained many elements of the equal percentage approach.

7 **Q. Are you personally familiar with other situations in which rate spread is**
8 **determined in the absence of a record regarding class cost-of-service?**

9 A. Yes. In Colorado, it is not unusual for general rate cases to be conducted
10 in two phases: the first phase addresses revenue requirement and the second phase
11 addresses cost-of-service, rate spread, and rate design. Upon determination of the
12 first phase of the case, but prior to the resolution of the second phase, any base
13 rate change is implemented via an equal percentage rider on all customers. Again,
14 this approach is the most reasonable one to take in the absence of a record on
15 cost-of-service.

16 **Q. In this emergency proceeding, APS is claiming that the need for immediate**
17 **relief is driven by increasing fuel and purchased power costs. Isn't that**
18 **sufficient justification for levying any surcharge on a kWh basis?**

19 A. No, it is not. While APS is claiming that increased fuel and purchased
20 power costs are the driving forces behind its financial duress, the proposed
21 emergency increase is associated with a general rate case filing, and is heavily
22 colored by the potential cost consequences to customers with respect to APS's

[17] "2001 Puget Sound Energy Interim Rate Case," Washington Utilities and Transportation Commission, Docket Nos. UE-011570 and UE-011571.

future cost of capital if emergency relief is not provided. Thus, the emergency filing incorporates issues that have across-the-board cost implications, which is suggestive on its face of a proportionate cost burden.

Further, we cannot assume that the cost impacts that APS is experiencing translate into simplistic kWh impacts on all kWh: the proper allocation of any fuel and purchased power cost increases experienced by APS remains to be determined in the general rate case. For example, it is clear to me that APS's increased fuel and purchased power expenses are not uniform across all seasons and times-of-use. Simply allocating these costs on a kWh basis, as APS has done, assumes that a kWh consumed at 2 o'clock in the morning in April has the same cost responsibility for mitigating APS's emergency as a kWh consumed at 5 o'clock on a July afternoon. This is clearly wrong. Consequently, even if APS's financial duress is driven by rising fuel and purchased power costs, it does not follow that the most appropriate interim rate design would be a flat kWh charge levied on all kWh – particularly when significant groups of customers would experience rate impacts that are 70 percent greater than the average under such an approach.

Q. But isn't an equal percentage increase on all customer rates also simplistic?

A. Yes, it is; but an equal-percentage approach has the attribute of ensuring that customers share the cost impact in the same proportion, which in the absence of a cost-of-service record, is the most reasonable approach that can be taken.

Q. Does this conclude your direct testimony?

A. Yes, it does.

KEVIN C. HIGGINS
Principal, Energy Strategies, L.L.C.
39 Market St., Suite 200, Salt Lake City, UT 84101
(801) 355-4365

Vitae

PROFESSIONAL EXPERIENCE

Principal, Energy Strategies, L.L.C., Salt Lake City, Utah, January 2000 to present. Responsible for energy-related economic and policy analysis, regulatory intervention, and strategic negotiation on behalf of industrial, commercial, and public sector interests. Previously Senior Associate, February 1995 to December 1999.

Adjunct Instructor in Economics, Westminster College, Salt Lake City, Utah, September 1981 to May 1982; September 1987 to May 1995. Taught in the economics and M.B.A. programs. Awarded Adjunct Professor of the Year, Gore School of Business, 1990-91.

Chief of Staff to the Chairman, Salt Lake County Board of Commissioners, Salt Lake City, Utah, January 1991 to January 1995. Senior executive responsibility for all matters of county government, including formulation and execution of public policy, delivery of approximately 140 government services, budget adoption and fiscal management (over $300 million), strategic planning, coordination with elected officials, and communication with consultants and media.

Assistant Director, Utah Energy Office, Utah Department of Natural Resources, Salt Lake City, Utah, August 1985 to January 1991. Directed the agency's resource development section, which provided energy policy analysis to the Governor, implemented state energy development policy, coordinated state energy data collection and dissemination, and managed energy technology demonstration programs. Position responsibilities included policy formulation and implementation, design and administration of energy technology demonstration programs, strategic management of the agency's interventions before the Utah Public Service Commission, budget preparation, and staff development. Supervised a staff of economists, engineers, and policy analysts, and served as lead economist on selected projects.

Utility Economist, Utah Energy Office, January 1985 to August 1985. Provided policy and economic analysis pertaining to energy conservation and resource development, with an emphasis on utility issues. Testified before the state Public Service Commission as an expert witness in cases related to the above.

Acting Assistant Director, Utah Energy Office, June 1984 to January 1985. Same responsibilities as Assistant Director identified above.

Research Economist, Utah Energy Office, October 1983 to June 1984. Provided economic analysis pertaining to renewable energy resource development and utility issues. Experience includes preparation of testimony, development of strategy, and appearance as an expert witness for the Energy Office before the Utah PSC.

