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**BEFORE THE ARIZONA CORPORATION (**

**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 TO AMEND  
DECISION NO. 67744**

**DOCKET NO. E-01345A-05-0816**

**IN THE MATTER OF THE INQUIRY INTO  
THE FREQUENCY OF UNPLANNED  
OUTAGES DURING 2005 AT PALO  
VERDE NUCLEAR GENERATING  
STATION, THE CAUSES OF THE  
OUTAGES, THE PROCUREMENT OF  
REPLACEMENT POWER AND THE  
IMPACT OF THE OUTAGES ON  
ARIZONA PUBLIC SERVICE  
COMPANY'S CUSTOMERS**

**DOCKET NO. E-01345A-05-0826**

**IN THE MATTER OF THE AUDIT OF THE  
FUEL AND PURCHASED POWER  
PRACTICES AND COSTS OF THE  
ARIZONA PUBLIC SERVICE COMPANY**

**DOCKET NO. E-01345A-05-0827**

**INITIAL POST-HEARING BRIEF  
OF  
ARIZONA PUBLIC SERVICE COMPANY**

Arizona Corporation Commission  
**DOCKETED**

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1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

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8 GARY PIERCE

9 IN THE MATTER OF THE APPLICATION OF  
10 ARIZONA PUBLIC SERVICE COMPANY  
11 FOR A HEARING TO DETERMINE THE  
12 FAIR VALUE OF THE UTILITY PROPERTY  
13 OF THE COMPANY FOR RATEMAKING  
14 PURPOSES, TO FIX A JUST AND  
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24 **INITIAL POST-HEARING BRIEF**  
25 **OF**  
26 **ARIZONA PUBLIC SERVICE COMPANY**

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**EXHIBITS:**

- Exhibit 1 – APS Hearing Exhibit No. 53 (Rejoinder A-1)
- Exhibit 2 – Arizona Public Service Company Risk of Credit Rating Downgrade to Junk
- Exhibit 3 – Credit Suisse Release: *Great Plains Energy*, December 22, 2006
- Exhibit 4 – Arizona Public Service Company Return on Equity Twelve-Month Period Ended March 31, 2003 to June 30, 2006
- Exhibit 5 – Consolidated Standard Filing Requirements Final APS Position

**APPENDIX A:**

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**I.**  
**INTRODUCTION**

On November 4, 2005, Arizona Public Service Company ("APS" or the "Company") filed an application with the Arizona Corporation Commission ("ACC" or "Commission") for a rate increase and to amend Decision No. 67744 (April 7, 2005). On November 9, 2005, the Commission opened a docket to investigate outages at the Palo Verde Nuclear Power Generating Station ("Palo Verde") during 2005, and also opened a docket to audit the fuel and purchased power practices and costs of APS. On January 31, 2006, and at the request of Commission staff ("Staff"), the Company filed an amended application for a rate increase using an updated Test Year. By Procedural Order issued September 18, 2006, all three dockets were consolidated. Hearings were conducted on these matters between October 10, 2006 and December 15, 2006 before the Commission's Chief Administrative Law Judge ("ALJ"), with various members of the Commission in attendance.

**II.**  
**SUMMARY OF POSITION**

**A. Overview.**

APS is requesting an increase of \$434,639,000, or 20.43 percent, over adjusted test period revenues. See, Initial Post-Hearing Brief of Arizona Public Service Company ("Initial Brief") Exhibit 1.<sup>1</sup> Of this, approximately \$314,400,000 (72.3 percent) represents an increase in fuel costs. (APS Exhibit No. 18 at 2 [Ewen]). The balance of the increase is composed of increased non-fuel costs, both operating and capital, that like fuel, are driven by both price increases in components ranging from copper wire to steel to concrete to pensions to equity capital and, perhaps to a greater extent, by the continued rapid growth of the Company's customers – a growth that demonstrably does **not** "pay for itself." (*Id.* at 2, 4; APS Exhibit No. 5 at 9-10 [Brandt]; *id.* at Attachment DEB-1RB; Tr. Vol. IV at 782-85; APS Exhibit No. 59). Because the Interim Power Supply Adjustor ("PSA"), will continue until rates in this proceeding

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<sup>1</sup> APS Initial Brief Exhibit 1 is the first page of APS hearing Exhibit No. 53.

1 become effective, but was not considered in the calculation of adjusted test period revenues, the  
2 incremental increase over rate levels currently in effect is \$249,046,000, or 11.7 percent.

3 The rate relief sought by APS is necessary and appropriate because the Company's  
4 current rates substantially under-collect the legitimate costs of providing electric service  
5 (particularly fuel and purchased power costs), do not adequately reflect certain non-fuel costs,  
6 and do not provide APS an opportunity to earn a reasonable rate of return on its invested equity  
7 ("ROE"). Although timely recovery of fuel and purchased power costs will be addressed in  
8 significant part if the Commission adopts the modifications to the PSA proposed by Staff and  
9 APS, no refinements to the PSA can be sufficient by themselves to address the non-fuel cost  
10 recovery and ROE issues that APS has raised in this proceeding. And it is these issues that have  
11 led to chronic under-earning by APS and have driven the Company and its customers to the very  
12 brink of "junk" credit status, with the attendant problems of even higher costs and limited access  
13 to critically needed capital to meet the growing demands of this State.

14 APS continues to suffer from a severe cash flow problem that began in 2005 and that was  
15 discussed in great detail in the emergency rate case<sup>2</sup> last spring. As APS's customer base grows,  
16 the need for cash to fund capital expenditures to meet that growth increases, as does the required  
17 return on such investment. At the same time, as costs of service (including, but not limited to,  
18 fuel and purchased power costs) continue to rise; APS's cash flow needs increase  
19 proportionately. This cash flow pressure from both the operating and new construction  
20 perspectives, coupled with the regulatory lag associated with recovery of billions of dollars of  
21 capital expenditures and the resulting inability of APS to earn anything close to a reasonable  
22 current rate of return on its invested equity, has left APS in a perilous credit-rating position that  
23 threatens to plunge APS into "junk" credit status for the first time in its more than 100-year  
24 history.

25 At present, APS has a Standard & Poor's ("S&P") credit rating of BBB-minus (just one  
26 notch above "junk" status) and a negative outlook from Moody's Investors Service ("Moody's").  
27 Those credit rating agencies, as well as the broader investment community, have made it clear

28 <sup>2</sup> Docket No. E-01345A-06-0009.

1 that they are looking at this rate proceeding for an indication as to whether APS is likely to  
2 obtain the rate relief and further regulatory support that will be required for APS to fully recover  
3 its costs in a timely manner, earn a reasonable ROE, and improve its lagging credit metrics.

4 As they did in the emergency rate case, Staff and The Residential Utility Consumer  
5 Office ("RUCO") downplay the seriousness of APS's cost recovery and ROE needs, and  
6 essentially ask APS customers to take the risk that APS can get by with less than it has requested  
7 – indeed, substantially less under both the Staff and RUCO proposals, which actually would  
8 **reduce** APS rates exclusive of fuel and purchased power costs. And although APS disputes a  
9 number of Staff and RUCO adjustments to the test period, the largest conceptual difference  
10 between the Company and these Parties is the latter's refusal to consider whether their proposals  
11 actually would produce rates that are just and reasonable **during the period they would be in**  
12 **effect**, rather than simply during some hypothetical historical period.

13 But the Staff and RUCO proposals not only entail substantial financial risk to APS and its  
14 customers that would stem from a downgrade to "junk" status, those proposals also effectively  
15 ignore the constitutional and regulatory mandate that APS be permitted to recover its prudently  
16 incurred costs of service and be afforded an opportunity to earn a reasonable ROE. Indeed,  
17 under both the Staff and RUCO proposals, APS's Funds From Operation ("FFO")/Debt ratio –  
18 the most important credit metric – would remain well below investment grade and would almost  
19 certainly result in APS being downgraded by the rating agencies to "junk" credit status.

20 The consequences of such a downgrade would be financially disastrous for the Company,  
21 its customers and its shareholders and would adversely impact the economy of the State. Among  
22 other things, such a downgrade to "junk" status would saddle the Company's customers with as  
23 much as \$1.3 billion in **additional** financing costs over the next decade.

24 Contrary to the protestations of Staff and RUCO, both of whom have proposed **decreases**  
25 in the non-fuel related rates charged by APS, the impact of the Commission's decision in this  
26 case on APS's projected financial condition and on future customer rates not only **can** be  
27 considered by the Commission, but **must** be considered by the Commission in order to ensure  
28 that the rate relief granted by the Commission is adequate **at the time it becomes effective** and,

1 thus, is consistent with applicable constitutional and regulatory principles.

2 [T]he rates established by the Commission should meet the overall operating costs of the  
3 utility and produce a reasonable rate of return. It is equally clear that the **rates cannot be  
4 considered just and reasonable if they fail to produce a reasonable rate of return.**

5 *Scates v. Arizona Corporation Comm'n*, 118 Ariz. 531, 533-34, 578 P.2d 612, 614-15 (Ariz.  
6 App. 1978).

7 The inability of APS to recover its costs of service and earn a reasonable ROE in the last several  
8 years, coupled with the strong evidence that these shortfalls will continue to increase in the  
9 future unless the Commission grants the rate relief requested by the Company, cannot and should  
10 not be ignored by the Commission in this case.

11 The Commission has been given, in this proceeding, several alternative and innovative  
12 options for addressing the cost recovery and ROE needs of the Company, including the options  
13 to include Construction Work in Progress ("CWIP") in rate base, allow recovery of accelerated  
14 depreciation, and/or include an attrition allowance to address the predicted (and undisputed)  
15 result that APS will continue to under-earn its allowed ROE because of the Company's huge  
16 capital expenditure obligations in coming years. The Commission could also authorize a return  
17 on "fair value" rate base in excess of APS's cost of capital. Whatever mechanisms the  
18 Commission chooses to use, however, the end result should achieve the full cost recovery,  
19 reasonable ROE, and improved financial metrics that APS seeks in this proceeding.

20 For more than ten years – from the early 1990s until March 2005 – APS went without  
21 any rate increase whatsoever and even reduced rates several times during that period. This  
22 provided cumulative benefits to APS customers of \$1.74 billion. (APS Exhibit No. 1 at 3  
23 [Wheeler]). Now, circumstances have changed. And although APS recognizes that the rate  
24 increase it seeks is not insignificant, APS believes that its rate increase request is both fair to  
25 customers and amply justified by increasing costs and other financial circumstances.

26 **B. Calculation Of Requested Increase.**

27 The test year used by the Company to determine operating income (test year ended  
28 September 30, 2005 ("Test Year")), when adjusted as proposed by the Company, produces

1 adjusted jurisdictional operating revenues of \$2,545,020,000. (APS Exhibit No. 53 at 2).  
2 Adjusted jurisdictional operating expense for the same period is \$2,415,481,000.<sup>3</sup> (*Id.*)  
3 Therefore, the Company's jurisdictional Test Year operating income is \$129,539,000. (*Id.* at 1).  
4 This produces just a 2.91 percent rate of return for APS – well below that found reasonable in  
5 Decision No. 67744 and below any of the recommendations in this case. (APS Exhibit 53 at 1).

6 The Company has proposed an adjusted jurisdictional original cost rate base ("OCRB")  
7 of \$4,456,937,000. (*Id.*). Correspondingly, the Company's adjusted jurisdictional reconstruction  
8 cost new – depreciated rate base ("RCND") is \$7,765,052,000. (*Id.*). The Commission has  
9 traditionally defined "fair value" rate base ("FVRB") as the average of OCRB and RCND,  
10 although there is no Commission rule or case law that would prevent a different weighting.

11 The Company's proposed weighted cost of capital is 8.73 percent (consisting of a cost of  
12 debt of 5.41 percent and a cost of equity of 11.50 percent).<sup>4</sup> (*Id.*) Based on the foregoing, the  
13 operating income required to realize this return is \$389,091,000 (OCRB of \$4,456,937,000 x  
14 0.0873). (*Id.*). Therefore, as the adjusted jurisdictional operating income is only \$129,539,000,  
15 the Company's operating income deficiency for the Test Year is \$259,552,000. (*Id.*). When the  
16 revenue conversion factor is applied (to include the incremental impact of federal and state  
17 income taxes), an increase in base revenue of \$425,847,000 is required. (*Id.*).

18 The Company is also proposing a new adjustment clause, the Environmental  
19 Improvement Charge ("EIC"), and is proposing to increase funding of its Environmental  
20 Portfolio Standard ("EPS"), which respectively adds \$4,542,000 and \$4,250,000 to the annual  
21 increase in revenue, increasing the Company's proposed required base revenue to \$434,639,000.  
22 (*Id.*).

### 23 III.

#### 24 RATE OF RETURN AND APS'S FINANCIAL INTEGRITY

##### 25 A. APS's Current Credit Ratings And Related Cash Flow Problems Are The Result Of Inadequate Rates.

26 As the Commission knows, APS's rates decreased for more than a decade from the early  
27

28 <sup>3</sup> This is the sum of line 2, purchase power and fuel costs, and line 9, the total.

<sup>4</sup> See, Standard Filing Requirement Schedule D-1, page 1 of 2, filed January 31, 2006.

1 1990s until April 2005 when the Commission approved a small rate increase in Decision No.  
2 67744. Since early in this decade, the Company's costs have been steadily increasing faster than  
3 its revenues, causing the Company to consistently under-earn its allowed rate of return. The  
4 Company's financial metrics (particularly its all important FFO/Debt ratio) began to slide  
5 downward. Although the rate increase in Decision No. 67744 helped to slow the Company's  
6 financial slide, the rapidly increasing costs of service in 2005 and 2006, coupled with the  
7 increasing expenditures necessary to meet the needs of the nation's second fastest growing  
8 customer base, have far exceeded the rates that APS charged its customers and have caused  
9 substantial deterioration of the Company's credit metrics and other financial criteria.

10 On December 21, 2005, in the wake of mounting unrecovered costs and the perception  
11 that Arizona regulators would not provide timely and adequate rate relief for the Company, S&P  
12 downgraded the Company's credit rating to BBB-minus – just one small step away from non-  
13 investment “junk bond” credit rating status. In doing so, S&P highlighted the deterioration of  
14 APS's credit metrics, and noted: “The need for continued timely processing of APS's rate  
15 applications and reasonable rate relief will be critical to producing consolidated long-term  
16 financial gain.” (APS Exhibit No. 4 at 13-14 [Brandt]). Since then, S&P has recognized what it  
17 called the “generally constructive” decisions by the Commission to accelerate the start of the  
18 PSA in January 2006 and to grant the 7 mill interim PSA adjuster effective May 1, 2006. (*Id.* at  
19 14). Nevertheless, S&P has twice since the downgrade reaffirmed the Company's low credit  
20 rating and has recently made it clear that “APS's rating is premised on the ACC continuing to  
21 provide sustained regulatory support that addresses permanent rate relief and manages the  
22 deferral balances downward over a reasonable time frame.” (APS Exhibit No. 5, Attachment  
23 DEB-5RB [Brandt]).

24 The other principal credit rating agency, Moody's, likewise took steps during the past  
25 year to downgrade APS. On January 10, 2006, Moody's placed APS “under review for  
26 downgrade” for the same reasons cited by S&P. (APS Exhibit No. 4 at 14 [Brandt]). Then, on  
27 May 9, 2006 – after the Commission's action in January 2006 to accelerate the PSA and after  
28 implementation on May 1 of the 7 mill interim PSA adjuster – Moody's downgraded APS from

1 Baa1 to Baa2 and assigned a "Negative" outlook to APS. (APS Exhibit No. 5, Attachment DEB-  
2 6RB at 1 [Brandt]). In doing so, Moody's stated that "the company's weak regulatory position  
3 reflects below average assurance of timely recovery of costs and investments." (*Id.* at 2).  
4 Moody's also stated: "The key credit concern is the need for rate increases in a challenging  
5 regulatory environment in Arizona, which is expected to contribute to financial ratios that are  
6 weak for the rating category over the near term." (*Id.*). And Moody's went on to observe that  
7 the Company's critical FFO/Debt ratio was "in the mid-teens and expected to remain there"  
8 unless "regulatory treatment is supportive of timely cost recovery." (*Id.*).

9 Plainly, both S&P and Moody's have serious concerns about APS's weak credit metrics  
10 and realize that only strong cash flow recovery in this proceeding will allow APS's metrics to  
11 improve. APS is expected to have an FFO/Debt ratio at year-end 2006 near the minimum for  
12 investment grade metrics under the S&P criteria. But the marginal year-end 2006 FFO/Debt  
13 ratio weakens and declines in 2007 without the rate relief requested by the Company. The  
14 current rates, even with an improved and forward-looking PSA, as proposed by Staff, are not  
15 enough to prevent a credit metric decline in 2007 and an even more precipitous drop in 2008.  
16 Indeed, current rates, **even with a forward-looking PSA**, would result in the Company having  
17 an FFO/Debt ratio at year-end 2007 of 16.4 percent and at year-end 2008 of 15.1 percent. (APS  
18 Exhibit No. 5, Attachment DEB-2RB [Brandt]). As Mr. Brandt explained and as Mr. Fetter  
19 confirmed, such FFO/Debt ratios are insufficient from a quantitative standpoint to maintain an  
20 investment grade credit rating and will negate any qualitative rating benefits that the rating  
21 agencies may have taken into account based on the Commission's interim rate orders in 2006.

22 Nor is it correct to assume that APS's current cash flow woes and earnings shortfall are  
23 the result solely of increased fuel and purchased power costs. Although such fuel and purchased  
24 power costs are about 70 percent of the revenue requirements of the Company's current rate  
25 request, they account for only about 32 percent of APS's total revenue requirements. (APS  
26 Exhibit No. 80). Other costs, such as operating and maintenance costs, taxes, and interest  
27 expense also drive the need for added cost recovery. Indeed, the huge capital expenditures that  
28 APS has been making in recent years and expects to make during coming years – an average of

1 \$900 million a year – to meet rapid customer growth in its service territory not only adversely  
2 impact the Company’s ability to earn its allowed ROE, but also exacerbate the Company’s cash  
3 flow needs. If only the increases in fuel and purchased power costs are dealt with in this rate  
4 case, the increases in the other revenue requirements due to the large capital expenditure outlays  
5 will lead to ongoing under-earning and non-investment grade financial metrics.

6 Simply stated, the Company’s current rate level, even with an improved, forward-looking  
7 PSA, is insufficient to allow the Company to recover its costs and to maintain, let alone improve,  
8 its current credit rating. From both a quantitative as well as a qualitative standpoint, the outcome  
9 of this rate proceeding will determine whether APS remains an investment-grade company or  
10 plunges to “junk” credit status for the first time in its more than 100 year history – a status that  
11 would put APS in the company of only five other investor-owned electric utilities in the United  
12 States. (Tr. Vol. II at 465-66 [Brandt]).

13 **B. The Company’s Credit Metrics And Other Financial Indicators Are Important And**  
14 **Relevant Factors For The Commission To Consider.**

15 Staff and RUCO would have the Commission believe that financial projections regarding  
16 the impact of various rate proposals can and should be disregarded by the Commission in  
17 reaching a decision in this proceeding. In fact, although the Company’s direct testimony and, to  
18 a greater extent, its rebuttal testimony discussed in detail the Company’s current financial  
19 condition, including its credit standing and credit metrics and the impact of various rate  
20 proposals on those metrics (*see, e.g.*, APS Exhibit No. 4 at 3-18 [Brandt]; APS Exhibit No. 5 at  
21 6-30 [Brandt]; APS Exhibit No. 23 at 8-34 [Fetter]), no Staff or RUCO witness even bothered to  
22 address those issues (except in passing), let alone attempt to rebut them. Indeed, at the outset of  
23 this case, RUCO’s counsel argued that the Company’s discussion of “projected financial results”  
24 and the Company’s “prefiled testimony . . . about Wall Street rating agencies and their potential  
25 reactions to actions of this Commission” were a “novel approach to setting rates” that the  
26 Commission should not accept. (Tr. Vol. I at 57-58 [Wakefield]). And Staff counsel similarly  
27 argued that the Company’s emphasis on “financial forecasts” and “projected financial data”  
28 amounts to an “end results analysis” that the Commission has not undertaken in past rate cases

1 and should not engage in now. (Tr. Vol. I at 75, 84 [Kempley]).

2 The Company disagrees with those contentions by Staff and RUCO. Projected financial  
3 information and projected credit rating information are important and relevant indicators for the  
4 Commission to consider in assessing the adequacy and reasonableness of a rate increase. Indeed,  
5 the Company is required by Commission regulations to provide projected financial information  
6 as part of its rate filing, and the Company did so in its original Standard Filing Requirement  
7 (“SFR”) Schedule F. (Tr. Vol. I at 113-14 [Wheeler]). Moreover, the consideration of such  
8 projected financial information by the Commission is not only appropriate, but also  
9 constitutionally mandated in order to ensure that rates are just and reasonable under all the facts  
10 and circumstances.

11 As Staff’s and RUCO’s own witnesses acknowledged, the concept of just and reasonable  
12 rates can be achieved through a variety of different approaches (Tr. Vol. I at 75), but all of those  
13 different approaches must comport with certain underlying constitutional principles that were  
14 articulated by the United States Supreme Court in *Bluefield Water Works & Improvement Co. v.*  
15 *Public Serv. Comm’n of West Virginia*, 262 U.S. 679 (1923) and *Federal Power Comm’n v.*  
16 *Hope Natural Gas Co.*, 320 U.S. 591 (1942). (Staff Exhibit No. 8 at 5-7 [Parcell]; RUCO  
17 Exhibit No. 11 at 4-5 [Hill]). In the *Bluefield* case, the Supreme Court stated:

18 What annual rate will constitute just compensation depends upon many circumstances  
19 and must be determined by the exercise of a fair and enlightened judgment, **having**  
20 **regard to all relevant facts.** . . . The return should be reasonably sufficient to assure  
21 confidence in **the financial soundness of the utility**, and should be adequate, under  
efficient and economical management, to **maintain and support its credit** and enable it  
to raise the money necessary for the proper discharge of its public duties.

22 262 U.S. at 692-93 (emphasis added). The Court reaffirmed these fundamental principles in the  
23 *Hope* case by stating:

24 The rate-making process . . . , i.e., the fixing of “just and reasonable” rates, involves a  
25 balancing of the investor and consumer interests. . . . From the investor or company point  
26 of view it is important that there be enough revenue not only for operating expenses but  
27 also for the capital costs of the business. These include service on the debt and dividends  
28 on the stock. By that standard the return to the equity owner should be commensurate  
with returns on investments in other enterprises having corresponding risks. That return,  
moreover, should be **sufficient to assure confidence in the financial integrity of the**  
**enterprise, so as to maintain its credit and to attract capital.**

1 320 U.S. at 603 (emphasis added).