Operations Research Assistant, Corporate Modeling and Operations Research Department, Utah Power and Light Company, Salt Lake City, Utah, May 1983 to September 1983. Primary area of responsibility: designing and conducting energy load forecasts.

Instructor in Economics, University of Utah, Salt Lake City, Utah, January 1982 to April 1983. Taught intermediate microeconomics, principles of macroeconomics, and economics as a social science.

Teacher, Vernon-Verona-Sherrill School District, Verona, New York, September 1976 to June 1978.

EDUCATION

Ph.D. Candidate, Economics, University of Utah (coursework and field exams completed, 1981).

> Fields of Specialization: Public Finance, Urban and Regional Economics, Economic Development, International Economics, History of Economic Doctrines.

Bachelor of Science, Education, State University of New York at Plattsburgh, 1976 (cum laude).

Danish International Studies Program, University of Copenhagen, 1975.

SCHOLARSHIPS AND FELLOWSHIPS

University Research Fellow, University of Utah, Salt Lake City, Utah 1982 to 1983.
Research Fellow, Institute of Human Resources Management, University of Utah, 1980 to 1982.
Teaching Fellow, Economics Department, University of Utah, 1978 to 1980.
New York State Regents Scholar, 1972 to 1976.

EXPERT TESTIMONY

"In the Matter of the Applications of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in Their Charges for Electric Service," State Corporation Commission of **Kansas**, Case No. 05-WSEE-981-RTS. Direct testimony filed September 9, 2005. Cross examined October 28, 2005.

"In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Recover Costs Associated with the Construction and Ultimate Operation of an Integrated Combined Cycle Electric Generating Facility," Public Utilities Commission of **Ohio**," Case No. 05-376-EL-UNC. Direct testimony submitted July 15, 2005. Cross examined August 12, 2005.

"In the Matter of the Filing of General Rate Case Information by Tucson Electric Power Company Pursuant to Decision No. 62103," **Arizona** Corporation Commission, Docket No. E-01933A-04-0408. Direct testimony submitted June 24, 2005.

"In the Matter of Application of The Detroit Edison Company to Unbundle and Realign Its Rate Schedules for Jurisdictional Retail Sales of Electricity," **Michigan** Public Service Commission, Case No. U-14399. Direct testimony submitted June 9, 2005. Rebuttal testimony submitted July 1, 2005.

"In the Matter of the Application of Consumers Energy Company for Authority to Increase Its Rates for the Generation and Distribution of Electricity and Other Relief," **Michigan** Public Service Commission, Case No. U-14347. Direct testimony submitted June 3, 2005. Rebuttal testimony submitted June 17, 2005.

"In the Matter of Pacific Power & Light, Request for a General Rate Increase in the Company's Oregon Annual Revenues," Public Utility Commission of **Oregon**, Docket No. UE 170. Direct testimony submitted May 9, 2005. Surrebuttal testimony submitted June 27, 2005. Joint testimony regarding partial stipulations submitted June 2005 and July 2005.

"In the Matter of the Application of Trico Electric Cooperative, Inc. for a Rate Increase," **Arizona** Corporation Commission, Docket No. E-01461A-04-0607. Direct testimony submitted April 13, 2005. Surrebuttal testimony submitted May 16, 2005. Cross examined May 26, 2005.

"In the Matter of the Application of PacifiCorp for Approval of its Proposed Electric Service Schedules and Electric Service Regulations," **Utah** Public Service Commission, Docket No. 04-035-42. Direct testimony submitted January 7, 2005.

"In the Matter of the Application by Golden Valley Electric Association, Inc., for Authority to Implement Simplified Rate Filing Procedures and Adjust Rates," Regulatory Commission of **Alaska**, Docket No. U-4-33. Direct testimony submitted November 5, 2004. Cross examined February 8, 2005.

"Advice Letter No. 1411 - Public Service Company of Colorado Electric Phase II General Rate Case," **Colorado** Public Utilities Commission, Docket No. 04S-164E. Direct testimony submitted October 12, 2004. Cross-answer testimony submitted December 13, 2004. Testimony withdrawn January 18, 2005, following Applicant's withdrawal of testimony pertaining to TOU rates.

"In the Matter of Georgia Power Company's 2004 Rate Case," **Georgia** Public Service Commission, Docket No. 18300-U. Direct testimony submitted October 8, 2004. Cross examined October 27, 2004.

"2004 Puget Sound Energy General Rate Case," **Washington** Utilities and Transportation Commission, Docket Nos. UE-040641 and UG-040640. Response testimony submitted September 23, 2004. Cross-answer testimony submitted November 3, 2004. Joint testimony regarding stipulation submitted December 6, 2004.