2 It is obvious that these constitutionally-mandated principles of ratemaking cannot be  
3 adequately addressed without consideration of the projected impact of a rate decision on a  
4 regulated utility's financial criteria, including its ability to "maintain and support its credit" and  
5 to "raise the money" necessary for the further operation of its business. In fact, the law requires  
6 that rates be just and reasonable when they are in effect, which necessitates some forward  
7 looking and not just rigid adherence to a hypothetical and stale Test Year that has been  
8 demonstrated to be unrepresentative of present conditions. *See, Scates v. Arizona Corporation*  
9 *Comm'n*, 118 Ariz. 531, 578 P.2d 612 (Ariz. App. 1978). Perhaps it is true, as Staff and RUCO  
10 suggest, that the Commission has not dwelled on these aspects of ratemaking in the past. The  
11 Company submits, however, that that was due to the fact that the Company previously was not  
12 repeatedly under-earning its allowed ROE, and the Company's cash flow, credit rating and credit  
13 metrics have rarely required a detailed analysis of the Company's projected financial data before  
14 now to ensure that a ratemaking decision satisfies the underlying constitutional principles. But  
15 that does not mean that those fundamental principles should now be ignored.

16 Indeed, other regulatory commissions often take into consideration the projected impact  
17 of a rate decision on a company's financial indicators, particularly the company's credit standing  
18 with the major credit rating agencies. (*See, e.g.*, Tr. Vol. XXIV at 4577-78 [Brandt] (citing Tom  
19 McGhee, *State Oks Xcel rate hike*, Denver Post, Nov. 21, 2006. Responding to questions about  
20 an Xcel Energy settlement agreement (Decision No. C06-1379) that increased rates, PUC  
21 Chairman Gregory Sopkin "said a smaller rate increase could damage Xcel's credit rating and  
22 increase its borrowing costs."); APS Exhibit No. 23 at 25 [Fetter] (referring to Missouri Public  
23 Service Commission ("MPSC") Case No. EO-2005-0329 at 14-15, where the MPSC decided that  
24 in making rate decisions for the next several years for Kansas City Power & Light ("KCPL") it  
25 will rely on "S&P's publicly-disseminated credit ratio guidelines to ensure that KCPL's key  
26 financial measures would remain at levels adequate for its 'BBB' credit ratings."); *see, also*, Tr.  
27 Vol. VI at 1284-86 [Fetter]; APS Exhibit No. 23 at 27-28 [Fetter] (noting that last year the  
28 Colorado Public Service Commission approved a comprehensive settlement agreement (Decision

1 No. C06-1379) allowing the Public Service Company of Colorado to peg certain rate increases to  
2 that company's "credit quality" rating.); *see, also, e.g., In re Public Service Co. of Indiana*, 72  
3 P.U.R. 4th 660, 677 (Mar. 7, 1986); Cause No. 37414 (taking into consideration the company's  
4 S&P and Moody's ratings and the company's need to "have reasonable access to the capital  
5 markets to provide for its future capital needs...."); *see, also, In re Commonwealth Edison Co.*,  
6 49 P.U.R. 4th 62, 76 (May 6, 1982); Decision No. 82-0026 (recognizing that a "further  
7 downgrading of Edison's credit ratings, particularly as to commercial paper, would immediately  
8 restrict Edison's day-to-day financing of all expenditures...."); *see, also, Public Serv. Co. of*  
9 *Colorado v. Publ. Utilities Comm'n of Colorado*, 653 P.2d 1117, 1122-23 (1982)(upholding rate  
10 increase where evidence showed that the company's "ability to raise capital was seriously  
11 impaired due to decreased earnings and a downgrading of [the company's] rating by both  
12 Moody's and Standard & Poors [sic].").

13         Simply stated, projected financial information as to the impact of the various rate  
14 proposals in this case on the Company's credit ratings and other financial indicators is highly  
15 relevant to the Commission's decision and cannot be ignored.

16 **C. There Is A Substantial Risk That APS Will Be Downgraded To "Junk Bond" Credit**  
17 **Status If The Full Rate Increase It Has Requested Is Not Granted.**

18         Recognizing as it must that the Company's projected financial information should be  
19 considered at least to the extent of assessing the impact of a rate decision on the Company's  
20 ability to "maintain its credit and to attract capital" (*Hope Natural Gas Co.*, 320 U.S. at 603), the  
21 Commission must then assess the extent to which the evidence in this proceeding bears on that  
22 issue. In this regard, the evidence presented by the Company is substantial and is essentially  
23 unrefuted.

24         In his Direct Testimony, Mr. Brandt (the Company's Chief Financial Officer) explained  
25 the current and projected cash flow needs of the Company, the Company's current credit ratings,  
26 the extent to which those credit ratings and related credit metrics have declined during the past  
27 twelve to twenty-four months, the precarious nature of the Company's current credit ratings, the  
28 importance of maintaining and eventually improving the Company's investment-grade credit

1 rating, and the projected credit metrics and other financial indicators under the Company's rate  
2 increase proposal. (APS Exhibit No. 4 at 3-31 [Brandt]; *Id.* at Attachments DEB-1 through  
3 DEB-4 [Brandt]). Among other things, Mr. Brandt explained that the Company's current rates  
4 have not adequately covered all costs of service, that the Company's cash flow and ROE have  
5 been impacted significantly by the Company's need to fund a large capital expenditure program  
6 averaging \$900 million a year for the foreseeable future, and that the Company's rate proposal  
7 would only modestly improve the Company's credit metrics over the next few years. (*See, also,*  
8 Tr. Vol. IV at 783-84.)

9 In his Rebuttal and Rejoinder Testimony, Mr. Brandt reinforced the points made in his  
10 Direct Testimony and pointed out that the Staff and RUCO rate proposals, if accepted by the  
11 Commission, would almost certainly result in APS having its credit rating downgraded to "junk  
12 bond" status. (APS Exhibit No. 5 at 3-15 [Brandt]; APS Exhibit No. 6 at 2-14 [Brandt]). As he  
13 did in the emergency rate case, Mr. Brandt called upon his more than 22 years of experience  
14 dealing with credit rating agencies to estimate for the Commission the risk of a credit rating  
15 downgrade under the Company proposal as well as the Staff and RUCO proposals, estimating  
16 the risk of a downgrade to junk at about 95 percent for the RUCO proposal, about 85 percent for  
17 the Staff proposal (notwithstanding Staff's improved and forward-looking PSA proposal), and  
18 even about 15 percent under the Company's proposal. (APS Exhibit No. 5 at 3 [Brandt], *see,*  
19 Arizona Public Service Company Risk of Credit Rating Downgrade to Junk, attached hereto as  
20 "APS Initial Brief Exhibit 2"). As Mr. Brandt explained, he based these estimates on financial  
21 forecasts that he prepared using the same forecasting methodology that the Company uses in the  
22 ordinary course of business and in its regular dealings with rating agencies and financial  
23 analysts. (Tr. Vol. IV at 769-72).

24 The financial forecasts for the Company's proposal, Staff's proposal (with projected  
25 PSA), and RUCO's proposal were summarized in attachments to Mr. Brandt's Rebuttal  
26 Testimony (DEB-1RB through DEB-3RB respectively), and the principal financial assumptions  
27 on which those forecasts were based were contained in Exhibits APS-10 and RUCO-2. (Tr. Vol.  
28 IV at 770-74). Mr. Brandt explained that, under the Company's proposal, APS's FFO/Debt ratio

1 would be 19.2 percent at year-end 2007, but then trend down to 17.5 percent at year-end 2008  
2 due largely to one undeniable fact: **near-term costs of customer growth are greater than the**  
3 **increased revenues generated by that growth by about \$86,000,000 per year at present.**  
4 (APS Exhibit No. 5 at 9-10 [Brandt]; *Id.* at Attachment DEB-1RB; Tr. Vol. IV at 782-85; APS  
5 Exhibit No. 77.) Similarly, Mr. Brandt explained that, under the Staff proposal (with projected  
6 PSA), the Company's FFO/Debt ratio would be 16.4 percent at year-end 2007 and 15.1 percent  
7 at year-end 2008; and under the RUCO proposal, the Company's FFO/Debt ratio would be 15.1  
8 percent at year-end 2007 and a mere 12.9 percent at year-end 2008. (APS Exhibit No. 5 at 9-10  
9 [Brandt]; *Id.* at Attachments DEB-2RB and DEB-3RB.) Those forecasted FFO/Debt ratios under  
10 the Staff and RUCO proposals (which were never refuted by any Staff or RUCO witness) are  
11 well below the 18 percent minimum for APS to maintain an investment grade credit rating under  
12 the S&P criteria and the comparable Moody's criteria. And as Mr. Brandt pointed out, both S&P  
13 and Moody's have implied that the credit metrics produced by the Staff and RUCO proposals  
14 would not be well received from a credit ratings standpoint. (APS Exhibit No. 5 at 13-15  
15 [Brandt]).<sup>5</sup>

16 Mr. Fetter, a former rating agency executive and a former Chairman of the Michigan  
17 Public Service Commission, testified in his Direct Testimony that the uncertainty and  
18 unprecedented events in the energy industry during recent years have caused credit rating  
19 agencies and the financial community generally to pay even closer attention to a regulated  
20 utility's credit metrics and other financial indicators. (APS Exhibit No. 23 at 16-19 [Fetter]).  
21 Mr. Fetter went on to explain that regulatory commissions need to engage in "proactive  
22 regulatory behavior" (*Id.* at 31-32) to ensure that the closer scrutiny now being given to a  
23 regulated utility's financial criteria by rating agencies and the financial community does not  
24 result in dire financial consequences for both the utility and its customers – which are exactly the

25  
26 <sup>5</sup> As Moody's said in its release of May 9, 2006, in which the agency assigned to APS a "negative outlook":

27 In light of the challenging regulatory environment, Moody's would look for APS to have financial  
28 metrics that are **somewhat stronger** than comparably rated utility operating companies that  
operate in more supportive environments.

(APS Exhibit No. at 14 [Brandt]). (Emphasis added.).

1 consequences that Nevada Power Company ("Nevada Power") and its customers have had to  
2 endure as a result of that company's downgrade to "junk bond" credit rating status several years  
3 ago.

4 More importantly, Mr. Fetter testified in his rebuttal that he independently analyzed  
5 APS's financial forecasts for 2006 through 2008, including the forecasts based upon the Staff  
6 and RUCO rate proposals. (APS Exhibit No. 24 at 11 [Fetter]). He went on to explain that those  
7 forecasts are similar to ones that he has used and relied upon as a regulator and as a ratings  
8 agency official. (*Id.*) He then explained that he "utilized the S&P methodology and the  
9 [Company's] forecast data" to determine for himself what he described as "the likely credit  
10 impacts under both the Commission Staff position and the RUCO case, compared against the  
11 likely result if the updated APS position were to be adopted by the Commission." (*Id.*) His  
12 conclusions, similar to those of Mr. Brandt, were: (1) "Forecasts under the Commission Staff  
13 case indicate that APS would likely not be able to maintain its investment-grade status once this  
14 proceeding has concluded;" and (2) "The results under the RUCO case would cause an even  
15 more severe negative impact on APS's credit profile, thus also likely driving the Company into  
16 below investment-grade or 'junk bond' status." (*Id.* at 12-13). Mr. Fetter then summarized his  
17 analysis and findings by stating: "If the Commission were to adopt either the Commission Staff  
18 position or the RUCO case, APS's credit ratings would likely suffer a rating downgrade to below  
19 investment-grade level." (*Id.* at 14).

20 Mr. Fetter reinforced his opinions about the likelihood of a downgrade if the Commission  
21 accepted either the Staff or the RUCO proposals (or anything close to them) by underscoring the  
22 fact that APS currently is rated by S&P at the lowest level of investment grade credit, leaving no  
23 margin for slippage given APS's credit metrics remain on the brink of non-investment grade if  
24 some other event causes APS's financial metrics or cash flow requirements to change. (APS  
25 Exhibit No. 24 at 10 [Fetter]). As Mr. Fetter put it, "BBB-minus is a very dangerous place to  
26 be," and he cautioned that APS should not be permitted to "linger" with such a credit rating for  
27 very long. (Tr. Vol. VI at 1278). In fact, Mr. Fetter went on to opine that he thought it would be  
28 a "close call" for APS to maintain its current investment-grade credit rating even under the

1 Company's own rate increase proposal:

2 I also noted in my testimony and my live answers today that APS's modified position is  
3 not an overwhelmingly strong position as shown by this chart, and I believe that APS  
4 would be able to maintain its investment grade status. It would be a close call, and I  
5 believe that the company, if it survives that close call, will endeavor, hopefully with  
6 support from regulators, to improve its credit rating over time higher into the BBB  
category where, which I view is the minimum level that any utility should operate in  
within today's current environment.

7 (Tr. Vol. VI at 1277-78).

8 This testimony by Mr. Brandt and Mr. Fetter – the two most experienced and  
9 knowledgeable witnesses on these issues in this proceeding – is strong evidence that there is a  
10 substantial risk that anything less than the rate increase proposed by the Company (and certainly  
11 the Staff and RUCO proposals) will result in a credit rating downgrade for APS – a downgrade  
12 to non-investment “junk bond” credit rating status.

13 **D. Quality Of Regulation Is Also A Factor Being Closely Watched In This Proceeding.**

14 The foregoing discussion of APS's credit metrics and other financial indicators addresses  
15 what the rating agencies consider to be the “quantitative” aspects of their credit rating criteria,  
16 but those agencies also consider several “qualitative” factors to assess the financial and business  
17 risks of a regulated utility and its debt offerings. (APS Exhibit No. 4 at 11-18 [Brandt]; APS  
18 Exhibit No. 24 at 3 [Fetter]). One of the most important qualitative factors is regulation. (*Id.*).  
19 S&P itself has recently explained the importance of supportive regulation as a factor in affixing a  
20 company's credit rating:

21 Regulation defines the environment in which a utility operates and greatly influences a  
22 company's financial performance. A utility with a marginal financial profile can, at the  
23 same time, be considered highly creditworthy as a result of supportive regulation.  
Conversely, an unpredictable or antagonistic regulatory environment can undermine the  
financial position of utilities that are operationally very strong.

24 To be viewed positively, regulatory treatment should be timely and allow consistent  
25 performance over time, given the importance of financial stability as a rating  
consideration.

26 (*Id.* at 5-6 [Fetter Rebuttal], quoting S&P Research: “New York Regulators’ Consistency  
27 Supports Electric Utility Credit Quality,” August 15, 2005).

28

1           Indeed, the importance of regulatory environment in the context of changes to a  
2 company's credit rating was underscored last year when S&P downgraded Central Vermont  
3 Public Service ("Central Vermont") from BBB to "junk" status based primarily on a single  
4 unfavorable rate order by the Vermont Public Service Board. (APS Exhibit No. 42 at 7 [Avera]).

5 In doing so, S&P stated:

6           The rate order represents an adverse shift in the company's regulatory environment,  
7 which heightens its business risk for the foreseeable future. . . . It also limits the  
8 company's ability to generate adequate and stable cash flows over the foreseeable future.  
9 To be considered highly creditworthy, a utility with a marginal financial profile must  
10 operate in a regulatory environment that provides for financial stability.

11 (*Id.*, quoting Business Wire, *S&P Downgrades CVPS Corporate Credit Rating*, June 14, 2005).

12           There can be no doubt that the rating agencies are closely and carefully assessing the  
13 extent of regulatory support and the consistency of treatment that will be provided to the  
14 Company by the Commission in this proceeding. Indeed, the rating agencies have said so. For  
15 the most part, the rating agencies viewed the Commission's actions in 2006 (including the  
16 acceleration of the 4 mill PSA in January and the added 7 mill interim PSA adjustor in May) to  
17 be "generally constructive" and supportive of the Company. (APS Exhibit No. 4 at 14).

18 Nevertheless, S&P cautioned just a few months ago that:

19           The stable outlook for PWCC and APS' rating is premised on the ACC continuing to  
20 provide sustained regulatory support that addresses permanent rate relief and manages the  
21 deferral balances downward over a reasonable time frame. . . . Cash flow metrics for  
22 2006 will be modestly assisted by the surcharges but funds from operations (FFO) to total  
23 debt is expected to be below S&P's benchmarks until going forward retail rates are  
24 brought more in line with current costs.

25 (APS Exhibit No. 5 at 13-14 [Brandt], quoting S&P release dated August 31, 2006, entitled  
26 *Summary: Arizona Public Service Co.*).

27           Moody's has similarly cautioned that its current negative outlook for APS reflects "the  
28 potential for downward pressure on ratings if [among other things] outcomes in still pending rate  
proceedings are not supportive of relatively timely recovery of increased costs." (APS Exhibit  
No. 5 at 14 [Brandt], quoting Moody's release dated May 9, 2006, entitled *Credit Opinion:*

1 *Arizona Public Service Company*).<sup>6</sup>

2 The Company agrees that the Commission's actions in the past twelve months have been  
3 constructive from a ratings standpoint and reasonably supportive of the Company's financial  
4 needs. Indeed, the Company has no doubt that the Company's credit rating would be in the  
5 "junk bond" category today, but for the actions of the Commission in the past twelve months.  
6 But the Company is far from safe from having its credit rating slip into "junk" status if the  
7 Commission were to reverse course in this proceeding and reject the Company's rate proposal in  
8 favor of something more closely approximating the Staff or RUCO proposals. Such action by  
9 the Commission would demonstrate a lack of regulatory support and would produce the very sort  
10 of regulatory uncertainty that the rating agencies have said would carry negative rating  
11 implications for APS, even apart from APS's quantitative credit metrics.

12 As Mr. Fetter has said, "nothing should be taken for granted in the current investing  
13 environment" (APS Exhibit No. 23 at 24 [Fetter]), particularly where, as here, APS is already in  
14 the precarious position of having a near-junk BBB-minus credit rating from S&P and a negative  
15 outlook from Moody's. Thus, from a qualitative as well as a quantitative standpoint, the  
16 Commission should strive in this proceeding to ensure that APS has rates going forward that are  
17 sufficient for the Company to maintain and eventually improve its credit rating.

18 **E. A Downgrade To "Junk Bond" Credit Rating Status Would Be Extremely**  
19 **Detrimental To APS And Even More So To Its Customers.**

20 The adverse consequences of APS having its credit rating downgraded to "junk bond"  
21 status would be severe and long term. In his Direct and Rebuttal Testimony, Mr. Brandt  
22 cataloged the significant adverse financial impact that such a downgrade would have on APS and  
23 its customers, including added financing costs of as much as \$1.3 billion over the next ten years,  
24 limitations on access to daily liquidity instruments, increased interest rates on the Company's

25 <sup>6</sup> It should be obvious that the rating agencies will re-evaluate their ratings and outlooks for APS promptly after the  
Order in this case is issued by the Commission. As Mr. Fetter has pointed out:

26 Credit ratings are based on prospective financials. As such, as soon as the final Commission order  
27 is issued, the credit rating agencies would analyze the likely financial impacts and provide the  
Company with an immediate opportunity to provide additional relevant information that should be  
28 considered. A rating change, if warranted, would follow shortly thereafter.

(APS Exhibit No. 24 at 15 [Fetter]).

1 debt, and restricted access to the capital markets due to the inability or unwillingness of many  
2 institutional investors to invest in "junk" rated bonds that would potentially prevent APS from  
3 raising needed funds for capital expansion and improvement. (APS Exhibit No. 4 at 19-23  
4 [Brandt]; APS Exhibit No. 5 at 15-17 [Brandt]). Mr. Brandt also discussed the impact that a  
5 "junk bond" credit rating would have on the Company's energy trading business and its contracts  
6 with power suppliers, pointing out that APS would be required to provide collateral or other  
7 security for such purchases and might be precluded from obtaining some contracts altogether.  
8 (APS Exhibit No. 4 at 22-23 [Brandt]; APS Exhibit No. 5 at 16-27 [Brandt]). All of these  
9 consequences of a "junk bond" credit rating were confirmed by Mr. Fetter in his testimony.  
10 (APS Exhibit No. 23 at 23 [Fetter]).

11         These consequences of a downgrade are neither speculative nor overstated. Both Mr.  
12 Brandt and Mr. Fetter discussed the examples of Nevada Power and Central Vermont (among  
13 others) which, as a result of their slide into "junk" credit status, have been saddled with hundreds  
14 of millions of dollars of added costs and significant restrictions on their ability to borrow. (Tr.  
15 Vol. VI at 1285-89 [Fetter]; Tr. Vol. IV at 744-45 [Brandt]). In fact, Mr. Brandt testified that  
16 recent reports have indicated that the increased financing costs to Nevada Power over just the  
17 last five years have already exceeded \$1 billion. (*Id.* at 744). In short, everything that Mr.  
18 Brandt has said will happen to APS if it were to slip to "junk" credit status has already happened  
19 to Nevada Power and the other electric utilities now rated "junk." (Tr. Vol. VI at 1285-89  
20 [Fetter]).

21         Moreover, recovery from a "junk" credit rating is difficult and slow. Citing again to the  
22 examples of Nevada Power and Central Vermont, Mr. Fetter explained:

23                 [O]nce a company goes below investment grade, it's not like turning on a dime, and the  
24 Commission by itself cannot divine decisions that return investment grade immediately.  
25 Even if all the parties in this room are in agreement, it could not bring APS back from the  
26 fall off the cliff within a day or a month or a week. It's a long process. And Nevada  
27 Power is now about three or four years into being below investment grade. Central  
28 Vermont Public Service accepts that even with [a] positive regulatory agreement, if  
approved by the commission, that they are looking at a two to three-year time period to  
get back. And so it . . . cannot be underemphasized the danger of going below  
investment grade.

1 (Tr. Vol. VI at 1288-89; *see, also*, APS Exhibit No. 23 at 24 [Fetter]).

2 These dangers and the dire consequences of a slide to “junk” credit status were cavalierly  
3 dismissed by Staff and RUCO witnesses. RUCO witness Stephen Hill stated that such a result is  
4 just “a situation we will deal with when we get there. . . . it’s certainly not insurmountable” (Tr.  
5 Vol. X at 2130), and Staff witness David Parcell opined that APS’s BBB-minus credit rating is  
6 “still BBB” and that S&P’s “stable” outlook for APS suggests that a downgrade is not in the  
7 offing (Tr. Vol. XVII at 3286) (ignoring that APS had a “stable” outlook in December 2005  
8 when S&P downgraded APS from BBB to BBB-minus). Not surprisingly, neither of those  
9 witnesses has any experience in dealing with rating agencies and neither did an analysis of the  
10 likelihood or the impact of a slide to “junk” status before rendering their unsupported opinions.  
11 Thus, the only credible evidence in the record is that a slide to “junk” credit status by APS would  
12 be extremely costly and detrimental to APS and its customers, would not be quickly remedied,  
13 and would potentially impede APS’s ability to finance its huge capital expenditure requirements.  
14 As the Commissions in Missouri, Colorado and elsewhere have recently done, this Commission  
15 should be proactive and should not disregard the significant adverse implication of a downgrade  
16 to “junk” credit status for APS. Simply put, the cost recovery and the ROE that APS seeks as  
17 part of its rate request are intertwined with and directly related to the cash flow woes and the  
18 under-earnings in recent years that have brought APS to the brink of a “junk bond” credit rating.  
19 The Commission should recognize that its rate decision in this proceeding must be sensitive to  
20 and address those issues.