"In the Matter of the Application of PacifiCorp for an Investigation of Interjurisdictional Issues," **Utah** Public Service Commission, Docket No. 02-035-04. Direct testimony submitted July 15, 2004. Cross examined July 19, 2004.

"In the Matter of an Adjustment of the Gas and Electric Rates, Terms and Conditions of Kentucky Utilities Company," **Kentucky** Public Service Commission, Case No. 2003-00434. Direct testimony submitted March 23, 2004. Testimony withdrawn pursuant to stipulation entered May 2004.

"In the Matter of an Adjustment of the Gas and Electric Rates, Terms and Conditions of Louisville Gas and Electric Company," **Kentucky** Public Service Commission, Case No. 2003-00433. Direct testimony submitted March 23, 2004. Testimony withdrawn pursuant to stipulation entered May 2004.

"In the Matter of the Application of Idaho Power Company for Authority to Increase Its Interim and Base Rates and Charges for Electric Service," **Idaho** Public Utilities Commission, Case No.

IPC-E-03-13. Direct testimony submitted February 20, 2004. Rebuttal testimony submitted March 19, 2004. Cross examined April 1, 2004.

"In the Matter of the Applications of the Ohio Edison Company, the Cleveland Electric Illuminating Company and the Toledo Edison Company for Authority to Continue and Modify Certain Regulatory Accounting Practices and Procedures, for Tariff Approvals and to Establish Rates and Other Charges, Including Regulatory Transition Charges Following the Market Development Period," Public Utilities Commission of **Ohio**, Case No. 03-2144-EL-ATA. Direct testimony submitted February 6, 2004. Cross examined February 18, 2004.

"In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property of the Company for Ratemaking Purposes, To Fix a Just and Reasonable Rate of Return Thereon, To Approve Rate Schedules Designed to Develop Such Return, and For Approval of Purchased Power Contract," **Arizona** Corporation Commission, Docket No. E-01345A-03-0437. Direct testimony submitted February 3, 2004. Rebuttal testimony submitted March 30, 2004. Direct testimony regarding stipulation submitted September 27, 2004. Responsive / Clarifying testimony regarding stipulation submitted October 25, 2004. Cross examined November 8-10, 2004 and November 29-December 3, 2004.

"In the Matter of Application of the Detroit Edison Company to Increase Rates, Amend Its Rate Schedules Governing the Distribution and Supply of Electric Energy, etc.," **Michigan** Public Service Commission, Case No. U-13808. Direct testimony submitted December 12, 2003 (interim request) and March 5, 2004 (general rate case).

"In the Matter of PacifiCorp's Filing of Revised Tariff Schedules," Public Utility Commission of **Oregon**, Docket No. UE-147. Joint testimony regarding stipulation submitted August 21, 2003.

"Petition of PSI Energy, Inc. for Authority to Increase Its Rates and Charges for Electric Service, etc.," **Indiana** Utility Regulatory Commission, Cause No. 42359. Direct testimony submitted August 19, 2003. Cross examined November 5, 2003.

"In the Matter of the Application of Consumers Energy Company for a Financing Order Approving the Securitization of Certain of its Qualified Cost," **Michigan** Public Service Commission, Case No. U-13715. Direct testimony submitted April 8, 2003. Cross examined April 23, 2003.

"In the Matter of the Application of Arizona Public Service Company for Approval of Adjustment Mechanisms," **Arizona** Corporation Commission, Docket No. E-01345A-02-0403. Direct testimony submitted February 13, 2003. Surrebuttal testimony submitted March 20, 2003. Cross examined April 8, 2003.

"Re: The Investigation and Suspension of Tariff Sheets Filed by Public Service Company of Colorado, Advice Letter No. 1373 – Electric, Advice Letter No. 593 – Gas, Advice Letter No. 80 – Steam," **Colorado** Public Utilities Commission, Docket No. 02S-315 EG. Direct testimony submitted November 22, 2002. Cross-answer testimony submitted January 24, 2003.

"In the Matter of the Application of The Detroit Edison Company to Implement the Commission's Stranded Cost Recovery Procedure and for Approval of Net Stranded Cost Recovery Charges," **Michigan** Public Service Commission, Case No. U-13350. Direct testimony submitted November 12, 2002.

"Application of South Carolina Electric & Gas Company: Adjustments in the Company's Electric Rate Schedules and Tariffs," Public Service Commission of **South Carolina**, Docket No. 2002-223-E. Direct testimony submitted November 8, 2002. Surrebuttal testimony submitted November 18, 2002. Cross examined November 21, 2002.

"In the Matter of the Application of Questar Gas Company for a General Increase in Rates and Charges," **Utah** Public Service Commission, Docket No. 02-057-02. Direct testimony submitted August 30, 2002. Rebuttal testimony submitted October 4, 2002.