21 **F. The 11.5 Percent ROE And The Debt/Equity Ratio Requested By The Company In**  
22 **This Proceeding Are Fair And Reasonable Under All The Facts And Circumstances.**

23 To comport with the constitutional principles articulated in *Bluefield* and *Hope* – and to  
24 avoid a downgrade to junk bond status – APS must be authorized a fair rate of return on equity,  
25 taking into account the economic requirements necessary to support continuous access to capital,  
26 as well as the specific risks and potential challenges for APS. Moreover, the Company’s overall  
27 return must be calculated based on a reasonable capital structure.  
28

1           **1. An ROE Of 11.5 Percent Is Fair And Reasonable.**

2           In his Direct Testimony, Dr. William Avera recommended that APS be authorized an  
3 11.5 percent ROE. Dr. Avera discussed the relationship between ROE and the preservation of  
4 the Company's financial integrity and ability to attract capital, explaining that an inadequate  
5 ROE in this proceeding "would further pressure APS's financial flexibility and credit standing."  
6 (APS Exhibit No. 41 at 62 [Avera]). Ultimately, he concluded that, based on "capital market  
7 expectations, the potential exposures faced by APS, and the economic requirements necessary to  
8 maintain financial integrity and support additional capital investment even under adverse  
9 circumstances," an 11.5 percent ROE would be fair and reasonable for APS at this time. (*Id.* at  
10 74; Tr. Vol. IX at 1859-63 [Avera]).

11                   **a. Dr. Avera Used A Comprehensive Methodology To Determine A Fair  
12 And Reasonable Recommended ROE Of 11.5 Percent.**

13           To arrive at his 11.5 percent ROE recommendation, Dr. Avera applied the Discounted  
14 Cash Flow ("DCF") model, risk premium methods, and the comparable earnings method to a  
15 proxy group of other electric utilities operating in the Western United States. Dr. Avera  
16 concluded that a fair and reasonable cost of equity range was 10.8 percent to 11.8 percent. (APS  
17 Exhibit No. 41 at 56 [Avera]). Dr. Avera incorporated a 20 basis-point allowance for equity  
18 flotation costs, resulting in a range of 11.0 - 12.0 percent, and concluded that the midpoint of  
19 11.5 percent represented a reasonable rate of return on common equity for APS. (*Id.* at 56-61).

20           Under Dr. Avera's analysis, the DCF model implied a cost of equity of 9.0 percent. Dr.  
21 Avera identified the limitations of the DCF model, however, noting that it would be  
22 unreasonable to establish an ROE based on the DCF approach alone because "it is a blunt tool"  
23 and does not necessarily capture long-term expectations for the industry. (*Id.* at 42).

24           Given the limitations of the DCF model, Dr. Avera also used the risk premium method,  
25 which "directly estimates investors' required rate of return by adding an equity risk premium to  
26 observable bond yields," in contrast to DCF models, "which directly impute the cost of equity."  
27 (*Id.* at 43-53). Dr. Avera also evaluated the cost of equity using the comparable earnings  
28 method, which refers to rates of return available from alternative investments of comparable risk.

1 (*Id.* at 53-55). Both of these methods implied a fair rate of return on equity far higher than the  
2 DCF model, ranging from 11.0 percent - 12.6 percent. (*Id.* at 53, 55). Given that the DCF result  
3 was out of line with the preponderance of estimates produced by these other methods, Dr. Avera  
4 concluded that the appropriate range was 10.8 - 11.8 percent, with an additional 0.2 percent for  
5 flotation costs.

6 **b. The Staff's Recommended ROE Of 10.25 Percent And RUCO's**  
7 **Recommended ROE Of 9.25 Percent Are Downward-Biased And**  
8 **Based On Technically Flawed Analyses.**

8 Despite the fact that the Staff and RUCO agree with APS that a utility's ability to attract  
9 capital must be considered in establishing a fair rate of return, the Staff recommends a  
10 downward-biased ROE of 10.25 percent and RUCO recommends an untenable ROE of 9.25  
11 percent.

12 Various benchmarks show that both of these recommendations fail to pass the threshold  
13 test of reasonableness required by established regulatory and economic standards governing a  
14 fair rate of return on equity. (APS Exhibit No. 42 at 2-11 [Avera]). First, the rates of return on  
15 common equity authorized electric utilities by regulatory commissions were 10.69 percent for  
16 electric utilities in the second quarter of 2006 and 10.57 percent for the year as of September 15,  
17 2006. (*Id.* at 8). Using the groups of firms identified as most comparable to APS by Mr. Hill  
18 and Mr. Parcell, the two groups of firms were authorized an average ROE of 10.89 percent and  
19 10.91 percent respectively. (*Id.* at 9; *Id.* at WEA-1RB). Second, Value Line reported as of  
20 September 1, 2006, that electric utilities as a whole are anticipated to earn a return of at least  
21 10.5 percent from 2007 through 2011. (APS Exhibit No. 42 at 9 [Avera]). And Lehman  
22 Brothers projected that in 2007 the electric utility industry would be granted allowed rates of  
23 return that averaged 11.3 percent in order to keep pace with the market as a whole. (AUIA  
24 Exhibit No. 1 at 28 [Cannell]).<sup>7</sup>

25 In addition to recommending returns below the average that other commissions have been

26 <sup>7</sup> Along these lines, the Commission can take administrative notice that, on December 21, 2006, the Missouri Public  
27 Service Commission issued its order in the Kansas City Power & Light rate case (Great Plains Energy) allowing a  
28 rate of return of 11.25 percent (on an equity ratio of 54 percent), notwithstanding testimony of staff witnesses who  
recommended an ROE range of 9.32-9.42 percent. (*See*, Credit Suisse Release: *Great Plains Energy*, December 22,  
2006, attached hereto as "APS Initial Brief Exhibit 3").

1 allowing utilities in recent months and are expected to allow in 2007, the Staff and RUCO  
2 witnesses based their ROE's on flawed analyses. Staff witness David Parcell based his results on  
3 his application of the constant growth DCF model, Capital Asset Pricing Model ("CAPM"), and  
4 comparable earnings approaches. (APS Exhibit No. 42 at 11 [Avera]). Dr. Avera identified  
5 many errors in Mr. Parcell's analysis, including problems with the following: the criteria Mr.  
6 Parcell used to define the proxy group in his analysis; his biased application of the DCF model;  
7 and his use of historical (rather than projected) rates of return and geometric (rather than  
8 arithmetic) means in applying the risk premium approach. (*Id.* at 11-31).

9 Indeed, Dr. Avera noted – and no other witness disputed – that based on the  
10 methodologies recently applied by ACC Staff witness Dennis Rogers in his January 16, 2006  
11 testimony in Docket No. W-01303A-05-0405 and adopted by the Commission in its July 28,  
12 2006 decision, the average cost of equity for Mr. Parcell's reference group is 11.20 percent  
13 before consideration of flotation costs. (*Id.* at 19-28; APS Exhibit No. 43 at 8 [Avera]). Thus,  
14 once the errors in Mr. Parcell's analysis are corrected, the average cost of equity falls squarely  
15 within the 11.0 - 12.0 percent range recommended by Dr. Avera.

16 While the Staff's recommended ROE of 10.25 percent is downward-biased because of  
17 the flaws discussed above, RUCO's recommended ROE of 9.25 percent is "completely outside a  
18 reasonable range and is entirely inconsistent with mainstream benchmarks." (APS Exhibit No.  
19 42 at 23 [Avera]). RUCO witness Stephen Hill relied solely on a constant growth DCF model,  
20 which has been recognized as fallible and misleading by regulators across the country, including  
21 Texas, Florida, Pennsylvania, Iowa, Alaska, and the Federal Communications Commission. (*Id.*  
22 at 46-48.) Moreover, applying the multi-stage DCF model that recently was adopted by the  
23 Commission results in an average cost of equity of 10.7 percent for Mr. Hill's same reference  
24 group, showing that his application of the DCF model produces downwardly biased and even  
25 illogical results. (*Id.* at 48; *Id.* at Attachment WEA-15RB.) These errors, among others, resulted  
26 in a single-digit ROE – which Mr. Hill admits is low (RUCO Exhibit No. 11 at 7 [Hill]) – that  
27 falls completely outside of a fair and reasonable range. Indeed, Mr. Hill admitted that he could  
28 not identify a single instance in the last year and a half in which any regulatory commission

1 anywhere in the country had allowed a rate of return as low as his recommended 9.25 percent in  
2 this case. (Tr. Vol. IX at 2035 [Hill]).

3 **2. APS's Proposed Rates Support A Capital Structure – Including A 46/54**  
4 **Debt/Equity Ratio – Necessary To Maintain An Investment Grade Rating.**

5 APS must maintain a strong financial profile to ensure access to the capital markets as the  
6 Company finances the capital expenditures required to meet the growing energy needs of its  
7 customers and to avoid a downgrade to junk status. As explained above, APS's proposal  
8 supports the capital structure necessary to keep the Company's financial metrics sufficiently  
9 strong to maintain an investment grade credit rating. In contrast, when viewed in the aggregate,  
10 APS's financial metrics would fall far below the minimum levels required to maintain  
11 investment grade ratings under either the proposed rates of the Staff and RUCO.

12 Mr. Brandt explained that to maintain an investment-grade credit rating, S&P requires a  
13 company like APS to maintain a Debt/Capital ratio of 48 – 58 percent. (APS Exhibit No. 5 at 9  
14 [Brandt]). Under APS's proposal, APS's Debt/Capital ratio would move from 54.6 percent at  
15 year-end 2006 to 52.1 percent by 2007. (*Id.* at 6; *Id.* at Attachment DEB-1RB [Brandt]) While  
16 Staff witness Parcell accepted APS's recommendation for a 46/54 Debt/Equity ratio, RUCO  
17 witness Hill opined that a 50/50 Debt/Equity ratio for the Company would suffice. (Tr. Vol. X at  
18 2127 [Hill]; Tr. Vol. XVII at 3272-3[Parcell]).

19 Mr. Hill's "phantom capital structure" ignores APS's current reality. (APS Exhibit No.  
20 42 at 2 [Avera]). First, Mr. Hill contends that APS's requested capital structure is different than  
21 its historical capitalization (which is not true). But historical ratios do not provide a basis for  
22 determining a reasonable capitalization for APS going forward given the Company's weakened  
23 credit ratings and the challenges of raising the capital necessary to support its capital expenditure  
24 requirements. (*Id.* at 64-65; APS Exhibit No. 6 at 19 [Brandt]). Second, Mr. Hill contends that  
25 APS's requested capitalization is not consistent with industry benchmarks. As Dr. Avera  
26 testified, Mr. Hill's analysis of industry capitalization ratios erroneously includes short-term debt  
27 and also includes the financial ratios of utilities with junk ratings, severely distorting his results.  
28 (APS Exhibit No. 42 at 66-69 [Avera]).

1 As Dr. Avera explained in his rebuttal, the decision by S&P and Fitch Ratings ("Fitch")  
2 to downgrade Central Vermont to below investment grade highlights the importance of  
3 maintaining sufficient common equity to preserve a utility's creditworthiness. Although Central  
4 Vermont's equity ratio exceeded 60 percent, the ratings agencies determined that the company's  
5 financial position was inadequate to support an investment grade rating. (APS Exhibit No. 42 at  
6 68-69 [Avera]).

7 In today's capital environment and in APS's current growth cycle, a 50/50 Debt/Equity  
8 ratio would result in a financially weaker APS and would undoubtedly reduce the Company's  
9 credit metrics to non-investment grade. (APS Exhibit No. 6 at 19 [Brandt]). A 46/54  
10 Debt/Equity ratio, as proposed by APS and as accepted by Staff, is more appropriate and more  
11 consistent with APS's current financial situation.

12 **G. APS Is Being Deprived Of A Reasonable Opportunity To Earn Its Allowed ROE**  
13 **Because Of Attrition Of Earnings Stemming From The Lag In Recovering Capital**  
14 **Expenditures.**

15 APS has demonstrated that it has substantially under-earned its allowed ROE for the last  
16 several years. (See, Arizona Public Service Company Return on Equity Twelve-Month Period  
17 Ended March 31, 2003 to June 30, 2006, attached hereto as "APS Initial Brief Exhibit 4"; see,  
18 also, APS Exhibit No 5, Attachment DEB-10RB [Brandt]). Indeed, the evidence shows that,  
19 over the more than three year period from March 31, 2003 to June 30, 2006, APS consistently  
20 under-earned its allowed rate of return by as much as half, resulting in a \$134,000,000 annual  
21 earnings deficit as of June 30, 2006, relative to APS's current allowed rate of return of 10.25  
22 percent. (*Id.*). Over this period, APS's actual ROE eroded from 8.4 percent for the twelve  
23 months ended March 31, 2003, to 5.7 percent for the twelve months ended June 30, 2006. (*Id.*).

24 The reasons for this earnings shortfall are both obvious and undisputed – the need for  
25 APS to fund a huge capital expenditure program in recent years, coupled with the regulatory lag  
26 in recovering those expenses as part of rate base, has prevented APS from maintaining a level of  
27 earnings commensurate with its allowed ROE. (APS Exhibit No. 4 at 29-31 [Brandt]). Even  
28 Staff and RUCO witnesses agreed (or at least could not deny) that this "attrition" of earnings

1 resulting from the lag in recovering capital expenditures was causing APS to under-earn its  
2 allowed rate of return. As Staff witness David Parcell testified:

3 Q. Do you have any reason to believe that APS is not going to continue to under earn  
4 the way it has [as shown] on this [Don Brandt] ROE chart . . . ?

5 A. I have no reason to believe that APS would necessarily earn its authorized rate of  
6 return. . . .

7 (Tr. Vol. XVII at 3267 [Parcell]).

8 Similarly, RUCO witness Stephen Hill testified:

9 Q. You do not deny, do you, sir, that the phenomenon of attrition prevents APS from  
10 earning its authorized rate of return under current circumstance, correct?

11 A. Well, I think I said yesterday that I haven't confirmed Mr. Brandt's projections,  
12 so I really can't confirm or deny that. But we will certainly agree with you that  
13 that could be the case.

14 (Tr. Vol. X at 2090-91[Hill]).

15 Under these circumstances, the constitutional requirement that APS be given a reasonable  
16 opportunity to earn a fair return on its invested equity is undermined. *See, Bluefield*, 262 U.S. at  
17 692 ("A public utility is entitled to such rates as will permit it to earn a return on the value of  
18 property which it employs for the convenience of the public equal to that generally being made at  
19 the same time and in the same general part of the country on investments in other business  
20 undertakings which are attended by corresponding risks and uncertainties"). Knowing that the  
21 regulatory process in Arizona can entail at least a year or two before a new rate order is  
22 implemented, it is not enough to suggest that APS need only file another rate case in order to  
23 timely recover capital expenditures and thereby avoid the effects of earnings attrition. In the  
24 wake of compelling evidence in this proceeding that APS has consistently under-earned its  
25 allowed ROE and will continue to do so for the foreseeable future because of the attrition of  
26 earnings resulting from huge capital expenditures, the Company submits that the Commission  
27 should take appropriate measure to limit the impact of such earnings attrition and thereby afford  
28 the Company a reasonable opportunity to earn its allowed ROE.

1 **H. The Commission Should Consider The Rate Adjustment Mechanisms Proposed By**  
2 **The Company, Including CWIP In Rate Base, Accelerated Depreciation, An**  
3 **Attrition Allowance And/Or A Higher Return On Fair Value Rate Base.**

4 Within the constitutional framework that requires that APS be allowed to recover its costs  
5 of service and be given a reasonable opportunity to earn a fair rate of return on its invested  
6 equity, the Commission certainly has broad discretion to determine how to achieve those goals.  
7 In his letter to the Company dated July 21, 2006 (APS Exhibit No. 5, Attachment DEB-11RB  
8 [Brandt]), Chairman Hatch-Miller seemed to recognize that point by requesting that the  
9 Company provide the Commission with testimony "on what measures the Commission could  
10 take" to help APS "gradually improve its creditworthiness" and ensure that the Company and its  
11 customers are not saddled with the added financing costs and possible capital expenditure  
12 ("CAPEX") disruptions that would result from a downgrade of APS to "junk" credit status.

13 In response to that letter from the Chairman, APS submitted with its Rebuttal Testimony  
14 of Mr. Wheeler, Mr. Brandt and Dr. Avera several measures for the Commission to consider  
15 (apart from the Company's rate proposal itself) that would address the Company's ongoing cash  
16 flow problems and the earnings attrition that result from the delay in recovering large capital  
17 expenditures. These measures included: (1) inclusion of construction work in progress  
18 ("CWIP") in rate base; (2) allowance of accelerated depreciation; (3) an attrition allowance to  
19 give the Company an opportunity to earn its allowed ROE, and (4) an increased return on "fair  
20 value" rate base. The Company submits that the Commission, consistent with the purpose and  
21 intent of the Chairman's July 21 letter, and in any event, should consider implementation of each  
22 of these measures in this case, not as additions to the rate increase requested by the Company,  
23 but rather as alternatives (in the event that any portion of the Company's rate request is not  
24 granted) to ensure that the Company's cash flow and permitted earnings do not continue to lag  
25 far behind that to which the Company needs and is constitutionally entitled.<sup>8</sup>

26  
27  
28 <sup>8</sup> The benefits of these suggested measures were well summarized by Mr. Fetter:

1           **1.       CWIP In Rate Base.**

2           As of June 30, 2006, the Company's CWIP accounts included \$261 million of generation  
3 and distribution plant expenditures. (APS Exhibit No. 24 at 17-18 [Fetter]). By placing these  
4 amounts in rate base, the Company would obtain cash flow to pay the financing costs it currently  
5 incurs on these existing expenditures. (APS Exhibit 5 at 25 [Brandt]). Specifically, inclusion of  
6 \$261 million of CWIP in rate base would increase APS's annual revenue by \$33 million. (*Id.* at  
7 25-26). This additional \$33 million in annual revenue would generate for the Company after  
8 taxes a total of \$20 million in positive cash flow annually. (*Id.*). As a result, the Company's  
9 FFO/Debt ratio would improve by an additional one-half percent in each of the next several  
10 years. (*Id.* at 27). Moreover, the inclusion of CWIP in rate base would not only improve the  
11 Company's credit metrics but would also reduce future revenue requirements from customers.  
12 (*Id.*).

13           Including CWIP in rate base does **not** increase the Company's earnings. (APS Exhibit  
14 No. 5 at 26 [Brandt]). As Mr. Brandt explained, because the Company would stop accruing  
15 Allowance for Funds Used During Construction ("AFUDC") on the CWIP investments that are  
16 placed in rate base, the loss of AFUDC would offset the earnings from the additional revenue  
17 generated by the CWIP inclusion. (*Id.*). In other words, inclusion of CWIP in rate base  
18 improves the Company's cash flow and credit metrics without increasing the Company's  
19 earnings.

20           Inclusion of CWIP in rate base is not a new concept. It has been utilized by this  
21 Commission in the past (Tr. Vol. I at 106 [Wheeler]; APS Exhibit No. 5 at 25 [Brandt]) and by  
22 other regulatory commissions when, as here, large capital expenditure obligations have the effect  
23 of eroding a company's current cash flow and, thereby, negatively impacting the company's  
24

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25           I encourage you to review and consider the ideas for reducing regulatory lag put forward by APS  
26 witnesses Steven Wheeler and Donald Brandt, as well as the thoughts of any other stakeholders  
27 who believe they know what can improve the process. The issue is important not only to regulated  
28 utilities in a growing service territory or customers when rates deserve to go down, but also  
          especially to financial community investors who spend everyday matching up risk and return. . . .  
          Arizona is competing with other jurisdictions all the time [for investment funds]. Competitiveness  
          in this context is measured by fair returns and timely processes.

(APS Exhibit No. 24 at 17-18 [Fetter]).

1 FFO/Debt ratio. For example, Mr. Fetter discussed the decision last year by the Colorado Public  
2 Utility Commission to allow Public Service Company of Colorado (Decision No. CO6-1379) to  
3 include CWIP in rate base and the decision just a few months ago by the Missouri Commission  
4 (Case No. EO 2005-0329) to allow KCPL to include CWIP in rate base – both for the stated  
5 purpose of improving current cash flow and related credit metrics of those companies while they  
6 undertake much smaller capital expenditure programs than APS must undertake. (APS Exhibit  
7 No. 23 at 25-28 [Fetter]). Commenting on this CWIP decision by the Colorado Commission,  
8 S&P applauded the forward thinking of the Colorado Commission, and went on to state:

9 This is a major step forward in eliminating the tug-of-war over cost recovery that, in the  
10 past, has plagued the credit of so many utilities when the time comes to build again.

11 (APS Exhibit No. 23 at 28 [Fetter Direct], citing *S&P Research: PS Colorado Earns Support*  
12 *for Credit Quality Up-Front; a Viable Model for the Electric Industry*, March 29, 2005).

13 Given the extraordinary circumstances in which the Company now finds itself – a credit  
14 rating on the brink of “junk” status due to lingering cash flow and earnings shortfalls – the  
15 inclusion of CWIP in rate base is a sensible (albeit limited) step by the Commission to protect  
16 the creditworthiness of the Company and prevent needless added financing costs for the  
17 Company’s customers. No party to this proceeding has presented any contrary evidence or  
18 arguments.

## 19 2. Accelerated Depreciation.

20 Like the inclusion of CWIP in rate base, an allowance for accelerated depreciation is a  
21 sensible regulatory measure to help improve the Company’s cash flow, and, therefore, the  
22 Company’s creditworthiness, without increasing the Company’s earnings as a result.

23 Total Company depreciation expense in the September 30, 2005 Test Year was  
24 approximately \$350,000,000 per year after pro forma adjustments. (APS Exhibit No. 5 at 24  
25 [Brandt]). With projected capital spending of about \$900,000,000 per year for the next three to  
26 five years, the imbalance between expenditure and recovery – averaging about \$550 million per  
27 year – contributes dramatically to the financial strain on the Company’s creditworthiness because  
28 the Company must finance this “gap” in the capital markets. (*Id.*). Accelerating some of this

1 depreciation expense has the beneficial impact of increasing cash flow, thereby increasing FFO.  
2 (*Id.*). For example, an allowance of \$50,000,000 per year in accelerated depreciation would  
3 generate about \$30,000,000, after income taxes, of additional positive cash flow, which would  
4 have the effect of improving the Company's FFO/Debt ratio by about seven-tenths of a percent  
5 in each of those years. (*Id.* at 25).

6 Even Staff witness Dittmer seemed to acknowledge the benefits of an allowance for  
7 accelerated depreciation as a means of improving cash flow without simultaneously increasing  
8 the Company's earnings:

9 Because there would be an increase in the recording of depreciation expense that would  
10 be equivalent to the increase in revenues being collected, the Company would not  
11 experience any reduction in earnings attrition. However, depreciation is a "non-cash"  
12 expense. Accordingly, the recovery of depreciation expense on an accelerated basis  
13 **would improve the Company's cash flow metrics.**

14 (Staff Exhibit No. 37 at 16 [Dittmer]). (Emphasis added).

15 In short, APS's earnings would remain the same with an allowance for accelerated depreciation,  
16 but the Company's cash flow and credit metrics would improve. (APS Exhibit No. 6 at 16  
17 [Brandt]). As such, an allowance for accelerated depreciation – like the inclusion of CWIP in  
18 rate base – is a sound regulatory measure for helping to improve APS's creditworthiness while  
19 also potentially saving money for customers if its use helps to avoid a slide by APS into "junk  
20 bond" credit status.