"The Kroger Co. v. Dynegy Power Marketing, Inc.," **Federal Energy Regulatory Commission**, EL02-119-000. Confidential affidavit filed August 13, 2002.

"In the matter of the application of Consumers Energy Company for determination of net stranded costs and for approval of net stranded cost recovery charges," **Michigan** Public Service Commission, Case No. U-13380. Direct testimony submitted August 9, 2002. Rebuttal testimony submitted August 30, 2002. Cross examined September 10, 2002.

"In the Matter of the Application of Public Service Company of Colorado for an Order to Revise Its Incentive Cost Adjustment," **Colorado** Public Utilities Commission, Docket 02A-158E. Direct testimony submitted April 18, 2002.

"In the Matter of the Generic Proceedings Concerning Electric Restructuring Issues," **Arizona** Corporation Commission, Docket No. E-00000A-02-0051, "In the Matter of Arizona Public Service Company's Request for Variance of Certain Requirements of A.A.C. R14-2-1606," Docket No. E-01345A-01-0822, "In the Matter of the Generic Proceeding Concerning the Arizona Independent Scheduling Administrator," Docket No. E-00000A-01-0630, "In the Matter of Tucson Electric Power Company's Application for a Variance of Certain Electric Competition Rules Compliance Dates," Docket No. E-01933A-02-0069, "In the Matter of the Application of Tucson Electric Power Company for Approval of its Stranded Cost Recovery," Docket No. E-01933A-98-0471. Direct testimony submitted March 29, 2002 (APS variance request); May 29, 2002 (APS Track A proceeding/market power issues); and July 28, 2003 (Arizona ISA). Rebuttal

testimony submitted August 29, 2003 (Arizona ISA). Cross examined June 21, 2002 (APS Track A proceeding/market power issues) and September 12, 2003 (Arizona ISA).

"In the Matter of Savannah Electric & Power Company's 2001 Rate Case," **Georgia** Public Service Commission, Docket No. 14618-U. Direct testimony submitted March 15, 2002. Cross examined March 28, 2002.

"Nevada Power Company's 2001 Deferred Energy Case," Public Utilities Commission of **Nevada**, PUCN 01-11029. Direct testimony submitted February 7, 2002. Cross examined February 21, 2002.

"2001 Puget Sound Energy Interim Rate Case," **Washington** Utilities and Transportation Commission, Docket Nos. UE-011570 and UE-011571. Direct testimony submitted January 30, 2002. Cross examined February 20, 2002.

"In the Matter of Georgia Power Company's 2001 Rate Case," **Georgia** Public Service Commission, Docket No. 14000-U. Direct testimony submitted October 12, 2001. Cross examined October 24, 2001.

"In the Matter of the Application of PacifiCorp for Approval of Its Proposed Electric Rate Schedules and Electric Service Regulations," **Utah** Public Service Commission, Docket No. 01-35-01. Direct testimony submitted June 15, 2001. Rebuttal testimony submitted August 31, 2001.

"In the Matter of Portland General Electric Company's Proposal to Restructure and Reprice Its Services in Accordance with the Provisions of SB 1149," Public Utility Commission of **Oregon**, Docket No. UE-115. Direct testimony submitted February 20, 2001. Rebuttal testimony submitted May 4, 2001. Joint testimony regarding stipulation submitted July 27, 2001.

"In the Matter of the Application of APS Energy Services, Inc. for Declaratory Order or Waiver of the Electric Competition Rules," **Arizona** Corporation Commission, Docket No.E-01933A-00-0486. Direct testimony submitted July 24, 2000.

"In the Matter of the Application of Questar Gas Company for an Increase in Rates and Charges," **Utah** Public Service Commission, Docket No. 99-057-20. Direct testimony submitted April 19, 2000. Rebuttal testimony submitted May 24, 2000. Surrebuttal testimony submitted May 31, 2000. Cross examined June 6 & 8, 2000.

"In the Matter of the Application of Columbus Southern Power Company for Approval of Electric Transition Plan and Application for Receipt of Transition Revenues," Public Utility Commission of **Ohio**, Case No. 99-1729-EL-ETP; "In the Matter of the Application of Ohio

Power Company for Approval of Electric Transition Plan and Application for Receipt of Transition Revenues," Public Utility Commission of **Ohio**, Case No. 99-1730-EL-ETP. Direct testimony prepared, but not submitted pursuant to settlement agreement effected May 2, 2000.

"In the Matter of the Application of FirstEnergy Corp. on Behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company, and the Toledo Edison Company for Approval of Their Transition Plans and for Authorization to Collect Transition Revenues," Public Utility Commission of **Ohio**, Case No. 99-1212-EL-ETP. Direct testimony prepared, but not submitted pursuant to settlement agreement effected April 11, 2000.

"2000 Pricing Process," **Salt River Project** Board of Directors, oral comments provided March 6, 2000 and April 10, 2000.

"Tucson Electric Power Company vs. Cyprus Sierrita Corporation," **Arizona** Corporation Commission, Docket No. E-000001-99-0243. Direct testimony submitted October 25, 1999. Cross examined November 4, 1999.

"Application of Hildale City and Intermountain Municipal Gas Association for an Order Granting Access for Transportation of Interstate Natural Gas over the Pipelines of Questar Gas Company for Hildale, Utah," **Utah** Public Service Commission, Docket No. 98-057-01. Rebuttal testimony submitted August 30, 1999.

"In the Matter of the Application by Arizona Electric Power Cooperative, Inc. for Approval of Its Filing as to Regulatory Assets and Transition Revenues," **Arizona** Corporation Commission, Docket No. E-01773A-98-0470. Direct testimony submitted July 30, 1999. Cross examined February 28, 2000.

"In the Matter of the Application of Tucson Electric Power Company for Approval of its Plan for Stranded Cost Recovery," **Arizona** Corporation Commission, Docket No. E-01933A-98-0471; "In the Matter of the Filing of Tucson Electric Power Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.," Docket No. E-01933A-97-0772; "In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona," Docket No. RE-00000C-94-0165. Direct testimony submitted June 30, 1999. Rebuttal testimony submitted August 6, 1999. Cross examined August 11-13, 1999.

"In the Matter of the Application of Arizona Public Service Company for Approval of its Plan for Stranded Cost Recovery," **Arizona** Corporation Commission, Docket No. E-01345A-98-0473; "In the Matter of the Filing of Arizona Public Service Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.," Docket No. E-01345A-97-0773; "In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona," Docket No.

RE-00000C-94-0165. Direct testimony submitted June 4, 1999. Rebuttal testimony submitted July 12, 1999. Cross examined July 14, 1999.

"In the Matter of the Application of Tucson Electric Power Company for Approval of its Plan for Stranded Cost Recovery," **Arizona** Corporation Commission, Docket No. E-01933A-98-0471; "In the Matter of the Filing of Tucson Electric Power Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.," Docket No. E-01933A-97-0772; "In the Matter of the Application of Arizona Public Service Company for Approval of its Plan for Stranded Cost Recovery," Docket No. E-01345A-98-0473; "In the Matter of the Filing of Arizona Public Service Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.," Docket No. E-01345A-97-0773; "In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona," Docket No. RE-00000C-94-0165. Direct testimony submitted November 30, 1998.

"Hearings on Pricing," **Salt River Project** Board of Directors, written and oral comments provided November 9, 1998.

"Hearings on Customer Choice," **Salt River Project** Board of Directors, written and oral comments provided June 22, 1998; June 29, 1998; July 9, 1998; August 7, 1998; and August 14, 1998.

"In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona," **Arizona** Corporation Commission, Docket No. U-0000-94-165. Direct and rebuttal testimony filed January 21, 1998. Second rebuttal testimony filed February 4, 1998. Cross examined February 25, 1998.

"In the Matter of Consolidated Edison Company of New York, Inc.'s Plans for (1) Electric Rate/Restructuring Pursuant to Opinion No. 96-12; and (2) the Formation of a Holding Company Pursuant to PSL, Sections 70, 108, and 110, and Certain Related Transactions," **New York** Public Service Commission, Case 96-E-0897. Direct testimony filed April 9, 1997. Cross examined May 5, 1997.

"In the Matter of the Petition of Sunnyside Cogeneration Associates for Enforcement of Contract Provisions," **Utah** Public Service Commission, Docket No. 96-2018-01. Direct testimony submitted July 8, 1996.

"In the Matter of the Application of PacifiCorp, dba Pacific Power & Light Company, for Approval of Revised Tariff Schedules and an Alternative Form of Regulation Plan," **Wyoming** Public Service Commission, Docket No. 2000-ER-95-99. Direct testimony submitted April 8, 1996.

"In the Matter of the Application of Mountain Fuel Supply Company for an Increase in Rates and Charges," **Utah** Public Service Commission, Case No. 95-057-02. Direct testimony submitted June 19, 1995. Rebuttal testimony submitted July 25, 1995. Surrebuttal testimony submitted August 7, 1995.

"In the Matter of the Investigation of the Reasonableness of the Rates and Tariffs of Mountain Fuel Supply Company," **Utah** Public Service Commission, Case No. 89-057-15. Direct testimony submitted July 1990. Surrebuttal testimony submitted August 1990.