### 21 3. Attrition Allowance.

22 As discussed above, APS has consistently and substantially under-earned its allowed  
23 ROE over at least the last three to four years, and the reason is the lag between the Company's  
24 need to expend huge sums for expansion of plant and equipment to meet the needs of a rapidly  
25 growing customer base and the eventual recovery of those sums in future rate base adjustments  
26 approved by the Commission. (*See, also*, APS Exhibit No. 5 at 28 [Brandt]). This so-called  
27 "regulatory lag" (APS Exhibit No. 2 at 13-14 [Wheeler]; Tr. Vol. I at 105) is particularly  
28 detrimental to earnings where, as here, current rates are based on a historical Test Year even  
though substantial capital expenditures are projected for the years when the rates will be in

1 effect. (APS Exhibit No. 2 at 14-16 [Wheeler]).

2 As a preliminary matter, it should not be assumed that a company's level of earnings is  
3 not related to its creditworthiness and its perceived business risk among investors in debt  
4 securities. As both Mr. Brandt and Mr. Fetter explained, a company that consistently under-  
5 earns its allowed ROE is perceived to be riskier from a debt-security standpoint because there is  
6 added cash flow pressure and less margin available for payment of principal and interest on debt  
7 obligations if the company runs into financial difficulties. (APS Exhibit No. 6 at 33 [Brandt];  
8 APS Exhibit No. 24 at 9 [Fetter]). As Mr. Fetter put it:

9 The existence of equity in a utility capital structure provides a company with the capacity  
10 to tolerate the normal ups and downs that come with operational business risks, while  
11 also providing a cushion to a company's lenders and bondholders (fixed-income  
12 investors). Fixed-income investors look to the earnings of shareholders as an additional  
margin available for the payment of interest and principal under adverse business  
circumstances.

13 (*Id.* at 9).<sup>9</sup>

14 Having established – without dispute by any party – that the lag in recovering large  
15 capital expenditures has caused APS to substantially under-earn its allowed ROE in recent years  
16 and that such earnings attrition will continue into future years as the Company's capital  
17 expenditure obligations increase, an attrition allowance added to the Company's revenue  
18 requirements in this proceeding is both fair and appropriate. Indeed, with undisputed evidence in  
19 the record that the Company will not actually earn the allowed ROE set by the Commission in  
20 this proceeding, it raises serious constitutional issues for the Commission to ignore an attrition  
21 allowance under these circumstances. As the Arizona courts have stated:

22 [T]he rates established by the Commission should meet the overall operating costs of the  
23 utility and produce a reasonable rate of return. It is equally clear that the **rates cannot be  
considered just and reasonable if they fail to produce a reasonable rate of return.**

24  
25 <sup>9</sup> In this regard, RUCO witness Stephen Hill was just flat wrong when he testified that a company's allowed ROE or  
actual equity earnings do not influence the decisions of credit rating agencies. As recently as September 2006, S&P  
made it clear that its credit determination:

26 . . . focuses on the willingness and ability of regulation to provide cash flow and earnings quality  
27 adequate to meet investment needs, **earnings stability** through timely recognition of volatile cost  
components such as fuel, and **satisfactory returns of invested capital and equity.**

28 (APS Exhibit No. 6 at 13-14 [Brandt], quoting S&P Research: *Key Credit Factors: Assessing U.S. Vertically  
Integrated Utilities' Business Risk Drivers*, September 14, 2006).

1 *Scates v. Arizona Corporation Comm'n*, 118 Ariz. 531, 533-34, 578 P.2d 612, 614-15 (Ariz.  
2 App. 1978).

3 Certainly, setting an allegedly "reasonable" ROE that the Commission knows (or reasonably  
4 should know) cannot actually be earned under present circumstances fails the constitutionally-  
5 mandated "reasonableness" standard.<sup>10</sup>

6 In this instance, the Company has proposed an earnings attrition allowance of 1.7 percent  
7 to 4.1 percent, to be added to the Company's allowed ROE, depending on the amount of the rate  
8 increase granted by the Commission. (Tr. Vol. II at 407-412 [Brandt]). This proposed range of  
9 attrition allowances was calculated based on the expected percentage amount by which the  
10 Company will under-earn its allowed ROE in years 2007 and 2008 due to the above-described  
11 regulatory lag associated with the Company's planned capital expenditures during those years.  
12 (*Id.*). In other words, simple math determines that, under present circumstances, APS will not  
13 have an opportunity to earn its allowed ROE unless the Commission adds the attrition  
14 allowances discussed above. Moreover, adding such an attrition allowance does not increase the  
15 Company's earned ROE to a level higher than the cost of capital, as found by the Commission,  
16 but rather allows the Company the opportunity to earn the cost of capital to which it is entitled.

#### 17 **4. Adjustment to Return on Fair Value.**

18 If the Commission is unwilling to address the Company's critical need for its requested  
19 additional revenues through one or more of the above techniques, there remains one other avenue  
20 of relief. The Commission has historically set the return on "fair value" rate base to produce the  
21 utility's weighted cost of capital. However, the Commission has likewise made it clear that such  
22 a return on "fair value" is the minimum reasonable return under Arizona's Constitution, thus  
23 clearly allowing the Commission to establish a higher return if such is necessary to produce "just  
24 and reasonable" rates. (Decision No. 53537 [April 27 1983]; APS Exhibit No. 2 at 19  
25 [Wheeler]).

26 <sup>10</sup> The downward trend of the Company under-earning its allowed ROE over the last five years, even apart from the  
27 attrition projections for future years, is strong evidence that the Company does not have a reasonable opportunity to  
28 earn its allowed ROE because of large capital expenditure commitments. See the chart at page 71 of DEB-10RB  
which discloses that the Company's adjusted ROE has fallen from 15.1 percent in 2001 (a year in which the  
Company lowered rates pursuant to an ACC Order) to 7.2 percent in 2003 and then to 5.7 percent as of June 2006.  
(*Id.* at 4).

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IV.

**BASE FUEL COST AND POWER SUPPLY ADJUSTOR**

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It is important to note what is NOT at issue in this matter. First, no party has suggested, let alone recommended, that the PSA be eliminated or weakened. Second, ALL the parties submitting testimony relative to the PSA have either proposed or supported changes to the mechanism to enhance the timely and full recovery by APS of prudent fuel and purchased power costs. And third, ALL such parties have recommended a significant increase in the Base Fuel Cost used to determine the level of fuel cost deferrals authorized under the PSA.

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The Company itself has proposed several structural changes to the existing PSA, both as originally approved in Decision No. 67744 and as modified by Decision No. 68437 (February 2, 2006). These are set forth at page 22 of the Direct Testimony of Donald G. Robinson (APS Exhibit No. 7) and include:

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- 1) Elimination of the Total Fuel Cost Recovery Cap of \$776.2 million established by Decision No. 67744 (and which has been effectively suspended by Decision Nos. 68437 and 68685 pending the resolution of this case);
  - 2) Elimination of the four mill cumulative "lifetime" cap on the Annual PSA Adjustor and its replacement with a four mill annual cap;
  - 3) Elimination of the 90/10 cost sharing mechanism established by Decision No. 67744 for the following elements of fuel and purchased power costs:
    - a. the costs of renewable energy acquired from third parties and not otherwise recoverable under the Environmental Portfolio Standard/Renewable Energy Standard; and
    - b. the demand component of any long-term purchased power agreement acquired via a competitive procurement process;
  - 4) Removal of 10 percent of hedging gain/losses from the 90/10 sharing, thus effectively increasing the sharing of such gains/losses to 80/20; and
  - 5) Elimination of the requirement for mandatory PSA surcharge applications whenever the level of deferrals reaches \$100,000,000.

In addition to these structural changes to the PSA, APS seeks to increase the Base Fuel Cost to 3.2491¢/kWh to reflect estimated 2007 fuel and purchased power costs. (APS Exhibit No. 18 at 2 [Ewen]). APS is further asking to add the Federal Energy Regulatory Commission

1 ("FERC") Fuel Account No. 557 (Broker Fees) to the costs recoverable through the PSA. (APS  
2 Exhibit No. 16 at 10-11 [Ewen]; Tr. Vol. XXIII at 4438-39 [Ewen]). Such broker costs were  
3 excluded from the PSA in Decision No. 68437 for reasons that do not exist in this proceeding, as  
4 will be discussed below, and their continued exclusion from the PSA would result in the  
5 complete disallowance of what no party has contested is not a prudent and reasonable cost of  
6 acquiring fuel and purchased power.

7 **A. Base Fuel Cost.**

8 APS has calculated its proposed Base Fuel Cost using the methodology suggested by  
9 Staff witness Antonuk for determining 2007 fuel and purchased power costs. (APS Exhibit No.  
10 18 at 4-5 [Ewen]). In his Supplemental Testimony, Mr. Antonuk agreed that the 3.2491¢/kWh  
11 figure was a reasonable estimate of 2007 fuel and purchased power costs. (Staff Exhibit No. 30  
12 at 23 [Antonuk]). Unlike the Base Fuel Cost proposals in the Company's Direct and Rebuttal  
13 testimonies APS has not annualized price changes scheduled to take effect in 2007 nor has it  
14 annualized generation levels for end of year customers. Both these omissions reduced the 2007  
15 Base Fuel Cost compared to the methodology used by APS in its prior testimony and used by the  
16 Commission in establishing the Base Fuel Cost in Decision No. 67744. For this reason, APS  
17 believes a Base Fuel Cost of 3.2491¢/kWh is a very reasonable, even conservative, estimate of  
18 what fuel costs will be in 2007.

19 Moreover, the 3.2491¢ figure is an annual average cost that includes the lower fuel and  
20 purchased power costs generally incurred by APS during the non-summer months of the year.  
21 (APS Exhibit No. 105 at 5). As shown in APS Exhibit No. 105, costs during the peak use  
22 months of 2007 would be 3.6915¢/kWh. (*Id.*). Assuming the Company's proposed Base Fuel  
23 Cost was adopted effective May 1, 2007, APS still projects an unrecovered balance of 2007 fuel  
24 and purchased power costs of \$58 million.

25 RUCO, AECC and Staff have all proposed lower Base Fuel Costs. In part, the  
26 differences reflect the use of staler prices (November 30, 2005, in the case of RUCO and  
27 February 28, 2006, in the case of AECC), but a more significant distinction is that they reflected  
28 estimates of costs for 2006 rather than the period rates established in this proceeding which will

1 actually become effective.<sup>11</sup> If these lower Base Fuel Costs are adopted without simultaneous  
2 adoption of the Staff's proposed prospective adjustor, annual PSA deferrals at 2007 levels would  
3 increase by roughly \$30 million for every mill that the Base Fuel Cost is set below 3.2491¢/kWh.  
4 The required adjustments to the PSA in 2008 would be increased by the same amounts.

5 Under Staff's recommendation, the problem of massive under-collections of 2007 fuel  
6 and purchased power costs, estimated at approximately \$130 million, is addressed by  
7 simultaneously implementing a forward-looking PSA adjustor equal to the difference between  
8 Staff's Base Fuel Cost of 2.7975¢ and the 2007 figure of 3.2491¢ – the APS Rejoinder  
9 recommendation to which Mr. Antonuk agreed in his Supplemental Testimony. (APS Exhibit  
10 No. 17 at 7 [Ewen]; Tr. Vol. XXIII at 4441-4442 [Ewen]; Staff Exhibit No. 30 at 23 [Antonuk]).  
11 Although mathematically identical to the Company's proposal, APS sees no purpose served by  
12 deliberately understating the Base Fuel Cost. Even if Staff's entire PSA structure is to be  
13 adopted, there was some continued lack of clarity concerning the procedural details of how the  
14 so-called "forward element" of the Staff PSA would be established for 2008. Using the  
15 Company's Base Fuel Cost of 3.2491¢/kWh would obviate the need for setting a "forward  
16 component" to the PSA in 2007, or more precisely, that "forward component" could be set at  
17 zero. (Tr. Vol. V at 109 [Ewen]). Between the time a decision is made in this proceeding and  
18 the Fall of 2007, the procedural details of implementing the Staff's PSA proposal going forward  
19 can be fleshed out prior to any filing for a PSA "forward component" to be applicable in 2008.<sup>12</sup>

20 The RUCO proposal of 3.1202¢/kWh is the same as the Company's originally  
21 recommended Base Fuel Cost of 3.1904¢, adjusted for the withdrawal of the APS proposal to  
22 increase the sharing of hedging gains and losses. (RUCO Exhibit No. 21 at 1 [Hornby]).  
23 Although relatively close to the Company position, RUCO's Base Fuel Cost would still result in

24 \_\_\_\_\_  
25 <sup>11</sup> The Staff calculation of Base Fuel Costs for 2006 has other inaccuracies, such as the inclusion of non-recurring  
26 revenues that have already been credited to the 2006 PSA deferral accounts and its reflection of the reduced fuel  
27 costs attributable to the Company's approved DSM programs, while at the same time other Staff witnesses were  
28 rejecting the corresponding revenue adjustment.

<sup>12</sup> As of the filing of this Initial Post-Hearing Brief, Staff has not filed a revised Plan of Administration ("POA") to  
implement its PSA proposal as amended by the testimony of Staff witness Antonuk. However, with the changes  
suggested in this Section of the Company's Initial Post-Hearing Brief, APS believes the Commission can and should  
approve either the Staff POA or the Company's POA to with no Party has expressed any exception to other than the  
substantive dispute between APS and AECC over proposed changes to the 90/10 penalty provision.

1 many millions of dollars in unnecessary PSA deferrals in 2007, with additional interest, all of  
2 which would then be passed on to customers in 2008.

3 The AECC position on Base Fuel Cost (2.9419¢/kWh) is premised on using the estimates  
4 of 2006 fuel costs presented during the emergency rate case proceeding. (AECC Exhibit No. 4 at  
5 6 [Higgins]). Although there has been significant price volatility since the February 28, 2006  
6 date used for the emergency rate case estimate, the primary reason the AECC proposal so  
7 significantly understates 2007 fuel and purchased power costs is that, like Staff's Base Fuel Cost,  
8 it is mired in 2006 data that ignores the higher utilization of gas generation and purchased power  
9 in 2007, including the recently executed contracts resulting from the RFP referenced in the 2004  
10 APS Settlement and Decision No. 67744, as well as other contractual price changes in 2007.  
11 (*See, Id.* at 6; APS Exhibit No. 17 at 8-9 [Ewen]).

12 **B. PSA.**

13 **1. 90/10 Sharing.**

14 The need to establish an accurate Base Fuel Cost is heightened to the extent the  
15 Commission retains significant elements of the present 90/10 sharing. In practice, the 90/10  
16 sharing feature has served as a penalty provision that automatically denies APS's recovery of 10  
17 percent of its increased fuel and purchased power costs. (APS Exhibit No. 8 at 7 [Robinson]).  
18 Mr. Antonuk, the Staff's consultant on PSA issues, agreed that the 90/10 sharing feature would  
19 result in the non-recovery of costs APS would reasonably expect to occur. (Tr. Vol. XXII at  
20 4149 [Antonuk]).

21 Staff's PSA proposal would completely eliminate the 90/10 penalty provision. Mr.  
22 Antonuk described it as a "blunt instrument" at best with regard to providing an incentive, and he  
23 suggested that the Commission focus in on the "drivers" of fuel cost. (Tr. Vol. XXI at 3896).  
24 APS believes Staff has made a valid point and that, rather than attempt to modify the 90/10  
25 provision to alleviate some of its most obvious inequities, eliminating it is appropriate, especially  
26 in view of the findings by Liberty Consulting and R.W. Beck concerning the overall prudence  
27 and effectiveness of the Company's fuel procurement and hedging practices. (Staff Exhibit No.  
28 33 at 6-7 [Fuel Audit]; APS Exhibit No. 72 at 5-1 through 5-4 [R.W. Beck]).

1           Although the APS proposed changes to the PSA did not eliminate this penalty feature, it  
2 would somewhat ameliorate its punitive impact both through the establishment of a realistic Base  
3 Fuel Cost and the exclusion from the sharing mechanism of two specific categories of purchased  
4 power costs. The most significant of these is the fixed or demand element of long-term Purchase  
5 Power Agreements (“PPAs”) acquired through competitive procurement. (APS Exhibit No. 7 at  
6 25 [Robinson]). APS is also asking that renewable energy purchases not otherwise recoverable  
7 through the EPS/RES be excluded. (*Id.* at 24-25).<sup>13</sup>

8           The rationale for excluding the former category of purchased power costs is simple. APS  
9 has, through the competitive procurement process, already received the best deal available.  
10 Although the variable portion of a PPA (which would remain subject to 90/10 sharing) can be  
11 affected, at least marginally, by APS dispatch and gas procurement policies, the demand  
12 component is fixed. Thus, there can be no further action by APS to reduce that cost component.  
13 Clearly, in such instances, the application of any manner of sharing mechanism is no more than a  
14 penalty for entering into PPAs with demand cost components, irrespective of their overall  
15 economics for APS customers. (*Id.* at 8).

16           Renewable resources have been and should continue to be encouraged by the  
17 Commission as a matter of public policy. These resources are generally higher cost than so-  
18 called conventional resources, and, thus, it is patently unfair to penalize the Company for 10  
19 percent of such additional costs. (*Id.* at 24-25).

20           RUCO supports this change to the PSA. (RUCO Exhibit No. 26 at 17-18 [Diaz Cortez]).  
21 Staff has suggested that the entire 90/10 sharing arrangement be abandoned; thus, APS would  
22 assume that Staff would also support the Company’s position on this issue even if other elements  
23 of its PSA proposal were not adopted by the Commission.

24           AECC opposes any modification of the 90/10 sharing on the grounds that no exceptions  
25 were made in the original 2004 APS Settlement. (AECC Exhibit No. 4 at 15-16 [Higgins]).  
26 AECC does not contend that the 90/10 provision, at least as applied to these two categories of  
27 PPA costs, is an effective “incentive” to APS for further cost containment. Neither does AECC

28 <sup>13</sup> Obviously, both these proposals are moot if the 90/10 penalty provision is removed, as has been suggested by Staff.

1 dispute the testimony by APS that both cost elements have become significantly larger  
2 components of overall fuel and purchased power costs as a direct result of other elements to the  
3 2004 APS Settlement and Decision No. 67744. (APS Exhibit No. 8 at 7-8 [Robinson]). Finally,  
4 AECC itself has suggested changes to the rate design agreed to in the Settlement (as is its right)  
5 and, thus, its contention that the 90/10 penalty provision to the PSA is somehow sacrosanct rings  
6 particularly hollow. (*Id.*).

7 **2. Broker Fees.**

8 APS and each of the other parties<sup>14</sup> have included approximately \$200,000 in broker fees  
9 in their calculation of Base Fuel Cost. (Tr. Vol. XXIII at 4438 [Ewen]). It is undisputed that  
10 such fees are a legitimate cost of acquiring fuel and purchased power for the benefit of APS  
11 customers. (Tr. Vol. XXI at 4010 [Antonuk]). Staff has proposed that such costs nevertheless be  
12 excluded from the costs recoverable through the PSA. (Staff Exhibit No. 30 at 8 [Staff PSA Plan  
13 of Administration]; Tr. Vol. XXI at 4010 [Antonuk]). This has the effect of not only denying to  
14 the Company any recovery of cost increases attributable to such fees, but also effectively denies  
15 recovery of even the amount included in the Base Fuel Cost. (Tr. Vol. XXI at 4010 [Antonuk]).

16 In Decision No. 68437, the Commission denied recovery of broker fees through the PSA  
17 because it believed that they had been excluded from the Base Fuel Cost established in Decision  
18 No. 67744, and that such exclusion might result in double-recovery of such fees. (Decision No.  
19 68437 at 25). Whether either the assertion in Decision No. 68437 about the calculation of Base  
20 Fuel Cost in Decision No. 67744 or the potential for over-recovery were accurate in the first  
21 instance is beside the point. There is no disagreement that they are included in Base Fuel Costs  
22 in this proceeding, that they are legitimate and necessary costs of fuel and purchased power  
23 procurement, and that their exclusion from the PSA would result in a complete disallowance of  
24 such costs.

25 **3. Four Mill Cap / Total Fuel Cost Recovery Cap / Mandatory Surcharge**  
26 **Application / Hedging Gains And Losses.**

27 There is no disagreement by any of the parties with the Company's position on the first

28 <sup>14</sup> The RUCO, Staff and AECC Base Fuel Cost recommendations are all variants of the original Base Fuel Cost proposed by APS and, thus, implicitly reflect the level of broker fees included by APS.

1 three of these proposed changes to the PSA. The Company has since withdrawn the fourth  
2 proposal and would treat hedging gains and losses just like other fuel and purchased power costs,  
3 which is the position explicitly taken by RUCO and AECC and not inconsistent with the Staff's  
4 position, which would eliminate the 90/10 sharing provision in its entirety.

5 **4. Plan Of Administration ("POA").**

6 Both APS and Staff submitted POAs to implement their respective recommendations  
7 relative to the PSA. (APS Exhibit No. 70, Attachment DJR-5RB [Rumolo]; Staff Exhibit No. 30  
8 at Staff's Proposed Plan of Administration [Antonuk]; Staff Exhibit No. 31 at Staff's Irrata to  
9 Plan of Administration [Antonuk]). With the exception of the substantive disputes over the level  
10 of Base Fuel Cost and application of the 90/10 penalty provision, there were no reservations  
11 expressed by the Parties concerning the Company's PSA POA.

12 As to Staff's POA, Mr. Antonuk made several oral revisions to that POA during his  
13 testimony at hearing. (Tr. Vol. XXI at 3870-75 [Antonuk]; Tr. Vol. XXII at 4123-32  
14 [Antonuk]). Most were ministerial, but the more significant change was to permit those PSA  
15 charges in effect at the time the Commission adopts Staff's PSA to run their course rather than  
16 being swept into some "Transition Component" of the PSA. These could include (depending on  
17 the timing of a final order in this proceeding) the: Step 1 surcharge (ends of its own terms on  
18 May 1, 2007); Step 2 surcharge (would begin coincident with rates in this proceeding, and per  
19 the recommendations of both Staff and APS, extend for twelve months); 2007 annual PSA  
20 Adjustor (would run from February 1, 2007 through January 31, 2008); and the Interim PSA  
21 Adjustor (ends coincident with an order in this proceeding). If these changes were made and the  
22 Base Fuel Cost be set at \$.032491 and the POA be amended to include broker fees, APS can  
23 support adoption of the Staff's POA. (Tr. Vol. XXIII at 4314-16 [Rumolo]; Tr. Vol. XXIII at  
24 4437-40 [Ewen]).

25 All parties expressing an opinion on the issue urged the Commission to approve a POA in  
26 its order in this proceeding. (Tr. Vol. XIV at 2948 [Rumolo]; Tr. Vol. XVIII at 3401 [Diaz  
27 Cortez]). APS believes this to be imperative so that whatever changes to the PSA are authorized  
28 in this docket can be implemented immediately and without controversy. Either the Company

1 POA or the Staff's POA, with the changes discussed herein, provides an adequate framework for  
2 implementing their respective PSA proposals.

3 V.

4 **OPERATING INCOME AND RATE BASE ADJUSTMENTS**

5 **A. Jurisdictional Allocation Of Rate Base And Operating Income Adjustments.**

6 Although APS and certain other parties disagreed over the propriety and calculation of a  
7 number of rate base and operating income adjustments, there was no issue concerning the  
8 Company's allocation of rate base and operating income adjustments as between the ACC  
9 jurisdiction and that of other bodies. Thus, in the discussion of these issues, APS will use ACC  
10 jurisdictional amounts, which may at times vary slightly from the amounts referenced in some of  
11 its witnesses' testimonies. See, Consolidated Standard Filing Requirements Final APS  
12 Position,<sup>15</sup> attached hereto as "APS Initial Brief Exhibit 5".