"In the Matter of the Review of the Rates of Utah Power and Light Company pursuant to The Order in Case No. 87-035-27," **Utah** Public Service Commission, Case No. 89-035-10. Rebuttal testimony submitted November 15, 1989. Cross examined December 1, 1989 (rate schedule changes for state facilities).

"In the Matter of the Application of Utah Power & Light Company and PC/UP&L Merging Corp. (to be renamed PacifiCorp) for an Order Authorizing the Merger of Utah Power & Light Company and PacifiCorp into PC/UP&L Merging Corp. and Authorizing the Issuance of Securities, Adoption of Tariffs, and Transfer of Certificates of Public Convenience and Necessity and Authorities in Connection Therewith," **Utah** Public Service Commission, Case No. 87-035-27; Direct testimony submitted April 11, 1988. Cross examined May 12, 1988 (economic impact of UP&L merger with PacifiCorp).

"In the Matter of the Application of Mountain Fuel Supply Company for Approval of Interruptible Industrial Transportation Rates," **Utah** Public Service Commission, Case No. 86-057-07. Direct testimony submitted January 15, 1988. Cross examined March 30, 1988.

"In the Matter of the Application of Utah Power and Light Company for an Order Approving a Power Purchase Agreement," **Utah** Public Service Commission, Case No. 87-035-18. Oral testimony delivered July 8, 1987.

"Cogeneration: Small Power Production," **Federal Energy Regulatory Commission**, Docket No. RM87-12-000. Statement delivered March 27, 1987, on behalf of State of Utah, in San Francisco.

"In the Matter of the Investigation of Rates for Backup, Maintenance, Supplementary, and Standby Power for Utah Power and Light Company," **Utah** Public Service Commission, Case No. 86-035-13. Direct testimony submitted January 5, 1987. Case settled by stipulation approved August 1987.

"In the Matter of the Application of Sunnyside Cogeneration Associates for Approval of the Cogeneration Power Purchase Agreement," **Utah** Public Service Commission, Case No. 86-2018-01. Rebuttal testimony submitted July 16, 1986. Cross examined July 17, 1986.

"In the Matter of the Investigation of Demand-Side Alternatives to Capacity Expansion for Electric Utilities," **Utah** Public Service Commission, Case No. 84-999-20. Direct testimony submitted June 17, 1985. Rebuttal testimony submitted July 29, 1985. Cross examined August 19, 1985.

"In the Matter of the Implementation of Rules Governing Cogeneration and Small Power Production in Utah," **Utah** Public Service Commission, Case No. 80-999-06, pp. 1293-1318. Direct testimony submitted January 13, 1984 (avoided costs), May 9, 1986 (security for levelized contracts) and November 17, 1986 (avoided costs). Cross-examined February 29, 1984 (avoided costs), April 11, 1985 (standard form contracts), May 22-23, 1986 (security for levelized contracts) and December 16-17, 1986 (avoided costs).

OTHER RELATED ACTIVITY

Participant, Oregon Direct Access Task Force (UM 1081), May 2003 to November 2003.

Participant, Michigan Stranded Cost Collaborative, March 2003 to March 2004.

Member, Arizona Electric Competition Advisory Group, December 2002 to present.

Board of Directors, ex-officio, Desert STAR RTO, September 1999 to February 2002.

Member, Advisory Committee, Desert STAR RTO, September 1999 to February 2002. Acting Chairman, October 2000 to February 2002.

Board of Directors, Arizona Independent Scheduling Administrator Association, October 1998 to present.

Acting Chairman, Operating Committee, Arizona Independent Scheduling Administrator Association, October 1998 to June 1999.

Member, Desert Star ISO Investigation Working Groups: Operations, Pricing, and Governance, April 1997 to present. Legal & Negotiating Committee, April 1999 to December 1999.

Participant, Independent System Operator and Spot Market Working Group, Arizona Corporation Commission, April 1997 to September 1997.

Participant, Unbundled Services and Standard Offer Working Group, Arizona Corporation Commission, April 1997 to October 1997.

Participant, Customer Selection Working Group, Arizona Corporation Commission, March 1997 to September 1997.

Member, Stranded Cost Working Group, Arizona Corporation Commission, March 1997 to September 1997.

Member, Electric System Reliability & Safety Working Group, Arizona Corporation Commission, November 1996 to September 1998.

Chairman, Salt Palace Renovation and Expansion Committee, Salt Lake County/State of Utah/Salt Lake City, multi-government entity responsible for implementation of planning, design, finance, and construction of an $85 million renovation of the Salt Palace Convention Center, Salt Lake City, Utah, May 1991 to December 1994.

State of Utah Representative, Committee on Regional Electric Power Cooperation, a joint effort of the Western Interstate Energy Board and the Western Conference of Public Service Commissioners, January 1987 to December 1990.

Member, Utah Governor's Economic Coordinating Committee, January 1987 to December 1990.