13 **B. Pro Forma Adjustments Affecting Rate Base.**

14 **1. Uncontested Rate Base Adjustments.**

15 **a. Sundance Units**

16 The Company is seeking the Commission's determination that the acquisition of the  
17 Sundance Units was prudent,<sup>16</sup> that the assets are "used and useful", and that APS be accorded  
18 full cost recovery under traditional cost-of-service principles in this rate case. The Sundance  
19 Units were acquired on May 13, 2005 for \$189,500,000. (APS Exhibit No. 56 at 16  
20 [Rockenberger]). APS is seeking to include this amount as part of its rate base in this rate case.  
21 (*Id.*). Both Staff and RUCO affirmatively stated that the acquisition of the Sundance Units was  
22 prudent. (Staff Exhibit No. 34 at 95 [Dittmer]; RUCO Exhibit No 29 at 3 [Schlissel]). No other  
23 party to this proceeding has suggested otherwise.

24 **b. Spent Fuel Storage.**

25 There is no dispute to the Company's final adjustment to reduce rate base in the amount

26 <sup>15</sup> The Company has prepared Consolidated Schedules by adding the pro forma adjustments from its Direct, Rebuttal  
27 and Rejoinder positions to show the complete impact of the Company's request. These Consolidated Schedules are  
28 attached hereto as APS Initial Brief Exhibit No. 5.

<sup>16</sup> FERC issued a Letter Order on May 6, 2005, approving the acquisition of Sundance from PP&L Sundance  
Energy, LLC ("PPL"). (APS Exhibit No. 46 at 3 [Dinkel]; *Id.* at Attachment PD-2). The sale and purchase  
transaction closed on May 13, 2005. (APS Exhibit No. 46 at 3 [Dinkel]).

1 of \$5,775,000,<sup>17</sup> which represents the Company's ACC Jurisdictional portion of current on-going  
2 and future activities to transfer spent nuclear fuel to an interim Spent Fuel Storage facility. *See*,  
3 APS Initial Brief Exhibit 5, Schedule B-2, Column 3.

4 **c. Palo Verde Unit 1 Steam Generators.**

5 There is no dispute to the Company's final adjustment to increase rate base in the amount  
6 of \$ 81,941,000,<sup>18</sup> which represents the Company's ACC Jurisdictional portion of the costs  
7 associated with the replacement and retirement of steam generators and related equipment for  
8 Unit 1 that occurred in 2005. *See*, APS Initial Brief Exhibit 5, Schedule B-2, Column 4.

9 **d. Long Term Disability (SFAS 112).**

10 There is no dispute to the Company's final adjustment to reduce rate base in the amount  
11 of \$ 3,661,000,<sup>19</sup> which represents the Company's ACC Jurisdictional portion of deferred credits  
12 for long term disability (SFAS 112) related to expenses for employees on long-term disability.  
13 *See*, APS Initial Brief Exhibit 5, Schedule B-2, Column 6.

14 **e. Regulatory Disallowance Of West Phoenix Unit 4.**

15 There is no dispute to the Company's final adjustment to reduce rate base in the amount  
16 of \$11,155,000, which represents both the Total Company and ACC Jurisdictional regulatory  
17 disallowance required by Decision No. 67744 for one of the generating units, West Phoenix Unit  
18 4, that was not reflected on the Company's books per GAAP, and as adjusted for the actual  
19 transfer date from Pinnacle West Energy Company ("PWEC") to APS. (APS Exhibit No. 56,  
20 Attachment LLR1-2 [Rockenberger]). *See*, APS Initial Brief Exhibit 5, Schedule B-2, Column 2.

23 \_\_\_\_\_  
24 <sup>17</sup> In this case, the Company's testimony referenced an amount of \$5,869,000, which represents the Total Company  
figure. (APS Exhibit No. 56 at Attachment LLR 1-3 [Rockenberger]).

25 <sup>18</sup> In this case, the Company's testimony referenced an amount of \$82,896,000, which represents the Total Company  
figure. (*Id.* at Attachment LLR 1-4). After the Company's January filing, RUCO identified an error in the  
26 Company's rate base pro forma related to the retirement of turbine rotors associated with the original Unit 1 steam  
generators and proposed a rate base adjustment to reflect that retirement. The Company agreed with RUCO's  
27 recommendation to record retirement of original steam generators by decreasing plant assets and accumulated  
depreciation by \$36,684,000. (APS Exhibit No. 57 at 11 [Rockenberger]). This had no effect on rate base, but it did  
have an impact on depreciation expense.

28 <sup>19</sup> In this case, the Company's testimony referenced an amount of \$3,886,000, which represents the Total Company  
figure. (APS Exhibit 49, Attachment CNF-5RB [Froggatt]).

1           **2. Contested Rate Base Adjustments.**

2                   **a. Allowance for Working Capital.**

3           Working capital consists of four basic components: fuel inventories; materials and  
4 supplies; prepayments; and, cash working capital. There is no dispute as to the first three of  
5 these elements. The issue of cash working capital is another matter, and there the Parties are in  
6 significant disagreement. APS's position is that it has an overall jurisdictional working capital  
7 requirement of \$148,089,000, consisting of \$76,849,000 for fuel inventories; \$95,836,000 for  
8 materials and supplies; \$4,968,000 for prepayments; and a negative cash working capital  
9 requirement (which partially offsets the other three components) of \$29,565,000.<sup>20</sup> The  
10 difference between the Company's allowance for working capital in its original filing and the  
11 Company's revised rebuttal allowance for working capital of \$148,089,000 results in a net  
12 reduction of cash working capital of \$4,344,000<sup>21</sup> as reflected on APS Initial Brief Exhibit 5,  
13 Schedule B-2, Column 7.

14           According to *Accounting for Public Utilities*:

15           Working capital is the average amount of capital provided by investors in the company,  
16 over and above the investment in plant and other specifically identified rate base items, to  
17 bridge the gap between the time expenditures are required to provide service and the time  
collections are received for that service.

18           ROBERT L. HAHNE & GREGORY E. ALIFF, *ACCOUNTING FOR PUBLIC UTILITIES* 5-2 (1990).

19           Unlike other rate base elements, which can be taken directly from the Company's balance sheet  
20 with or without adjustments, cash working capital is a calculated number that identifies the  
21 additional cash investment made in the Company in order to operate and maintain its electric  
22 system on a daily basis. Simply put, if cash revenues are received after an expense has been  
23 incurred and reflected on the Company's income statement or balance sheet, investors have to  
24 provide funds to bridge that gap. If cash is received prior to that expense being incurred, the  
25 opposite is true, *i.e.*, customers are providing that bridge and should receive credit in the form of  
26 an offset to the utility's rate base.

27           In this instance, the primary dispute relative to cash working capital is not in the

28           <sup>20</sup> APS Exhibit No. 69, Attachment DJR-1, Schedule GJ, p. 1 Column (1) [Rumolo].

<sup>21</sup> APS Initial Brief Exhibit 5, Schedule B-3, Column 7(N).

1 calculation of lead/lag days, but the elements of cost of service that ought to be reflected in the  
2 calculation. APS believes that both depreciation and deferred taxes generate additional  
3 investment needs that must be reflected in rate base as part of the Allowance for Cash Working  
4 Capital, while Staff and RUCO do not. (APS Exhibit No. 66 at 2-3 [Balluff]). Staff and RUCO  
5 also use the lag in the payment of interest expense to further reduce cash working capital while  
6 ignoring the more than offsetting lag in the receipt of equity returns. (*Id.*). Finally, Staff has  
7 excluded the amortized expense of pre-paid insurance costs and nuclear fuel from its lead-lag  
8 study. (Staff Exhibit No. 34, Attachment JRD-A; APS Exhibit No. 66 at 10 [Balluff]).

9       It is indisputable that the construction of depreciable utility plant, which gives rise to both  
10 depreciation and deferred taxes, involves a cash investment. It is equally clear that the utility is  
11 entitled to a return on that investment until it has been recovered from customers in the form of  
12 cash receipts. When depreciation expense is recorded and deferred income tax charges are  
13 recorded, accumulated depreciation and deferred income tax credits are recorded. The reserve  
14 for accumulated depreciation and the accumulated balance of deferred taxes offset the  
15 investment in plant for ratemaking purposes. (*Id.* at 3-4 [Balluff]). Those two reserves, which  
16 reduce rate base, are credited (increased) monthly based on the depreciation and deferred tax  
17 expense recorded for the month. The corresponding cash receipts will not be received until the  
18 following billing month. Because the Company's rate base is reduced by the **recorded** level of  
19 accumulated depreciation and deferred taxes (rather than the **received** level of actual cash  
20 recovery), there is a gap between when customers are credited (through a rate base deduction) for  
21 their payment of depreciation expense and deferred tax expense and the time they actual pay for  
22 these items. (APS Exhibit No. 65 at 10-11 [Balluff]). This gap represents additional investment  
23 by the Company that must either be reflected in the calculation of cash working capital or  
24 recognized as direct adjustments to the depreciation and deferred tax reserves. Exclusion of  
25 depreciation expense alone prevents APS from earning a return on over \$32,000,000 of  
26 unrecovered invested capital. (APS Exhibit No. 66 at 3 [Balluff]). Excluding deferred tax  
27 expense leads to another understatement of rate base of \$7,872,000. (APS Exhibit No. 65 at  
28 Attachment FB-1 [Balluff]).

1 APS is aware that the Commission has rejected the inclusion of depreciation and deferred  
2 taxes in prior decisions. As the arguments on this issue have become focused, an increasing  
3 number of jurisdictions have taken a new look and have concluded that one or both of these costs  
4 are appropriate elements of cash working capital. A few examples of states that have included  
5 depreciation and deferred income taxes in lead lag studies are: South Carolina, where these items  
6 must be included in a lead lag to reflect the delay in the collection of these components of  
7 revenue;<sup>22</sup> Connecticut, where the Department of Public Utility Control agreed that no-cash  
8 expenses such as depreciation, amortization, and deferred income taxes create a working capital  
9 requirement;<sup>23</sup> and California, which includes both depreciation expense and deferred taxes at  
10 zero lag days because of the reduction of rate base by accumulated depreciation and deferred  
11 income taxes.<sup>24</sup>

12 The Commission has previously taken conflicting positions on the use of interest  
13 expense, adopting it in Decision No. 55931 (April 1, 1988), while admitting in that same  
14 Decision that it had previously rejected the concept. (Decision No. 55931 at 67). The testimony  
15 in this case is that the lag in paying interest, a non-operating expense, is an inherent part of the  
16 return to equity investors, *i.e.*, part of the "leverage" provided by debt capital to equity. If it is  
17 appropriate to include the interest component of the return in the calculation of cash working  
18 capital, it is necessary to include the entire rate base (including the weighted cost of debt) in the  
19 calculation of working capital. (APS Exhibit No. 66 at 11 [Balluff]). To use it to reduce rate  
20 base is tantamount to making equity investors use a component of their rightful return to finance  
21 plant used to serve APS customers. Moreover, as Mr. Balluff pointed out, there is also a lag in  
22 the receipt by equity investors of their return. If one form of investment (*i.e.*, debt) is to be  
23 factored in the calculation of cash working capital, then all other forms should be in play, which  
24 would have increased the Company's overall cash working capital allowance from that  
25 requested. (*Id.*)

26 <sup>22</sup> In re Application of South Carolina Electric & Gas Company for Adjustments in the Company's Electric Rate  
Schedule and Tariffs, Docket No. 88-681-E – Order No. 89-588 at 37 (July 3, 1989).

27 <sup>23</sup> DPUC Review of the United Illuminating Company's Rate Filing and Rate Plan Proposal, Docket No. 01-10-10 at  
44 (Sept. 26, 2002).

28 <sup>24</sup> See, generally, Water Division, California Public Utilities Commission, Standard Practice U-16-W, Determination  
of Working Cash Allowance (May 16, 2002).

1           Although the impacts of excluding the amortization of prepaid insurance costs (\$500,000)  
2 and nuclear fuel amortization (\$3,500,000) from the Staff lead-lag study are relatively small,  
3 Staff has simply provided no explanation for this departure from normal practice other than to  
4 declare the expense “non-cash.” RUCO, which supported Staff on the other cash working capital  
5 issues, did not propose a similar insurance adjustment. (APS Exhibit No. 66 at 10 [Balluff]).

6                           **b.       Bark Beetle Regulatory Asset.**

7           In Decision No. 67744, the Commission authorized APS to defer the reasonable and  
8 prudent costs of bark beetle remediation that exceeded 2002 Test Year levels of tree and brush  
9 control. The Company began deferring costs in 2005 to ensure that the allowable deferred costs  
10 were properly calculated. (APS Exhibit No. 57 at 13 [Rockenberger]). The Company has  
11 estimated a Total Company deferral of distribution-related bark beetle remediation costs of  
12 \$11,622,000 at December 31, 2006, which adds \$4,360,000 to APS’s rate base. *See*, APS Initial  
13 Brief Exhibit 5, Schedule B-2, Column 5.<sup>25</sup>

14           The only disputes related to the bark beetle remediation costs is the time period for which  
15 the Company can recovery its remediation expenditures, as discussed in detail in section  
16 V.C.2(a), below. The required rate base adjustment is, of course, dependent upon the  
17 Commission’s resolution of that “time period” issue.

18                           **c.       Investment Tax Credit**

19           Prior to 1987, federal ITCs that were related to the construction and acquisition of utility  
20 plant had been available to corporate utility taxpayers. The Tax Reform Act of 1986 generally  
21 eliminated the ITC for tax years beginning in 1987, concurrent with implementation of a lower  
22 corporate federal income tax rate. (Staff Exhibit No. 34 at 100 [Dittmer]). The ITCs at issue in  
23 this rate case were realized by APS as a result of the Company’s recent claim requesting  
24 additional credits for a specific transition period (1986 – 1990) that was permitted after repeal of  
25

26 <sup>25</sup> The Company’s rate base calculation was reduced from its original filing of \$6,115,000 (APS Exhibit No. 56,  
27 Attachment LLR-1-5 [Rockenberger]) by \$1,755,000, which includes a reduction of \$2,793,000 for accumulated  
28 deferred income taxes, partially offset by a \$1,038,000 rate base increase comprised of a \$705,000 addition to correct  
the calculation for the actual September 30, 2005, deferred bark beetle remediation costs, and a \$333,000 addition to  
increase the projected bark beetle remediation cost deferrals through December 31, 2006. (APS Exhibit No. 57 at 13-  
14 [Rockenberger]).

1 the ITCs. (APS Exhibit No. 49 at 9-10 [Froggatt]). As with the out of period tax consulting fee  
2 discussed above, these related tax credits are non-recurring and clearly unrelated to the Test Year  
3 and should, therefore, not be included in the regulated cost of service, independent of the issues  
4 of their permitted ratemaking treatment under federal tax law and the prior decisions of this  
5 Commission. (*Id.* at 8).

6 Staff has recommended an offset to rate base by 100% of the unamortized balance of the  
7 ITC (1986 through 1990) for plant that was not fully depreciated as of the Test Year, less the  
8 fees paid to Deloitte and Touche to obtain these additional ITCs.<sup>26</sup> (Staff Exhibit No. 37 at 43  
9 [Dittmer]). The ITCs in question relate to plant constructed during the years 1986 through 1990,  
10 which was 15 to 20 years ago. (APS Exhibit No. 50 at 2 [Froggatt]).

11 Staff's assertion that it is difficult to speculate upon how such ITCs may have been  
12 treated in regulatory proceedings had they been claimed and known at a much earlier date is both  
13 unfounded and contradicted by their own testimony. (Staff Exhibit No. 34 at 105 [Dittmer]).  
14 Pursuant to Decision No. 58644, which adopted a 1994 Settlement Agreement, the remaining (as  
15 of 1994) unamortized ITCs from all of the years prior to 1991 were to be fully amortized below-  
16 the-line over five years. (Decision No. 58644 at 7; Staff Exhibit No. 34 at 105 [Dittmer]). Thus,  
17 customers have not further claim to any such ITCs.

18 Staff has presented no reason to disregard the clear language of Decision No. 58644.  
19 Staff has agreed that the ITCs at issue in this case were for tax years prior to 1994. (Tr. Vol.  
20 XXII at 4214 [Dittmer]). Staff also agreed that the five-year below-the-line amortization period  
21 would have expired well before the beginning of the test period in this case. (*Id.*). For all of  
22 these reasons, as well as those discussed at the beginning of this section, Staff's proposal should  
23 be rejected.

24 RUCO did not propose any sharing of the benefit of the ITCs or use of the ITCs as a rate

25 <sup>26</sup> In its direct testimony, Staff had recommended a 50/50 sharing between ratepayers and shareholders of net savings  
26 resulting from the ITCs. (Staff Exhibit No. 34 at 104 [Dittmer]). That Staff proposal would violate the Internal  
27 Revenue Code, constituting an IRS normalization violation. (APS Exhibit No. 49 at 9 [Froggatt]). The result of this  
28 proposal would be disastrous to the Company and its customers, with the loss of tens of millions of dollars of  
previously-claimed ITCs that would have to be refunded to the IRS. (Staff Exhibit No. 37 at 42 [Dittmer]). Staff  
withdrew their first proposal, deciding that based on reading Private Letter Rulings issued by the IRS, the ITC rate  
base adjustment as originally proposed would be an Internal Revenue Code normalization violation. (*Id.* at 44  
[Dittmer]). Subsequently, Staff recommended the approach discussed above.

1 base reduction. No other Party made recommendations regarding the additional tax credits.

2 **C. Pro Forma Adjustments Affecting Operating Income.**

3 **1. Uncontested Operating Income Adjustments.**

4 **a. Spent Fuel Storage.**

5 There is no dispute to the Company's final adjustment to reduce Test Year pre-tax  
6 operating income in the amount of \$10,653,000,<sup>27</sup> which represents the Company's ongoing  
7 ACC Jurisdictional costs for interim storage of spent nuclear fuel from Palo Verde and an  
8 amortized portion of deferred amounts. See, APS Initial Brief Exhibit 5, Schedule C-2, Column  
9 14. Consistent with the treatment in Decision No. 67744, the Company is specifically requesting  
10 that the Commission include the "Schedule of Amounts to Be Deposited in the Decommission  
11 Trusts" to its final Decision in this case. (See, Appendix I, Decision No. 67744; APS Exhibit  
12 No. 56 at Attachment LLR-3 [Rockenberger]).

13 **b. Nuclear Decommissioning**

14 There is no dispute to the Company's final adjustment to reduce Test Year pre-tax  
15 operating income in the amount of \$3,820,000,<sup>28</sup> which represents the Company's ACC  
16 Jurisdictional qualified funding levels annualized to \$19,211,000, as approved in Decision No.  
17 67744 at 171-177. See, APS Initial Brief Exhibit 5, Schedule C-2, Column 13. The Company is  
18 requesting that the Commission's Decision in this case also specifically provide for approval of  
19 the \$19,211,000 annual level of decommissioning funding and that the Commission Decision  
20 include Attachment LLR-3 from APS Exhibit No. 56 [Rockenberger].

21 **c. Four Corners Coal Reclamation.**

22 There is no dispute to the Company's final adjustment to reduce Test Year pre-tax  
23 operating income in the amount of \$1,284,000,<sup>29</sup> which represents the Company's ACC  
24 Jurisdictional annual expense of reclamation costs based upon the 2004 Marston study. See,

25 <sup>27</sup> In this case, the Company reduced pre-tax operating income by \$10,828,000, which represents the Total Company  
26 figure. (APS Exhibit No. 56 at 9 [Rockenberger]; *Id.* at Attachments LLR 2-2; APS Exhibit No. 57 at 17  
[Rockenberger]; *Id.* at Attachment LLR-4-3RB).

27 <sup>28</sup> In this case, the Company reduced pre-tax operating income by \$3,883,000, which represents the Total Company  
figure. (APS Exhibit No. 56 at Attachments LLR 2-7 [Rockenberger]).

28 <sup>29</sup> In this case, the Company reduced pre-tax operating income by \$1,305,000, which represents the Total Company  
figure. (APS Exhibit No. 56 at 19-20 [Rockenberger]; *Id.* at Attachment LLR-2-8).

1 APS Initial Brief Exhibit 5, Schedule C-2, Column 17.

2 **d. Annualize Payroll.**

3 There is no dispute to the Company's final adjustment to reduce Test Year pre-tax  
4 operating income in the amount of \$8,717,000,<sup>30</sup> which represents the Company's ACC  
5 Jurisdictional annualized payroll, benefits, and payroll tax expense to December 2005 employee  
6 levels; December 2005 wage levels for performance review employees; and April 2006 wage  
7 levels for union employees. *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 20.

8 **e. Regulatory Disallowance For West Phoenix Unit 4.**

9 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
10 operating income in the amount of \$227,000,<sup>31</sup> which represents the Company's ACC  
11 Jurisdictional adjustment to reflect an annual reduction in depreciation expense associated with  
12 the write-off discussed in the Uncontested Rate Base Adjustments portion of this brief. *See*, APS  
13 Initial Brief Exhibit 4, Schedule C-2, Column 10.

14 **f. Regulatory Assessments And Franchise Fees.**

15 There is no dispute to the Company's final adjustment to Test Year pre-tax operating  
16 income of \$0, which represents the Company's ACC Jurisdictional pro forma adjustment that  
17 removes assessments and franchise fees in the amount of \$15,723,000<sup>32</sup> from both operating  
18 revenues and expenses in the Test Year. *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column  
19 1. Pursuant to Decision No. 67744, both items are treated as "add-ons" to customers' bills,  
20 similar to sales tax.

21 **g. Base Rate Component For EPS.**

22 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
23 operating income in the amount of \$779,000, which represents both the Total Company and the  
24 ACC Jurisdictional pro forma adjustment that reflects the Company's accounting for the  
25

26 <sup>30</sup> In this case, the Company reduced pre-tax operating income by \$9,239,000, which represents the Total Company  
figure. (APS Exhibit No. 56 at 24 [Rockenberger]; *Id.* at Attachments LLR 2-14).

27 <sup>31</sup> In this case, the Company increased pre-tax operating income by \$230,000, which represents the Total Company  
figure. (APS Exhibit No. 56 at 7 [Rockenberger]; *Id.* at Attachments LLR 2-1).

28 <sup>32</sup> In this case, the Company reduced operating revenues and expenses by \$15,947,000, which represents the Total  
Company figure. (APS Exhibit No. 28 at 11 [Froggatt]; *Id.* at Attachment CNF 1-1).

1 \$6,000,000 authorized System Benefits Charge ("SBC") to fund the EPS.<sup>33</sup> (APS Exhibit No. 48  
2 at 12 [Froggatt]; *Id.* at Attachment CNF 1-2). *See*, APS Initial Brief Exhibit 5, Schedule C-2,  
3 Column 2.