Chairman, Standard Contract Task Force, established by Utah Public Service Commission to address contractual problems relating to qualifying facility sales under PURPA, March 1986 to December 1990.

Chairman, Load Management and Energy Conservation Task Force, Utah Public Service Commission, August 1985 to December 1990.

Alternate Delegate for Utah, Western Interstate Energy Board, Denver, Colorado, August 1985 to December 1990.

Articles Editor, Economic Forum, September 1980 to August 1981.

Estimated Emergency Increase Needed to Achieve 18% FFO/Debt in 2006

Ln No.	Funds From Operations / Adjusted Average Total Debt	As of 12/31/2006	Source
	Funds From Operations (FFO)		
1	Adjusted Net Income	200,723	See Note 1
2	Track B Disallowance	0	See Note 1
3	Depreciation and Amortization (Excl. Nuc. Fuel)	352,104	See Note 1
4	Nuclear Fuel Amortization	29,581	See Note 1
5	Cash Decommissioning Fund Contributions	(19,210)	See Note 1
6	AFUDC Equity	(10,063)	See Note 1
7	Capitalized Interest	(7,029)	See Note 1
8	Deferred Income Taxes	22,735	See Note 1
9	Deferred Income Taxes - AECC Adjustment for PSA Revenue	6,771	See Ln. 28
10	Deferred Income Taxes - AECC Adj. for Emergency Rev. Needed to Achieve Target FFO/Debt	(49,115)	See Ln. 35
11	Deferred Fuel	(48,289)	See Note 1
12	Deferred Fuel - AECC Adjustment for PSA Revenue	(17,340)	See Ln. 26
13	**Deferred Income Taxes - AECC Adj. for Emergency Rev. Needed to Achieve Target FFO/Debt**	**125,772**	See Ln. 34
14	**Adjusted Fund From Operations**	586,641	= Sum (Ln. 1: Ln. 13)
	Adjusted Average Total Debt		
15	Adjusted Total Debt (2006)	3,459,117	See Note 1
16	Adjusted Total Debt (2005)	3,059,114	See Note 1
17	2 Year Adjusted Total Debt	6,518,231	= Ln. 15 + Ln. 16
18	**Adjusted Average Total Debt**	3,259,116	= Ln 17 ÷ 2
19	*Target FFO/Adjusted Average Total Debt*	**18.0%**	Target Percent = Ln. 14 ÷ Ln. 18

Note 1: Data Source - APS Response to ACC Staff Data Request No. 4-34.

KCH-2, PAGE 1 SUPPORTING CALCULATIONS:

Ln No.	IMPACT OF CHANGE IN PSA ADJUSTOR & SURCHARGE REV.	As of 12/31/2006	Source
	For 2006, APS Revenue Calculation Assumes:		
20	PSA Adjustor Revenue	88,111	See Note 2
21	PSA Surcharge Revenue	43,612	See Note 2
22	Total	131,723	
	Note 2: Data Source - APS Response to ACC Staff Data Request No. 1-12.		
	For 2006, AECC Revenue Calculation Assumes:		
23	PSA Adjustor Revenue	103,231	Attachment KCH-2, Sch. 2
24	PSA Part I Surcharge Revenue	11,151	Attachment KCH-2, Sch. 2
25	Total	114,383	
26	2006 PSA Revenue Difference	(17,340)	= Ln. 25 - Ln. 22
27	Effective Fed. & State Tax Rate	39.05%	See Note 4
28	Tax Impact of PSA Revenue Change	6,771	= -(Ln. 26 x Ln. 27)
29	Net Change to FFO from PSA Revenue Change	(10,569)	= Ln 26 + Ln. 28
	AECC PROPOSED CHANGE IN INTERIM RATE REVENUE		
30	Required Adjusted Net Income to Achieve FFO/Debt of 18%	586,641	=18% x Ln. 18
31	APS Assumed Adjusted Funds From Operation with PSA FFO Adj.	520,552	See Note 3
32	Net Change to APS FFO from PSA Revenue Change	(10,569)	= Ln. 29
33	AECC Proposed Change in Adjusted FFO	76,658	= Ln. 30 - (Ln. 31 + Ln. 29)
34	Net to Gross Conversion Factor	1.6407	See Note 4
35	Change in Deferred Fuel Balance from Interim Rate Revenue	125,772	= Ln. 33 x Ln. 34
36	Change in Deferred Tax Balance from Interim Rate Revenue	(49,115)	= -(Ln. 35 - 33)

Note 3: Data Source - APS Response to ACC Staff Data Request No. 1-4.
Note 4: Data Source - APS Nov. 2005 Rate Case Filing, Schedule C-3, p. 1 of 1, ACC Docket No. E-01345A-05-0816.