4 **h. Interest On Customer Deposits.**

5 There is no dispute to the Company's final adjustment to reduce Test Year pre-tax  
6 operating income in the amount of \$2,400,000, which represents both the Total Company and the  
7 ACC Jurisdictional pro forma adjustment that reflects annualized interest costs associated with  
8 customer deposits (interest expense). (APS Exhibit No. 49 at 5 [Froggatt]; *Id.* at Attachment  
9 CNF 6RB). *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 4.

10 **i. Amortization Of Regulatory Assets.**

11 There is no dispute to the Company's final adjustment to reduce Test Year pre-tax  
12 operating income in the amount of \$381,000, which represents the Company's ACC  
13 Jurisdictional pro forma adjustment that reflects the amortization of the Palo Verde Unit 2  
14 Sale/Leaseback rent levelization regulatory asset over the remaining life of the lease. This  
15 adjustment is consistent with both the Settlement Agreement adopted in Decision No. 67744 and  
16 the Commission's original authorization of this transaction in Decision No. 55120 (July 24,  
17 1986). (APS Exhibit No. 48 at 13 [Froggatt]; *Id.* at Attachment CNF 1-5). *See*, APS Initial Brief  
18 Exhibit 5, Schedule C-2, Column 5.

19 **j. PWEC Loan.**

20 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
21 operating income in the amount of \$3,292,000,<sup>34</sup> which represents the Company's ACC  
22 Jurisdictional pro forma adjustment to amortize over five years deferred net interest income from  
23 the APS loan to PWEC, which was repaid in full on April 11, 2005. *See*, APS Initial Brief  
24 Exhibit 5, Schedule C-2, Column 6.

25 <sup>33</sup> Revenue of \$6,779,000 was reclassified from Contribution-in-Aid-of-Construction. Because the costs were  
26 charged to Construction Work in Process rather than an Operation and Maintenance account, they are not reflected in  
27 the Test Year operating results. The pro forma adjustment is needed to properly reflect, for ratemaking treatment,  
28 revenue of \$6,779,000 and an expense of \$6,000,000, the allowed portion of expenses related to the base rate portion  
of the SBC used to fund the EPS. (APS Exhibit No. 48 at 12 [Froggatt]; *Id.* at Attachment CNF 1-2).

<sup>34</sup> In this case, the Company increased pre-tax operating income by \$3,330,000, which represents the Total Company  
figure. (APS Exhibit No. 48 at 14 [Froggatt]; *Id.* at Attachment CNF 1-6).

1                   **k.       Tax Consulting Fees.**

2                   There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
3 operating income in the amount of \$2,746,000,<sup>35</sup> which represents the Company's ACC  
4 Jurisdictional pro forma adjustment that reflects the elimination of non-recurring tax research  
5 consulting fees that was recorded during the historic Test Year, but was incurred prior to the  
6 beginning of the Test Year and is not an on-going expense. *See*, APS Initial Brief Exhibit 5,  
7 Schedule C-2, Column 32.

8                   **l.       Out Of Period Income Tax Adjustments.**

9                   There is no dispute to the Company's final adjustment to increase Test Year operating  
10 income in the amount of \$243,000<sup>36</sup> that represents ACC Jurisdictional figure, which added  
11 income tax true-up items that related to the Test Year period, and removed income tax expense  
12 recorded during the Test Year period related to non-recurring income tax items. *See*, APS Initial  
13 Brief Exhibit 5, Schedule C-2, Column 7.

14                   **m.       Miscellaneous Adjustments.**

15                   There is no dispute to the Company's final adjustment to reduce Test Year pre-tax  
16 operating income in the amount of \$1,720,000,<sup>37</sup> which represents the Company's ACC  
17 Jurisdictional pro forma adjustment that reflects the elimination of non-recurring or out-of-  
18 period expenses or credits from the Test Year, including financial data warehouse costs, Four  
19 Corners severance reserve true-up, FERC audit reserve, APS corporate offices rent expense, and  
20 bill estimation refund. *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 23.

21                   **n.       Pension Expense.**

22                   There is no dispute to the Company's final adjustment to decrease pre-tax operating  
23 income by \$2,119,000,<sup>38</sup> which represents the Company's ACC Jurisdictional pre-tax adjustment  
24

25 <sup>35</sup> In this case, the Company increased pre-tax operating income by \$2,778,000, which represents the Total Company  
figure. (APS Exhibit No. 49 at 7-8 [Froggatt]; *Id.* at Attachment CNF-9RB).

26 <sup>36</sup> In this case, the Company increased operating income by \$1,287,000, which represents Total Company figure.  
(APS Exhibit No. 48 at 14-15 [Froggatt]; *Id.* at Attachment CNF 1-7).

27 <sup>37</sup> In this case, the Company reduced pre-tax operating income by \$3,876,000, which represents the Total Company  
figure. (APS Exhibit No. 56 at 26-27 [Rockenberger]; *Id.* at Attachment LLR-2-17).

28 <sup>38</sup> In this case, the Company decreased pre-tax operating income by \$2,249,000, which represents the Total Company  
figure. (APS Exhibit No. 57 at 22 (Rockenberger); *Id.* at Attachment LLR-4-5RB.)

1 to reflect actual 2006 pension expense. *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column  
2 36.

3 **o. Post Retirement Medical Benefits.**

4 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
5 operating income by \$3,006,000,<sup>39</sup> which represents the Company's ACC Jurisdictional pro  
6 forma adjustment reflecting updated actuarial information related to post-retirement medical  
7 benefits.<sup>40</sup> *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 37.

8 **p. Administrative And General.**

9 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
10 operating expenses by \$8,422,000,<sup>41</sup> which represents the Company's ACC Jurisdictional pro  
11 forma adjustment that reflects out-of-period costs related to depreciation and rent expense,  
12 including out-of-period adjustments for the PWEC Units and legal costs properly chargeable to  
13 PWEC and related to the sale of Silverhawk. *See*, APS Initial Brief Exhibit 5, Schedule C-2,  
14 Column 35.

15 **q. Unregulated APS Marketing And Trading Activity.**

16 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
17 operating income by \$14,917,000,<sup>42</sup> which represents the Company's ACC Jurisdictional  
18 adjustment related to the exclusion of calculations related to revenue and expenses associated  
19 with transactions that are not related to serving APS native load during the Test Year. *See*, APS  
20 Initial Brief Exhibit 5, Schedule C-2, Column 33.

21 **r. Palo Verde Unit 1 Steam Generators Depreciation**

22 There is no dispute to the Company's final adjustment to reduce Test Year pre-tax  
23

24 <sup>39</sup> In this case, the Company increased pre-tax operating income by \$3,191,000, which represents the Total Company  
figure. (APS Exhibit No. 57 at 23 [Rockenberger]; *Id.* at Attachment LLR-4-6RB).

25 <sup>40</sup> Staff recommended an increase in operating expenses of \$2,038,000, which was based on the actuarial estimates  
that the Company was relying on to record 2006 post-retirement benefit costs in excess of the level of costs recorded  
26 in the Test Year. (Staff Exhibit No. 35, Schedule C-7). Subsequently, the Company updated that adjustment with  
final 2006 actuarial information, and Staff had no disagreement with that number. (Staff Exhibit No. 37 at 24  
[Dittmer]).

27 <sup>41</sup> In this case, the Company increased pre-tax operating income by \$8,520,000, which represents the Total Company  
figure. (APS Exhibit No. 57 at 25-26 [Rockenberger]).

28 <sup>42</sup> In this case, the Company increased pre-tax operating income by \$15,149,000, which represents the Total  
Company figure. (APS Exhibit No. 49 at 4 [Froggatt]; *Id.* at Attachment CNF-3RB).

1 operating income by \$1,764,000,<sup>43</sup> which represents the Company's ACC Jurisdictional adjusted  
2 depreciation expense to include one full year of depreciation on the new Unit 1 steam generators  
3 and to exclude the actual Test Year depreciation on the replaced steam generators. *See*, APS  
4 Initial Brief Exhibit 5, Schedule C-2, Column 15.<sup>44</sup>

5 **s. Normalize Non-Nuclear Maintenance Expense.**

6 Except as discussed in the Contested Operating Income Adjustments section V.C.2(b)  
7 and (c) below regarding the Sundance and PWEC Units, there is no dispute to the Company's  
8 final adjustment to decrease Test Year pre-tax operating income by \$1,435,000,<sup>45</sup> which  
9 represents the Company's ACC Jurisdictional adjustment to Test Year operations to reflect the  
10 normalization of fossil production maintenance expense and to include operation and  
11 maintenance ("O&M") costs of renewable generation acquired in compliance with the EPS. *See*,  
12 APS Initial Brief Exhibit 5, Schedule C-2, Column 25.

13 **t. Normalize Nuclear Maintenance Expense.**

14 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
15 operating income by \$718,000,<sup>46</sup> which represents the Company's ACC Jurisdictional  
16 adjustment to Test Year operations to reflect the normalization of nuclear production  
17 maintenance expense. *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 26.

18 **u. Annualize Customer Levels To Year End 2004.**

19 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
20 operating income by \$28,318,000, which represents the both the Total Company and ACC  
21 Jurisdictional adjustment to Test Year operations to reflect the annualization of customer counts  
22 at December 31, 2004. (APS Exhibit No. 16, Attachment PME-19 [Ewen]). *See*, APS Initial  
23

24 <sup>43</sup> In this case, the Company reduced pre-tax operating income by \$1,785,000, which represents the Total Company  
figure. (APS Exhibit No. 59 at 12 [Rockenberger]; *Id.* at Attachment LLR-4-1RB).

25 <sup>44</sup> As noted in the Uncontested Rate Base Adjustments portion of this brief, APS and RUCO originally had a dispute  
26 over the exclusion of depreciation on the retired steam generator and associated equipment. This was resolved and  
was reflected in APS Exhibit No. 57 at 11 [Rockenberger], as well as in the Company's final proposed depreciation  
expense.

27 <sup>45</sup> In this case, the Company reduced pre-tax operating income by \$1,456,000, which represents the Total Company  
figure. (APS Exhibit No. 16 [Ewen] at Attachment PME-15).

28 <sup>46</sup> In this case, the Company increased pre-tax operating income by \$729,000, which represents the Total Company  
figure. (*Id.*).

1 Brief Exhibit 5, Schedule C-2, Column 27.

2 **v. Normalize Weather Conditions.**

3 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
4 operating income by \$5,967,000, which represents both the Total Company and ACC  
5 Jurisdictional adjustment to Test Year operations to reflect normal weather conditions for the ten  
6 years ended December 31, 2004. (APS Exhibit No. 16, Attachment PME-18 [Ewen]). *See*, APS  
7 Initial Brief Exhibit 5, Schedule C-2, Column 28.

8 **w. Annualize 4/1/05 ACC Rate Levels.**

9 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
10 operating income by \$17,136,000, which represents both the Total Company and ACC  
11 Jurisdictional adjustment to Test Year operations to reflect the annualization of ACC rate levels  
12 for the April 1, 2005 rate increase that was authorized in Decision No. 67744. (APS Exhibit No.  
13 69, Attachment DJR-5 [Rumolo]). *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 29.

14 **x. E-3/E-4 Promotional Expense.**

15 There is no dispute to the Company's final adjustment to decrease Test Year pre-tax  
16 operating income by \$62,000, which represents both the Total Company and ACC Jurisdictional  
17 adjustment to Test Year operations to reflect the increased promotional expense for low income  
18 rate options that were required by Decision No. 67744. (APS Exhibit No. 69, Attachment DJR-7  
19 [Rumolo]; APS Exhibit No. 70 at 5 [Rumolo]). *See*, APS Initial Brief Exhibit 5, Schedule C-2,  
20 Column 30.

21 **y. Schedule 1 Changes.**

22 There is no dispute to the Company's final adjustment to increase Test Year pre-tax  
23 operating income by \$165,000, which represents both the Total Company and ACC  
24 Jurisdictional adjustment to Test Year operations to reflect revenue-related changes to the  
25 Company's Rate Schedule 1 that were authorized by Decision No. 67744. *See*, APS Initial Brief  
26 Exhibit 5, Schedule C-2, Column 31.

1                    **z.        Federal And State Income Tax**

2                    There is no dispute between APS and Staff as to the Company's additional adjustment to  
3 the Company's original cost of service income tax expense to reflect a top-down tax calculation  
4 including permanent tax items to reduce Test Year income tax expense by \$4,588,000<sup>47</sup>, which  
5 represents the Company's ACC Jurisdictional adjustment. See, APS Initial Brief Exhibit 5,  
6 Schedule C-2, Column 34.

7                    **2.        Contested Operating Income Adjustments.**

8                    **a.        Bark Beetle Remediation.**

9                    Based upon APS's proposed three-year amortization, the Company has proposed a pro  
10 forma adjustment to increase Test Year costs, and, thus, reducing pre-tax operating income by  
11 \$1,548,000 to reflect that annual expense level. (APS Exhibit No. 57 at 14 [Rockenberger]; *Id.*  
12 at Attachment LLR-4-2RB). See, APS Initial Brief Exhibit 5, Schedule C-2, Column 16.

13                    There is no dispute among the Company, Staff and RUCO that Decision No. 67744  
14 provided for recovery of deferred bark beetle remediation costs and subsequent amortization of  
15 such costs, and each accepted the three-year amortization period proposed by the Company.  
16 (APS Exhibit No. 57 at 12 [Rockenberger]; Staff Exhibit No. 34 at 23 [Dittmer]; RUCO Exhibit  
17 No. 22 at 11 [Rigsby]). Rather, the disputes related to these remediation costs involve the time  
18 period for which the Company can collect the expenditures in this proceeding.

19                    It is Staff's position that the Company did not have the authority to defer remediation  
20 costs prior to April 2005, because Decision No. 67744, which authorized such a deferral, did not  
21 go into effect until April 2005. As a result, Staff has proposed an adjustment to APS's proposed  
22 rate base addition and amortization expense for bark beetle costs incurred from January 1, 2005  
23 through March 31, 2005.

24                    This interpretation is contrary to the plain reading of Decision No. 67744 and the  
25 Settlement Agreement (adopted by that Decision), which states, "APS is authorized to defer for  
26

27 <sup>47</sup> In this case, the Company reduced test year income tax expense by \$4,838,000, which represents the Total  
28 Company figure. (APS Exhibit No. 49 at 4 [Froggatt]; *Id.* at Attachment CFN-4RB). The impacts of interest  
synchronization and the Generation Production Income Tax deduction are incremental to the \$4,588,000, but this  
number remains the same.

1 later recovery the reasonable and prudent direct costs of bark beetle remediation that exceed the  
2 *test year* levels of tree and brush control.” (Emphasis added). (Decision No. 67744 at 31;  
3 Settlement Agreement, ¶¶ 110-111). Clearly, the language indicates that a full year of cost  
4 recovery was intended. (APS Exhibit No. 57 at 13 [Rockenberger]). Otherwise, it would make  
5 no sense to compare expenditures from April 1, 2005 through December 31, 2005 to an annual  
6 figure (*i.e.*, the 2002 Test Year used for purposes of Decision No. 67744), as is required by that  
7 Decision. An alternative computation would be to take the nine months of bark beetle costs in  
8 2005 that occurred after Decision No. 67744’s effective date and then annualize them (*i.e.*,  
9 multiply them by 133 percent) prior to making the calculation referenced in the above passage of  
10 the Decision. However, that result would essentially be the same position as under the  
11 Company’s proposal, which simply uses the actual calendar year 2005 costs. Therefore, it is the  
12 Company’s position that the Settlement Agreement intended, and Decision No. 67744  
13 authorized, that deferrals would include the entire calendar year in which the deferral became  
14 effective. (*Id.* at 12-13).

15 RUCO, on the other hand, has not taken issue with bark beetle deferrals beginning in  
16 January 2005, but objected to the Company’s calculation of deferred costs through 2006, and  
17 asserted that the adjustment in this case should only reflect direct costs that were recorded at the  
18 end of the Test Year. RUCO has proposed a reduction to the Company’s pro forma rate base  
19 calculation of \$6,115,000 and a corresponding reduction to amortization expense of \$2,273,000  
20 associated with bark beetle remediation. RUCO did acknowledge that amounts deferred by APS  
21 subsequent to September 30, 2005, and prior to rates going into effect as a result of this  
22 proceeding, would be recovered by APS in a subsequent rate proceeding. (Tr. Vol. XVIII at  
23 3363-65 [Diaz-Cortez]).

24 It is APS’s contention that it is appropriate to use estimated costs for the period of time  
25 from September 30, 2005 (the end of the Test Year) through December 31, 2006, to ensure that  
26 the rates in effect for 2007 provide for the amortization for the actual costs incurred by year end  
27 2006. (APS Exhibit No. 57 at 16 [Rockenberger]). There is little purpose served in prohibiting  
28 current recovery of prudently incurred costs and burdening future rate proceedings with the

1 recovery of costs that were already incurred in 2006 to serve the Company's customers.  
2 Therefore, APS does not accept RUCO's proposed adjustments to reduce the rate base for costs  
3 incurred subsequent to the Test Year, and the corresponding adjustment to reduce operating  
4 expenses for the annual amortization expense. (*Id.* at 14-15).

5 **b. Sundance Units.**

6 The Company has reduced its pre-tax operating income by a pro forma adjustment of  
7 \$4,804,000,<sup>48</sup> which represents the Company's ACC Jurisdictional adjustment and includes non-  
8 fuel operations and maintenance expenses of the Sundance Units, necessary to annualize the Test  
9 Year expense. *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 12.

10 The Company is seeking an annualized O&M expense of \$6,410,000, which includes  
11 \$3,660,000 (one full year of routine O&M expense) and \$2,750,000 (overhaul maintenance  
12 costs). (APS Exhibit No. 56 at 16 [Rockenberger]). The routine O&M expense was estimated  
13 based on the projected information provided by PP&L, the former owners of the Sundance Units,  
14 as adjusted for the expected level of Company operation. (*Id.* at 16-17). The Total Company  
15 \$4,860,000 pro forma adjustment reflects the difference between the \$6,410,000 annualized costs  
16 and the Test Year actual costs of \$1,550,000, which is about five months of actual costs. (*Id.* at  
17 17).

18 Although Staff has determined that the acquisition of the Sundance Units was prudent,  
19 Staff has recommended that the non-routine (overhaul) O&M expense normalization for the  
20 Company's Sundance Units be excluded, despite the fact that the Company has followed the  
21 same methodology for the Sundance Units as it has for its other generating facilities. (APS  
22 Exhibit No. 17 at 12 [Ewen]). This is the same methodology that has historically been accepted  
23 by the Commission. (*Id.*). Although it appears that Staff is concerned that the adjustment for  
24 Sundance plant overhauls could potentially lead to a double-recovery of such costs at a future  
25 date, in fact, the converse is true. (*Id.*).

26 The method traditionally followed by the Commission in setting rates for such items is to  
27

28 <sup>48</sup> In this case, the Company reduced pre-tax operating income by \$4,860,000, which represents the Total Company figure. (APS Exhibit No. 56 at 16 [Rockenberger]; *Id.* at Attachment LLR-2-6).

1 average the expenses over generating plant overhaul cycles so that payments in one year do not  
2 lead to an overstatement of the Company's rates. (APS Exhibit No. 18 at 11 [Ewen]). For  
3 example, if overhauls are conducted every five years, the cost is recovered by charging one-fifth  
4 of the cost each year. That way, the fact that an overhaul might occur in a particular test period  
5 (thus inflating that year's non-routine maintenance costs) does not lead to over-recovery of the  
6 total cost of the overhaul. Conversely, the fact that an overhaul of a particular unit did **not** occur  
7 in a test period does not result in the cost being ignored and going unrecovered. Because the  
8 Sundance Units major overhaul cycle is twelve years (the same as the former PWEC units, to  
9 which Staff has **not** objected (Tr. Vol. XXII at 4221-22 [Dittmer]), the Company has requested  
10 essentially that one-twelfth of its expenses be recovered in each year. (APS Exhibit No. 18 at 11  
11 [Ewen]). This way, APS neither over nor under recovers these costs depending on whether the  
12 overhaul occurs during a test period.

13 Under the Staff recommendation, the Company does not begin to recover these costs until  
14 some indeterminate time in the future. (*Id.*). If and when that occurs, the Company may be able  
15 to recover its costs, but customers in the future will be left to pay for costs attributable to  
16 customers in the present and in the recent past. (*Id.*). Staff has cited no reason to depart from  
17 long-accepted Arizona regulatory practice in this specific instance.

18 Although RUCO has also determined that the acquisition of the Sundance Units was  
19 prudent and did not support Staff's adjustment to non-routine O&M, RUCO is requesting that  
20 the Sundance Plant routine O&M be adjusted – more specifically the variable component of that  
21 O&M. RUCO's proposed adjustment, which is premised on lower operating levels at Sundance,  
22 is inconsistent with the findings of Staff's consultants, who after an extensive and thorough  
23 audit, found that "O&M expenditure patterns [were] ... consistent with system operational  
24 requirements." (Staff Exhibit No. 28 at 92 [Antonuck]; Staff Exhibit No. 33 at 92 [Fuel Audit]).  
25 Moreover, Staff made no similar adjustment to routine O&M costs of Sundance. (*Id.*).  
26  
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1                   c.     **PWEC Units.**

2             The Company reduced pre-tax operating income by \$53,021,000,<sup>49</sup> which represents the  
3     Company's ACC Jurisdictional annualized operating expense for the PWEC Units. *See*, APS  
4     Initial Brief Exhibit 5, Schedule C-2, Column 11. The adjustment included a reduction of  
5     \$1,125,000, which was associated with auxiliary power purchased by PWEC from APS that was  
6     no longer applicable because the PWEC Units are now owned by APS. The adjustment also  
7     includes an Administrative and General ("A&G") expense and an annualized depreciation and  
8     amortization expense, as well as an annualized property tax expense. (APS Exhibit No. 56 at 14-  
9     16 [Rockenberger]).

10            The Commission authorized the transfer of the PWEC Units to APS in Decision No.  
11    67744, and they were formally transferred to APS on July 29, 2005. (Decision No. 67744 at 8-  
12    9). Because these units transferred to APS during the Test Year, they were already included in  
13    the Test Year rate base; however, an operating income pro forma adjustment was necessary to  
14    annualize the PWEC Units operating expenses.

15            The annualized routine operations maintenance expense of \$26,204,000 reflected the  
16    actual 2004 expenditures for the PWEC Units, adjusted for the expected increase in average  
17    projected operating megawatt hours for 2006 through 2011. (APS Exhibit No. 56 at 14-15  
18    [Rockenberger]). Because the PWEC Units had only recently been placed in service, the  
19    Company had no historical cost basis for calculating overhaul costs. (*Id.* at 15). For that reason,  
20    the Company estimated a \$10 million normalized overhaul maintenance expense using a  
21    projected 12-year average, restated in 2004 dollars. (*Id.*).

22            Neither Staff nor RUCO took exception to the non-routine (overhaul) O&M expense for  
23    the PWEC Units.<sup>50</sup> RUCO proposed a reduction in the variable component of routine O&M for  
24    the PWEC units. The reason given for such adjustment was the same as for the Sundance Units,  
25    and it should be rejected for the same reasons as discussed above.

26  
27            <sup>49</sup> In this case, the Company reduced pre-tax operating income by \$53,644,000, which represents the Total Company  
figure. (APS Exhibit No. 56 at 14 [Rockenberger]).

28            <sup>50</sup> The inconsistency of Staff's position on this issue as between Sundance and the other APS generating units,  
including but not limited to, the PWEC units was discussed above.

1                   d.       **Advertising And Business Meals.**

2           The evidence in this case supports the Company's final adjustment to increase its pre-tax  
3 Test Year operating income in the amount of \$6,264,000,<sup>51</sup> which represents the Company's  
4 ACC Jurisdictional pre-tax adjustment to advertising and other expenses. See, APS Initial Brief  
5 Exhibit 5, Schedule C-2, Column 22.

6           The Company does not oppose the removal of Staff's marketing and sponsorship costs  
7 from expense totaling \$437,000. This adjustment is included in the \$6,264,000 figure discussed  
8 above. (APS Exhibit No. 57 at 24 [Rockenberger]).

9           RUCO proposed an adjustment of \$566,000 for sponsorships and other expenses, and an  
10 adjustment of \$4,625 to remove what RUCO categorized as promotional advertising. Although  
11 APS has not opposed RUCO's \$4,625 adjustment nor some \$66,000 of its "sponsorship and  
12 other expenses" adjustment (also already included in the \$6,264,000 figure cited above), APS  
13 opposes the remaining \$500,000 of that adjustment. (APS Exhibit No. 57 at 24 [Rockenberger]).

14           RUCO's proposed adjustment includes \$100,000 for the Dodge Theater expense that  
15 Staff has already included in its adjustment, to which APS agreed and already included. To  
16 allow RUCO's adjustment would result in reducing advertising twice for the same \$100,000  
17 expense. (*Id.*).

18           The remaining piece of RUCO's advertising adjustment, \$400,000, is for business  
19 lunches, which the Company believes are legitimate business expenses that provide APS the  
20 benefit of additional productive non-interrupted, non-paid work time from its employees. (*Id.*).  
21 Neither Staff nor any other Party other than RUCO has proposed the elimination of meal  
22 expenses for employees that work through lunch at the Company's request. APS is not aware of  
23 such an adjustment ever having been proposed in prior APS rate proceedings even though the  
24 provision of employee meals under the circumstances cited by Ms. Rockenberger is a long-  
25 standing Company practice. (Tr. Vol. XIII at 2687-89 [Rockenberger]). RUCO provided **no**  
26 evidence that either the amount claimed was excessive or that such meals did not serve valid

27 \_\_\_\_\_  
28 <sup>51</sup> In this case, the Company increased pre-tax operating income by \$6,648,000, which represents the Total Company figure. (APS Exhibit No. 56 at 25 [Rockenberger]; *Id.* at Attachment LLR-2-16); See also APS Exhibit No. 57 at 24 [Rockenberger]; *Id.* at Attachment LLR-4-7RB).

1 business purposes. RUCO's assertion that there are other less expensive ways to incent  
2 employees to "go above and beyond the call of duty" lacks both evidentiary basis and, in any  
3 event, does not refute the Company's contention that customers are well-served by allowing APS  
4 to continue to conduct business during what would otherwise be time allotted for employees to  
5 take their lunch break. (Tr. Vol. XVIII at 3432 [Diaz-Cortez]).

6 **e. Underfunded Pension Liability.**

7 The evidence in this case supports the Company's final adjustment to decrease its pre-tax  
8 Test Year operating income in the amount of \$41,166,000,<sup>52</sup> which represents the Company's  
9 ACC Jurisdictional pre-tax adjustment to its underfunded pension account. See, APS Initial  
10 Brief Exhibit 5, Schedule C-2, Column 21.

11 APS, like companies in all industries across the nation, is faced with an underfunded  
12 pension obligation. APS firmly believes that the Company and the Commission should begin to  
13 address this under funding issue now.

14 APS (through its parent company, Pinnacle West Capital Corporation) has a pension plan  
15 that covers all of its employees. (APS Exhibit No. 56 at 24-25 [Rockenberger]). As of  
16 December 31, 2004, the projected benefit obligation of the pension plan was approximately  
17 \$1,371,000,000 and the fair value of the plan's assets was approximately \$982,000,000. (*Id.* at  
18 25). The difference between these two amounts represents the underfunded pension liability of  
19 the plan. (*Id.*).

20 To address this, the Company has proposed an adjustment that would accelerate the  
21 recovery of the Company's underfunded pension liability over a five-year period, beginning in  
22 2007. (*Id.*). The annual increase to pension expense proposed by the Company would be  
23 approximately \$44,000,000. (*Id.*; *Id.* at Attachment LLR-2-15 [Rockenberger]). Because this  
24 would be an accelerated recovery, the Company has proposed creating a regulatory liability that  
25 would be later amortized as a reduction to pension expense over ten years (beginning in 2012).  
26 (APS Exhibit No. 56 at 25 [Rockenberger]). Such amortization would reduce future costs by  
27 approximately \$22,000,000 per year for ten years, thus entirely offsetting the accelerated

28 <sup>52</sup> In this case, the Company decreased pre-tax operating income by \$43,695,000, which represents the Total Company figure. (APS Exhibit No. 56 at 24-24 [Rockenberger]; *Id.* at Attachment LLR-2-15).

1 recovery sought in this proceeding. (*Id.*) In addition, the accelerated recovery of the current  
2 under funding would itself reduce future pension costs independent of the creation of the  
3 aforementioned regulatory liability, thus providing additional benefits to APS customers in the  
4 future. The accelerated pension funding will also provide an ongoing benefit to customers by an  
5 estimated \$10,000,000 per year in perpetuity, as a result of the higher fund balance at the end of  
6 the 15-year program. (Tr. Vol. XXIV at 4547 [Brandt]).

7 During the time that the Company "holds" any funds as a result of this accelerated  
8 pension funding, customers receive a "rate base return" on the outstanding balance because the  
9 balance is recorded as regulatory liability, which is a reduction to rate base. (*Id.*; APS Exhibit  
10 No. 6 at 24 [Brandt]). As a result, customers are fairly compensated for their up front funding of  
11 the Company's pension program, both by receiving that funding back over ten years **with** a full  
12 return and the lowering of revenue requirements in the future, all of which will have a stabilizing  
13 effect on rates in future years. (APS Exhibit No. 6 at 24 [Brandt]); APS Exhibit No. 5 at 57-58  
14 [Brandt]).

15 There are several other reasons for the Commission to approve what the Company has  
16 proposed. First, this is a liability that exists now, and it, therefore, stands to reason that this  
17 liability should be reflected in current rates and not deferred to a later date to be paid by future  
18 customers. Second, there is no reason to believe that this under funding in the plan over the last  
19 several years will go away or be reversed on its own. Indeed, the APS pension plan did not  
20 "under perform" relative to the market (APS Exhibit No. 5 at 56 [Brandt]); in fact, it  
21 outperformed the peer group and the S&P 500 index during the period in question. (*Id.*) The  
22 under funding is mostly the result of the lower than "normal" interest rates used for purposes of  
23 discounting the pension obligation (and therefore determine the pension plan contribution). (*Id.*;  
24 *Id.* at Attachment DEB-16RB). Third, APS must now account on a current basis for the  
25 projected benefit obligation ("PBO") rather than the smaller accumulated benefit obligation  
26 ("ABO") and must reflect on its year-end balance sheet a liability for any unfunded PBO-based  
27  
28

1 pension obligation. (Tr. Vol. IV at 776-77 [Brandt]; APS Exhibit No. 6 at 26 [Brandt]).<sup>53</sup> As  
2 Mr. Brandt explained, the new accounting standard for pension accounting (Financial  
3 Accounting Standard 158), that requires companies to reflect on their financial statements the  
4 PBO rather than the ABO, was prompted by the many highly-publicized instances in the last few  
5 years in which large corporations disclosed that their employee pension plans were substantially  
6 underfunded. (Tr. Vol. IV at 776-77 [Brandt]). And finally, as noted above, the Company's  
7 pension funding proposal has substantial long-term financial benefits for customers and a  
8 levelizing impact on rates.

9 Another benefit of the Company's pension funding proposal, which is not directly  
10 reflected in the discussion above, is the positive impact that it has on the Company's overall cash  
11 flow and its FFO/Debt ratio. (APS Exhibit No. 6 at 25-26 [Brandt]). The credit rating agencies  
12 now look very closely at the unfunded pension obligations that a company has, and the rating  
13 agencies use the PBO (rather than the ABO) when calculating a company's credit metrics. (*Id.* at  
14 25). Thus, accelerated contributions to the pension plan would substantially reduce the need for  
15 future pension fund contributions (as well as lowering the pension expense borne by APS  
16 customers), thereby improving the Company's FFO/Debt ratio and assisting the Company to  
17 maintain its bond ratings. (*Id.*).

18 The objections of Staff, RUCO and AECC to this pension funding proposal by APS  
19 essentially amount to a "wait-and-see" approach – *i.e.*, let's wait and see what happens in future  
20 years. But as Mr. Brandt explained, such an approach merely defers the problem, and likely  
21 causes it to grow; it does nothing to deal with the underfunding that already exists. (APS Exhibit  
22 No. 5 at 56-59 [Brandt]; APS Exhibit No. 6 at 23 [Brandt]). Implementing the Company's  
23 pension funding proposal now is not only consistent with the new PBO accounting requirement  
24 (Tr. Vol. IV. at 778 [Brandt]), but also has the benefit of requiring current customers to fund a  
25 liability that has already been incurred rather than deferring that liability to future customers.

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<sup>53</sup> The PBO measures the full pension liability, whereas the ABO is a partial measure (*i.e.*, a subset of the PBO). The ABO is based on current pay levels for employees and assumes that employees do not receive pay increases between the measurement date and their retirement dates. (APS Exhibit No. 5 at 61-62 [Brandt]). The PBO assumes that employees continue to receive pay increases until they retire. (*Id.*). Because the ABO does not consider future pay increases that affect future pension obligations, the ABO yields a smaller pension liability than the PBO. (*Id.*).

1 (APS Exhibit No. 5 at 58 [Brandt]).

2 In short, it is both fair to customers and fiscally prudent for the Company and the  
3 Commission to deal with this pension under funding issue now rather than deferring the problem  
4 to a later date.

5 **f. Annualize Property Tax Expense.**

6 The evidence in this case supports the Company's adjustment to reduce its pre-tax Test  
7 Year operating income in the amount of \$15,031,000,<sup>54</sup> which represents Company's ACC  
8 Jurisdictional revised calculation of annualized property tax expense. *See*, APS Initial Brief  
9 Exhibit 5, Schedule C-2, Column 19.

10 In its filing, the Company adjusted its operating expenses to include amounts to annualize  
11 the PWEC Units' property taxes, one full year of property taxes for the Sundance Units,  
12 estimated taxes for the full Maricopa Community College Bond and account for an automatic  
13 2007 increase in property taxes resulting from the PWEC Units "phase-in" period provided by  
14 statute<sup>55</sup> through 2009 (APS Exhibit No. 56 at 23 [Rockenberger]). The 2005 tax year APS  
15 composite tax rate, which includes the PWEC Units, was calculated based on tax rates provided  
16 by the County Treasurer in each of the counties where APS has property. In addition to the APS  
17 composite tax rate, the actual 2005 tax rate for the Sundance Units was used. Finally, the  
18 Company took into account the reduction in assessment ratio provided by House Bill 2779,  
19 which was passed during the 2005 legislative session. (*Id.*).

20 In its January 2005 filing, the Company calculated its property tax expense, which was  
21 based on the December 31, 2004 property values provided by ADOR. (APS Exhibit No. 57 at  
22 20-21 [Rockenberger]). During the course of this proceeding, however, the Company received  
23 more current assessment valuation information from ADOR based on actual plant values at  
24 December 31, 2005 that provides a more precise calculation of the property taxes that the  
25 Company will be accruing and paying as property tax expense in 2007, the time period when  
26 rates from this case will be in effect. (*Id.*). ADOR has also recently approved the Company's

27 <sup>54</sup> In this case, the Company decreased pre-tax operating income by \$15,159,000, which represents the Total  
28 Company figure. (APS Exhibit No. 56 at 23 [Rockenberger]; *Id.* at Attachment LLR-2-12-13; *see also* APS Exhibit  
No. 57 at 20 [Rockenberger]; *Id.* at Attachment LLR-4-4RB).

<sup>55</sup> A.R.S. § 42-14156.

1 request to reduce the assessed value for the PWEC Units regulatory disallowance that is reflected  
2 in Company records. These are known and measurable net increases in the 2005 assessed value  
3 and should appropriately be taken into consideration in the calculation of property taxes. (*Id.*).

4 APS opposes RUCO's stand-alone adjustment to reduce property taxes by \$5,977,000,  
5 which is based on a temporary suspension of the county education tax rate.<sup>56</sup> (*Id.*). This  
6 legislation was passed during the 2006 legislative session, and signed into law June 21, 2006.  
7 RUCO is proposing the use of a tax rate enacted outside the Test Year that reduces property  
8 taxes, but fails to take into consideration other significant factors that occur outside the Test Year  
9 that increase property taxes.

10 Property taxes are comprised of two key components: the level of plant-in-service; and,  
11 the property tax rate. As plant-in-service increases, property taxes increase, and as property tax  
12 rates decrease, property taxes decrease. In this case, although the property tax rate is decreasing,  
13 the Company's total tax bill is actually increasing because the amount of facilities that APS has  
14 added to its electric system has increased. (Tr. Vol. XII at 2616 [Rockenberger]). One  
15 component of property tax cannot be implemented in isolation; both the increase in plant-in-  
16 service through the end of 2005 and its impact on the property tax calculation, as well as the  
17 reduction in the tax rate, have to be considered. (Tr. Vol. XIII at 2683 [Rockenberger]).

18 The rates that are approved in this proceeding will go into effect in 2007. The matching  
19 principle requires that APS match the recovery in rates with the actual expense to ensure that the  
20 Company will have the cash flow to pay the property tax bill. (Tr. Vol. XIII at 2685  
21 [Rockenberger]).

22 The Company's projected 2007 property tax expense is anticipated to be \$128,000,000,  
23 based upon December 31, 2005 general ledger balances and inclusive of all property tax  
24 deductions. (Tr. Vol. XII at 2616 [Rockenberger]). RUCO's calculation only considered the  
25 2006 level of property tax expense, which was based upon December 31, 2004 general ledger  
26 balances. (Tr. Vol. XII at 2618 [Rockenberger]). That level of plant-in-service is nine months  
27 prior to the end of Test Year and, thus, fails to reflect even the property taxes due on Test Year

28 <sup>56</sup> A.R.S. § 41-1276 (I).

1 end plant levels. It is 18 months prior to enactment of the new tax rate and more than two years  
2 prior to any new rates going into effect from this proceeding. RUCO's proposed adjustment  
3 would result in recovery of, at most, \$124,000,000 in property tax expense in the first year that  
4 the rates in this case will be in effect; calendar 2007 property tax expense is already at least  
5 \$128,000,000. This will result in a shortfall of \$4,000,000 in revenues. (Tr. Vol. XIII at 2686  
6 [Rockenberger]).

7 APS proposes that the Test Year property tax expense be based on year-end 2005 plant to  
8 ensure that the regulated rates provide for a larger share of the Company's actual 2007 property  
9 tax expense. (APS Exhibit No. 58 at 3-4 [Rockenberger]). APS's proposal recognizes both the  
10 post-Test Year change in the rate and the post-Test Year changes to the level of plant to which  
11 that rate would apply. (Tr. Vol. XXIII at 2640-41 [Rockenberger]). This proposal provides  
12 customers the full benefit of the suspension of the county education tax rate, while also  
13 recognizing the full cash value of plant-in-service that is known and measurable at this time. (*Id.*  
14 at 2683, 2686 [Rockenberger]).

15 Staff has proposed an adjustment to reduce property taxes by \$1,708,000 to eliminate the  
16 APS proposed inclusion of the 2007 statutory phase-in of increased property taxes associated  
17 with the PWEC Units. (Staff Exhibit No. 35, Schedule C-17). APS agrees with Staff's  
18 recommendation which provides for a Test Year operating expense of \$128,600,000. This  
19 amount most nearly approximates the Company's 2007 estimated \$128,000,000 property tax  
20 expense, with is the level of property tax expense that the Company believes is appropriate to  
21 recover. It should be noted that the Company does not agree with the elimination of the 2007  
22 statutory phase-in, but rather, the Staff adjustment provides for the recovery of expected property  
23 tax expense.

24 **g. Annualized Depreciation And Amortization.**

25 The evidence in this case supports the Company's final adjustment to decrease its pre-tax  
26 Test Year operating income in the amount of \$ 20,276,000,<sup>57</sup> which represents the Company's  
27

28 <sup>57</sup> In this case, the Company decreased pre-tax operating income by \$22,498,000 which represents the Total  
Company reduction. (APS Exhibit No. 56 at 20-22 [Rockenberger]; *Id.* at Attachment LLR-2-9).

1 ACC Jurisdictional pre-tax adjustment to depreciation and amortization expense based upon the  
2 technical update to the depreciation rates authorized in Decision No. 67744. *See*, APS Initial  
3 Brief Exhibit 4, Schedule C-2, Column 18.

4 **(1) Depreciation.**

5 Consistent with Decision No. 67744, as of April 1, 2005, APS implemented the  
6 depreciation rates ordered by the Commission. For this filing, Dr. Ronald White performed  
7 depreciation studies as of December 31, 2004. Based upon the results of the technical update,  
8 depreciation and amortization expense increased by \$23,055,000.<sup>58</sup> (APS Exhibit No. 56 at 21  
9 [Rockenberger]; *Id.* at Attachments LLR-2-9 and LLR-2-10).

10 Staff and RUCO have agreed with the depreciation rates proposed by APS. Staff found  
11 that the depreciation rates proposed by the Company were developed in a manner that was  
12 consistent with the Commission's rules for depreciation rates and were consistent with a  
13 "technical update" approach to the depreciation rates that the Commission approved in Decision  
14 67744. (Staff Exhibit No. 18 at 34-35 [R. Smith]). The Staff had recommended that APS clearly  
15 specify the new depreciation rates as a service life rate or a net salvage rate, similar to the rates  
16 shown in Appendix A to Decision No. 67744, and the Company does not object. APS does not  
17 agree with Staff's proposal to modify the Commission's rules regarding net salvage. Staff's  
18 approach would only serve to further jeopardize the Company's already inadequate cash flow  
19 and to burden future customers with the cost of retiring or decommissioning plants that are  
20 serving current customers. No other Party opposed APS's proposal.

21 **(2) Amortization.**

22 The Company has not requested any change to the amortization rates authorized in  
23 Decision No. 67744, although the Company is requesting approval for two new rates to provide  
24 for the amortization of leased vehicles that are purchased by the Company at the end of the lease  
25

26 <sup>58</sup> The depreciation study does not include allocation of shared services depreciation expense. In accordance with the  
27 Code of Conduct and the Company's Affiliate Accounting policies, an operating revenue adjustment of \$480,000  
28 was made by APS to reflect the amounts received from affiliates for their allocation of shared services depreciation  
expenses. (APS Exhibit No. 56 at 22 [Rockenberger]; *Id.* at Attachment LLR-2-9). In addition, amortization of the  
gain associated with the sale of the Glen Canyon 230 kV line further reduces depreciation and amortization expenses  
by \$77,000. (*Id.*).

1 term. (APS Exhibit No. 56 at 22-23 [Rockenberger]). No party has opposed the new  
2 amortization rates.

3 RUCO, however, has taken issue with the Company's overall amortization expense even  
4 though it was calculated based on current authorized amortization rates. Instead, RUCO has  
5 proposed a \$6,991,000 reduction in amortization expense based on its use of a composite  
6 amortization rate. RUCO calculated an increase in amortization expense by multiplying the total  
7 increase in intangible and general plant balances by a composite amortization rate of 10.38  
8 percent. This approach ignores the differences in the ACC-approved amortization rates for  
9 various intangible plant accounts and is contrary to the long-standing, Commission-approved  
10 method of amortization of intangibles and general plant assets that APS has been operating under  
11 for many years and was used by Staff in this proceeding.

12 In contrast to the RUCO methodology, the Amortization Rate Summary provided by APS  
13 clearly shows that the actual amortization rates vary according to the type of asset group and are,  
14 in many instances, specific to the individual asset. (APS Exhibit No. 56, Attachment LLR-2-11  
15 [Rockenberger]). For example, amortization of computer software is at 20 percent annually,  
16 while amortization of a lease is over the life of the particular lease. APS's calculation was based  
17 on the actual individual asset costs and lives at September 30, 2005, multiplied by the actual  
18 ACC-approved amortization rates for each individual asset account. (APS Exhibit No. 57 at 19  
19 [Rockenberger]).

20 RUCO did not dispute the asset balances of the intangibles or general plant account  
21 balances. In fact, Ms. Diaz Cortez stated in her testimony that she analyzed the asset balances at  
22 December 31, 2004, and at September 30, 2005, and noted the assets increased by approximately  
23 5.5 percent. (RUCO Exhibit No. 24 at 28 [Diaz Cortez]). RUCO did not dispute any of the  
24 account balances that it analyzed. RUCO also agreed that different asset accounts with the same  
25 total balance amortized over different service lives result in different amortization expense. (Tr.  
26 Vol. XVIII at 3427 [Diaz Cortez]). RUCO concurred that the overall asset balance can remain  
27 the same, yet there can still be a significant change in amortization expense. The adoption of one  
28 composite rate, as RUCO has proposed, would disregard the method of amortizing intangible

1 and general plant account balances that has been the long-standing method accepted and  
2 approved method by this Commission specifically for APS, and to its knowledge, for other major  
3 utilities in this state.

4 **h. Demand Side Management.**

5 The Company proposed a final adjustment to decrease Test Year pre-tax operating  
6 income by \$7,896,000, which represents both the Total Company and ACC Jurisdictional DSM  
7 pro forma adjustment to the Test Year operating costs. (APS Exhibit No. 48 at 12 [Froggatt]; *id.*  
8 at Attachment CNF 1-3). *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 3. The DSM  
9 pro forma adjustment increases Test Year operating costs by the \$2,989,000 (for program costs)  
10 and recognizes the corresponding reduction in revenue as a result of Commission approved DSM  
11 programs, which is expected to be \$4,907,000. (*Id.*). These numbers are additive.

12 Both Staff and RUCO dispute APS's pro-forma \$4,907,000 revenue adjustment, which  
13 reflect a conservation adjustment.<sup>59</sup> Staff contended that the conservation adjustment, unlike the  
14 performance incentive, is based upon estimated costs. (Staff Exhibit No. 16 at 9 [Anderson]).<sup>60</sup>  
15 RUCO concurred in this objection, arguing that the conservation adjustment is based upon  
16 "estimated lost revenues and expenses that have not actually been realized." (RUCO Exhibit No.  
17 24 at 15 [Diaz Cortez]). Since the program is in its early stages, RUCO believes estimates of  
18 future consumption and losses in revenue based upon DSM programs should not be taken into  
19 account until they have occurred in some historical period. (*Id.*).

20 RUCO argued that the Settlement Agreement specifically precludes the Company from  
21 making the conservation adjustment.<sup>61</sup> (RUCO Exhibit No. 24 at 15 [Diaz Cortez]). However,

22 <sup>59</sup> The term "conservation adjustment" has been used interchangeably with "net lost revenues". To avoid confusion  
23 with the "net lost revenues" or "uncollected fixed costs" that have been discussed related to the Company's net  
metering program, the term "conservation adjustment" is used in this discussion.