Ln No.	INTERIM PERCENT INCREASE CALCULATION	Amount	Source
37	APS Requested Annual Interim Increase Amount	298,700	APS Attachment PME-1
38	Total Annual Retail Revenue @ Current Rates	2,127,322	See Note 5
39	APS Requested Interim Increase Percent	14.0%	= Ln. 37 ÷ Ln. 38
	Note 5: Data Source - APS Nov. 2005 Rate Case Filing, Schedule H-1, p. 1 of 1, ACC Docket No. E-01345A-05-0816.		
40	AECC Proposed Interim Rate Revenue	125,772	See Ln. 35
41	APS additional revenue from interim rates (5/06 thru 12/06)	226,288	See Note 6
42	AECC Percent of APS Revenues	55.6%	= Ln. 40 ÷ Ln. 41
43	AECC Proposed Percent Increase (est.)	7.8%	= Ln. 39 x Ln. 42

Note 6: Data Source - APS Response to ACC Staff Data Request No. 1-12.

Estimated 2006 PSA Adjustor and PSA Surcharge Revenues

Ln No.		Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Total
1	Projected Retail Sales (MWhs)[1]	2,094,795	1,791,633	1,858,076	1,883,287	2,366,570	2,737,237	3,190,865	3,148,779	2,612,605	2,135,934	1,903,190	2,179,666	27,902,637
	Annual Adjustor Collections													
2	Annual Adjustor Rate ($/kWh)	0.00000	0.00400	0.00400	0.00400	0.00400	0.00400	0.00400	0.00400	0.00400	0.00400	0.00400	0.00400	
3	Annual Adjustor Collections ($)		7,166,532	7,432,304	7,533,148	9,466,280	10,948,948	12,763,460	12,595,116	10,450,420	8,543,736	7,612,760	8,718,664	103,231,368
	Annual PSA Surcharge													
4	Part I Surcharge Rate - $15.3M/Yr ($/kWh)	0.00000	0.00000	0.00000	0.00000	0.00055	0.00055	0.00055	0.00055	0.00055	0.00055	0.00055	0.00055	
5	Annual Surcharge Colloection ($)					1,301,614	1,505,480	1,754,976	1,731,828	1,436,933	1,174,764	1,046,755	1,198,816	11,151,165
6	Total PSA Adjustor & PSA Part I Surcharge ($)	0	7,166,532	7,432,304	7,533,148	10,767,894	12,454,428	14,518,436	14,326,944	11,887,353	9,718,500	8,659,515	9,917,480	114,382,533
7	Part II Surcharge Rate - $44.6M/Yr ($/kWh)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00160	0.00160	0.00160	0.00160	0.00160	0.00160	
8	Annual Surcharge Colloection ($)							5,105,384	5,038,046	4,180,168	3,417,494	3,045,104	3,487,466	24,273,662
9	Total PSA Adjustor & PSA Part I&II Surcharges ($)	0	7,166,532	7,432,304	7,533,148	10,767,894	12,454,428	19,623,820	19,364,991	16,067,521	13,135,994	11,704,619	13,404,946	138,656,196

Note 1: Data Source: APS Response to ACC Staff Data Request No. 1-12.

Impact of APS Proposal on Commercial and Industrial Customers

E-32 Current Rates (w/out PSA Adjustor) vs. Rates w/APS Proposed Emergency Energy Charge			
Annual % & Annual $ Increase	Demand kW		
Load Factor	100	500	1,000
35.00%	11.48%	13.38%	13.66%
	$3,422	$17,110	$34,220
55.00%	14.83%	16.79%	17.07%
	$5,377	$26,887	$53,774
75.00%	17.17%	19.06%	19.32%
	$7,333	$36,664	$73,328

Impact of APS Proposal on Commercial and Industrial Customers

E-34 Current Rates (w/out PSA Adjustor) vs. Rates w/APS Proposed Emergency Energy Charge			
Annual % & Annual $ Increase	Demand kW		
Load Factor	3,000	5,000	10,000
35.00%	17.28%	17.38%	17.46%
	$102,659	$171,098	$342,196
55.00%	21.14%	21.23%	21.31%
	$161,321	$268,868	$537,737
75.00%	23.60%	23.69%	23.75%
	$219,983	$366,639	$733,278

Impact of APS Proposal on Commercial and Industrial Customers

E-35 Current Rates (w/out PSA Adjustor) vs. Rates w/APS Proposed Emergency Energy Charge			
Annual % & Annual $ Increase	Demand kW		
Load Factor	3,000	5,000	10,000
35.00%	17.18%	17.28%	17.36%
	$102,659	$171,098	$342,196
55.00%	21.30%	21.39%	21.47%
	$161,321	$268,868	$537,737
75.00%	23.97%	24.06%	24.13%
	$219,983	$366,639	$733,278