24 <sup>60</sup> Staff's argument that reflecting the conservation adjustment to test period sales is somehow duplicative of the  
performance incentive is addressed in section VII.D.3(a) of the Company's Initial Post-Hearing Brief.

25 <sup>61</sup> The Settlement Agreement from APS' previous rate case provides:

26 This Agreement does not provide for the recovery of net lost revenues. *Except* to the extent  
27 reflected in a test year used to establish APS rates in future rate proceedings, or unless otherwise  
28 authorized by the Commission in a separate non-rate case proceeding, APS shall not recover or  
seek to recover net lost revenues on a going-forward basis. In no event will APS recover or seek to  
recover net lost revenues incurred in periods prior to such test year or for periods prior to the  
Commission's authorization of net lost revenue recovery in a separate non-rate case proceeding ....

Decision No. 67744 at 10 ¶ 46 (2005) (emphasis added).

1 RUCO later modified its argument, recognizing that the Settlement Agreement did allow APS to  
2 make a request for the conservation adjustment as part of a general rate case – precisely what  
3 APS is doing. (Tr. Vol. XVIII at 3420 [Diaz Cortez]). Although RUCO attempted to qualify its  
4 position by arguing that the Settlement Agreement contemplated three years of uninterrupted  
5 DSM policy, no Settlement Agreement language or evidence was entered to that effect, nor does  
6 the Company’s request for a relatively routine type of pro forma adjustment to test period  
7 revenue affect the three-year commitment to DSM required by Decision No. 67744.

8 RUCO also argued that the conservation adjustment violates the “matching principle”  
9 alleging that it accounts for post-Test Year losses in revenue without accounting for “post-test-  
10 year gains in revenue from customer growth.” (RUCO Exhibit No. 24 at 15 [Diaz Cortez]). The  
11 Company disagrees in that its adjustment merely captures the impact of DSM expenditures made  
12 during the Test Year and in 2006.

13 Although Staff agreed with the Company that the conservation adjustment may be  
14 pursued as part of a general rate case (Tr. Vol. XIX at 3639 [Anderson]), Staff argues that the  
15 conservation adjustment is limited by the Test Year, and since the conservation adjustment  
16 requested by the Company was provided as a pro forma adjustment, it should not be allowed.  
17 (*Id.* at 3640 [Anderson]). Yet, the revenue pro forma adjustment made by the Company is  
18 simply a normalization adjustment for the “known and measurable” effect of the recently  
19 approved DSM programs based on expenditures in 2005-2006. (APS Exhibit No. 17 at 10  
20 [Ewen]).

21 Although both Staff and RUCO contend that the conservation adjustment, unlike the  
22 performance incentive, is based upon estimated costs and should not be allowed, (Staff Exhibit  
23 No. 16 at 9 [Anderson]; RUCO Exhibit No. 24 at 15 [Diaz Cortez]), the Company submits that it  
24 is appropriate to set rates on conditions that will be present when the new rates go into effect.  
25 (APS Exhibit No. 17 at 10 [Ewen]). Consistent with standard ratemaking policy, the Company  
26 proposes a conservation adjustment to base rates predicated upon known and measurable  
27 conditions as set forth in Decision No. 67744. (*Id.*). The Company even modified its request,  
28 basing the conservation adjustment on “actual spending ... and the amounts planned to be spent

1 in the 4th quarter of this year.” (APS Exhibit No. 18 at 9 [Ewen]). Most of that spending was  
2 for programs such as the compact fluorescent light program, for which the savings per bulb are  
3 completely predictable. (Tr. Vol. VII at 1404 [Orlick]. As such, the Company’s calculations are  
4 not estimates, but “known and measurable” adjustments to the Test Year. (Tr. Vol. V at 1095  
5 [Ewen]). The failure to allow APS to recover its lost revenues from DSM programs by reflecting  
6 such revenue losses in general rate proceedings will simply prevent the Company from currently  
7 recovering its full cost of service. (APS Exhibit No. 17 at 10 [Ewen]).

8 **i. Base Fuel And Purchased Power (Including Off-System Sales).**

9 Fuel and purchased power expenses were discussed in a previous section of APS’s Initial  
10 Post-Initial Brief. The pro forma adjustment necessary to reflect the Company’s proposed Base  
11 Fuel Cost is shown on APS Initial Brief Exhibit 5, Schedule C-2, Column 24. The evidence in  
12 this case supports the Company’s adjustment to reduce its operating income in the amount of  
13 \$259,512,000,<sup>62</sup> which represents the Company’s ACC Jurisdictional adjustment to the  
14 Company’s original pro-forma to include 2007 base fuel and purchased power expense and off-  
15 system revenues, as expressed in cents/kWh, at adjusted Test Year levels.

16 **j. “Lobbying” Costs.**

17 **(1) Company’s Request.**

18 The Company is requesting inclusion of \$1,763,994 of prudently incurred expenses for  
19 efforts by its Federal Affairs and Public Affairs Departments that benefit customers and utility  
20 operations in its cost of service for which Staff seeks elimination. (Staff Exhibit No. 35 at  
21 Schedule C-15). The Company itself already allocated certain costs between “below-the-line”  
22 lobbying activities for which the Company is not seeking recovery and “above-the-line” Public  
23 Affairs activities that directly benefited regulated operations and, as a result, nearly two-thirds of  
24 the Company’s Public Affairs Department budget had already been allocated to the shareholders  
25 “below-the-line.” (APS Exhibit No. 2 at 23-24 [Wheeler]).

26  
27  
28 <sup>62</sup> This amount is calculated as follows: \$243,824,000 (SFR Schedule C-2, filed January 31, 2006, column (VV)),  
plus \$32,305,000 (APS Exhibit No. 49, Attachment CNF-2RB Page 6 of 7, column 16 [Froggatt]), minus  
\$16,617,000. (APS Exhibit 53, Rejoinder C-1, Page 2 of 2, column (e)).

1           Examples of customer benefits that arose from the activities of two APS departments  
2 include: obtaining a waiver of the tariff importation fees for the Palo Verde replacement steam  
3 generator, which resulted in savings of approximately \$10 million; support of provisions in the  
4 Energy Transportation Act of 2005 on tax incentives for new transmission investment, which  
5 resulted in an estimated savings of \$1.4 million per \$50 million of eligible new transmission;  
6 support of the Production Tax Credit provisions of the American Jobs Creation Act that  
7 produced a \$3 million benefit, which is already reflected in this rate case; and support of state  
8 property tax legislation, which resulted in annual property tax savings of \$1.7 million – also  
9 reflected in this proceeding. (APS Exhibit No. 2 at 24 [Wheeler]).

10           Evidence presented relating to utility and customer savings associated with lobbying  
11 efforts has not been controverted. RUCO recognized that some of APS's requested lobbying  
12 expenses have a public benefit to customers and has recommended that the Commission allow 50  
13 percent recovery of such costs. (RUCO Exhibit No. 26 at 15 [Diaz Cortez]). Staff acknowledged  
14 that not all lobbying efforts by utility companies are detrimental to customers and that "it is  
15 virtually impossible to know at what 'cost' the achievement of even the 'pro-consumer'  
16 legislation was accomplished" by such efforts. (Staff Exhibit No. 34 at 116 [Dittmer]). Staff,  
17 while admitting that some lobbying expenses are beneficial to customers, did not specifically  
18 analyze APS's lobbying expenses to determine whether such lobbying efforts benefited  
19 customers in this case. (Tr. Vol. XXII at 4231-4233 [Dittmer]).

20           The Commission itself has seemingly recognized the legitimacy and even necessity of  
21 efforts by utilities to influence public policy and its role in benefiting utility customers. At the  
22 hearing in this case, in conjunction with the discussion of the utilization of hook-up fees, both  
23 Commissioner Mayes and Mundell specifically inquired as to whether APS has "lobbied"  
24 Congress for tax changes related to the requirement that a utility include in gross taxable income  
25 contributions in aid of construction. (Tr. Vol. IV at 752-753[Brandt]; Tr. Vol. XXVI at 4836  
26 [Robinson]). In addition, one of the Commissioners suggested that APS "lobby" the legislature  
27 for additional funding so the Commission could acquire additional staff. (Tr. Vol. XX 3754; Tr.  
28 Vol. XXII at 4233 [Dittmer]).



1 the following determination:

2 47. Our precedent has not always been clear when it comes to the classification and  
3 recovery of informational expenditures. On a number of occasions the Commission has  
4 found "lobbying" expenses of any type to be non-recoverable, while on other occasions  
5 the Commission has determined that even if the costs are related to lobbying and should  
6 be recorded in Account 426.4, they are appropriately recoverable from ratepayers upon  
7 sufficient showing that they were undertaken for the benefit of ratepayers. . . .

8 48. Based on the above-stated principles, the Commission will permit recovery of ISO-  
9 NE's "external affairs" and "corporate communications" expenses as detailed in ISO-  
10 NE's July 17 filing. *We find that because ISO-NE has shown that its informational  
11 activities were directly related to existing or proposed core operations and undertaken to  
12 benefit its ratepayers, it may recover the costs associated with those activities.*  
13 (Emphasis added.)

14 (*Id.* at 43-44).

15 There are other jurisdictions that have allowed or have implied that they would allow  
16 recovery of some or all of lobbying-type expenses to the extent such activities benefited  
17 customers, including Georgia,<sup>64</sup> Idaho,<sup>65</sup> Indiana,<sup>66</sup> Missouri,<sup>67</sup> Nevada,<sup>68</sup> Florida,<sup>69</sup> and Rhode  
18 Island.<sup>70</sup>

19 The Commission has previously indicated that it would consider allowing the recovery of  
20 lobbying expenses to the extent a utility has met its burden of demonstrating customer benefits.  
21 Because APS has provided uncontroverted evidence demonstrating the benefits of its lobbying  
22 activities to customers, the Commission should reject the adjustments proposed by Staff and  
23 RUCO.

24 **k. Incentive Compensation.**

25 APS's annual variable incentive plans and its long-term incentive plans are designed  
26 consistently with the competitive market practices, and are integral in providing a reasonable,  
27

28 <sup>64</sup> *Re GA. Power Co.*, 120 P.U.R. 4<sup>th</sup> 621, Georgia Public Service Commission, Docket No. 3840-U (Sept. 28, 1989).

<sup>65</sup> *Re Intermountain Gas Co.*, 30 P.U.R. 4<sup>th</sup> 231, Idaho Public Utilities Commission, Order No. 14859 (Aug. 17, 1979).

<sup>66</sup> *Re Hoosier Energy Rural Elec. Coop., Inc.*, 62 P.U.R. 4<sup>th</sup> 134, Indiana Public Service Commission, Cause No. 37294 (June 29, 1984); *Re Ind.-Am. Water Co., Inc.*, 169 P.U.R. 4<sup>th</sup> 252, Indiana Utility Regulatory Commission Cause No. 40103 (May 30, 1996).

<sup>67</sup> *Re Kan. City Power and Light Co.*, 55 P.U.R. 4<sup>th</sup> 468 (July 8, 1983).

<sup>68</sup> *Re Sierra Pac. Power Co.*, 129 P.U.R. 4<sup>th</sup> 470 (Jan. 31, 1992).

<sup>69</sup> *Re Florida Power Corporation*, 138 P.U.R. 4<sup>th</sup> 472, Florida Public Service Commission, Order No. PSC-92-1197-FOF-EI (October 22, 1992).

<sup>70</sup> *Providence Gas Company v. Edward Burman et. al.*, 22 P.U.R. 4<sup>th</sup> 103, 119 R.I. 78, 376 A.2d 687 (1977).



1 stock incentive program, which is also part of the compensation package for eligible APS  
2 employees. Staff has proposed to eliminate this amount in its entirety. RUCO has not  
3 specifically objected to the Company's proposal.

4 Although proposing no disallowance of **cash** incentive pay, Staff has drawn an arbitrary  
5 distinction in the case of incentives paid in Company stock. APS's stock incentive component,  
6 or "long-term" incentive, is integral in attracting and retaining high quality management  
7 personnel. (APS Exhibit No. 50 at 19-20 [Gordon]). The program benefits APS customers by:

- 8       ▪ Minimizing costs associated with high turnover at the executive level, including  
9       recruiting, productivity reductions and continuity of leadership.
- 10       ▪ Minimizing the need for additional base pay or other fixed benefits to provide  
11       competitive compensation levels.
- 12       ▪ Providing focus and accountability for the executive and management team to  
13       develop and implement effective business strategies that span multiple year  
14       periods.
- 15       ▪ Long-term financial health provides stability and allows the Company to continue  
16       to invest in the business operations, grow its asset base and continue to improve  
17       operating efficiencies through economy of scale and upgrades in technology and  
18       infrastructure which directly benefit customers through maintaining a low cost  
19       generation and delivery structure.

20 (*Id.* at 21-22).

21 Staff has attempted to justify the exclusion of approximately \$4.8 million of stock-based  
22 incentive compensation by alleging that stock-based incentives are entirely or primarily driven  
23 by Pinnacle West earnings achievements or total return to shareholders that only indirectly  
24 benefits consumers. First of all, the issue is whether APS employee compensation, including  
25 cash and stock incentives, is reasonable and **not** how that compensation is determined or whether  
26 that compensation is comprised of base salary, incentive pay, benefits or stock. (APS Exhibit 2  
27 at 22 [Wheeler]). There has been no allegation, let alone evidence, that overall APS employee  
28 compensation is excessive or unreasonable. (APS Exhibit No. 2 at 21-22 [Wheeler]).

Moreover, the Staff disallowance of the plan is based upon the faulty belief that the  
interests of investors and consumers are in fundamental conflict over the issue of financial  
performance. Customers have a large stake in the financial success of the utility because that is

1 the only way the utility can attract needed capital investment at a reasonable cost. (*Id.*) In a  
2 sense, their stake may be higher than that of investors and the employees receiving stock  
3 incentives. The former can take their capital and their services elsewhere if they do not receive  
4 fair compensation. Consumers cannot as easily avoid the problems associated with a utility in  
5 financial trouble or which cannot attract and retain qualified management employees.

6 The stock incentive plan is an additional component of employee compensation that the  
7 Company offers which is consistent with similar programs of other companies. (*Id.* at 22).  
8 Again, the only relevant ratemaking issue is whether APS employee compensation taken as a  
9 whole is reasonable, and not whether the compensation is base salary, benefits, cash incentive  
10 pay or stock. Not only has there been no evidence presented in this case that suggests that  
11 overall APS compensation is unreasonable, the evidence presented is to the contrary. (*Id.* at 21-  
12 22). On cross-examination, when asked whether he made any determination as to the  
13 reasonableness of the compensation received by the Company's officers and senior management,  
14 the Staff witness responded "no" and that the basis for his recommendation was "conceptual".  
15 (Tr. Vol. XXII at 4229 [Dittmer]). Staff did not find the stock incentive plan unreasonable or  
16 imprudent – indeed Staff did not even allege as much. Therefore, APS should be permitted  
17 recovery of such costs. (APS Exhibit No. 2 at 22 [Wheeler]).

18 (2) RUCO's Overall 20 Percent Reduction In Incentive Pay

19 As noted above, Staff did not oppose APS's Employee Cash Incentive Program in which  
20 APS is seeking approval of approximately \$17,800,000 in operating expenses related to its  
21 employee cash incentive program and concluded that the cash incentive payments were  
22 reasonable and found that the Company proposed level of Test Year cash incentives are **tied**  
23 **primarily to performance measures that directly benefit APS customers as they included**  
24 **the achievement of customer oriented goals such as lowering costs, increasing reliability or**  
25 **improving service and satisfaction.** (Emphasis added.) (Staff Exhibit No. 34 at 110, 112  
26 [Dittmer]).

27 In contrast, RUCO has proposed a reduction of approximately 20 percent (\$4,563,000) to  
28 the Company's employee cash incentive program, without providing **any** supporting analysis

1 (RUCO Exhibit No. 23 at 9, 12 [Rigsby]), or making any assertion that APS's incentive program  
2 was not in line with other firms. Furthermore, in making this recommendation, RUCO failed to:  
3 1) analyze the potential impacts that a reduction in incentive compensation would have on APS's  
4 ability to retain or attract qualified employees; 2) analyze the reasonableness of the total  
5 compensation package of APS employees; 3) determine how many APS employees were also  
6 APS residential customers and take into consideration that such employees would realize a  
7 reduction in compensation, as well as a rate increase; or 4) analyze the potential effects such a  
8 reduction would have on investors, rating agencies, or Wall Street analysts. (Tr. Vol. XVIII at  
9 3330-3336 [Rigsby]). RUCO's sole justification was that APS customers should not have to  
10 shoulder the burden of higher electric rates when APS employees are given an opportunity to  
11 earn more pay that could mitigate or eliminate the impact of the rate increase, and that APS  
12 employees should "share the same pain and hardship" that the rate increase would have on their  
13 customers. (RUCO Exhibit No. 22 at 13-15 [Rigsby]).

14 The RUCO proposal to reduce incentive compensation to even rank and file APS  
15 employees is simply arbitrary and ill-conceived and should not be adopted. The suggested  
16 "share the pain" approach implies that APS employees that directly and substantially contribute  
17 to the provision of an essential utility service should subsidize the cost of providing electricity to  
18 the Company's customers. It penalizes APS employees by requiring them to shoulder the burden  
19 of cost increases attributable to economic forces outside of their control, such as increased fuel  
20 costs and a rapidly growing service territory. Moreover, in the case of APS employees who also  
21 happen to be APS customers, the RUCO proposal would, in effect, require such employees to  
22 pay twice for the increase. Finally, it also sends the wrong message to a highly skilled and  
23 trained workforce regarding how their efforts are viewed and could potentially inhibit the  
24 Company's ability to attract and retain such employees in a very competitive environment.

25 The Company presented evidence that it had already eliminated **all** officer cash incentive  
26 payments (approximately \$3,890,000) from its Test Year period and included officer salaries at  
27 the 2004 (as opposed to the higher Test Year) level. (APS Exhibit No. 2 at 21 [Wheeler]; APS  
28 Exhibit No. 3 at 10 [Wheeler]). Moreover, whereas RUCO again presented no evidence that the

1 APS compensation was unreasonable, the Company provided uncontroverted testimony as to the  
2 reasonableness of the employee compensation programs. (APS Exhibit No. 2 at 21-22  
3 [Wheeler]).

4 **3. Adjustments Where The Need For And The Means Of Calculations Are**  
5 **Uncontested, But Where Final Adjustments Differ.**

6 While there is no disagreement among Parties regarding the need for the following  
7 adjustments or the mechanics as to how they are calculated, the outcomes of the calculations  
8 differ because the amounts that are input into the calculations depend on other factors, as  
9 described below.

10 **a. Income Tax / Interest Synchronization.**

11 There is no dispute as to the methodology used in the Company's final adjustment to  
12 reduced Test Year operating income in the amount of \$2,523,000,<sup>71</sup> which represents ACC  
13 Jurisdictional figure that reflected the synchronization of interest expense using the adjusted  
14 September 30, 2005 capital structure and the cost of long-term debt, as well as the use of the  
15 statutory income tax rate. *See*, APS Initial Brief Exhibit 5, Schedule C-2, Column 9. However,  
16 the level of synchronized interest and its associated income tax effect does depend on the final  
17 level of jurisdictional (original cost) rate base found appropriate by the Commission and the  
18 weighted cost of debt. (RUCO Exhibit No. 23 at 17 [Rigsby]).

19 **b. Generation Production Income Tax Deduction**

20 APS had determined the deduction for the Test Year ended September 30, 2005 reduced  
21 income tax expense by \$1,862,000. (APS Exhibit No. 48 at 15-16 [Froggatt]; *id.* at Attachment  
22 CNF 1-8). Subsequent to the filing of APS's direct case, final Treasury Regulations were issued.  
23 (Staff Exhibit No. 34 at 127 [Dittmer]). Staff's proposed adjustment takes into account the final  
24 Treasury Regulations that were not available to APS when it filed its direct case and  
25 synchronizes the calculation for Staff's proposed return recommendation. APS agrees in  
26 principle with the changes resulting from the issuance of the final regulations, but opposes

27 <sup>71</sup> In this case, the Company reduced operating income by \$3,009,000, which represents Total Company figure.  
28 (APS Exhibit No. 48 at 16 [Froggatt]; *Id.* at Attachment CNF 1-9; *see also* APS Exhibit No. 49 at 7 [Froggatt]; *Id.* at Attachment CNF-8RB).

1 calculating the adjustment based on Staff's proposed weighted cost of common equity. This  
2 adjustment should ultimately reflect the cost of capital used by the Commission to establish rates  
3 in its final Order. (APS Exhibit No. 49 at 6 [Froggatt]). The Company's revised estimate results  
4 in a reduction of ACC Jurisdictional income tax expense of \$3,054,000.<sup>72</sup> [*Id.*; *Id.* at Attachment  
5 CNF-7RB). See, APS Initial Brief Exhibit 5, Schedule C-2, Column 8. The revised estimate  
6 was based upon the final Treasury Regulations and the APS proposed cost of common equity of  
7 6.27 percent. For every tenth-point reduction (from 6.27 percent) in the weighted cost of  
8 common equity used by the Commission to establish rates in its final Order, the income tax  
9 expense increases by approximately \$42,600.<sup>73</sup>

10 **D. Other Revenue Requirement Issues.**

11 **1. Environmental Improvement Charge**

12 The Company proposes a final adjustment to increase Test Year pre-tax operating income  
13 by \$4,542,000, which represents the Company's ACC Jurisdictional pro forma adjustment  
14 increase to Test Year operating costs. (APS Exhibit No. 53 [Rejoinder A-1]). (A detailed  
15 analysis of justification for the EIC adjustment is discussed later in this Initial Post-Hearing  
16 Brief.)

17 **2. Addition Of Incremental EPS Surcharge**

18 Decision No. 68668 required APS to set aside \$4,250,000 for additional funding for the  
19 EPS Uniform Credit Purchase Program ("UCPP"). Staff recommends that the EPS adjustor rate  
20 and caps be increased to recover an additional \$4,250,000 through the Company's Adjustment  
21 Schedule EPS-1. (APS Staff Exhibit No. 12 at 4 [Keene]; APS Exhibit No. 38, Attachment  
22 GAD-2RB [DeLizio]). APS notes that the actual level of expenditures for the UCPP during  
23 2006 was unknown as of the time of the hearing and, thus, it may be appropriate to allow for  
24 some manner of "true-up" such that under/over spending of the additional \$4,250,000 would be  
25 carried forward as a regulatory asset/liability that could be reconciled in future rate proceedings  
26

27 <sup>72</sup> In this case, the Company reduced income tax expense by \$3,089,000, which represents the Total Company  
figure. (APS Exhibit No. 49 at 6 [Froggatt]; *Id.* at Attachment CNF-7-RB).

28 <sup>73</sup> E.g., Staff's proposed weighted cost of common equity is 5.59%.  $6.27\% - 5.59\% = 0.68\%$ .  $(0.68\% / .1) \times \$42.6K =$   
 $\$290K$ .  $\$3,089K - \$290K = \$2,799K$ , which is the Staff proposed reduction of income tax expense.

1 or, in the case of a regulatory liability, used to finance additional credit purchases in 2007 and  
2 succeeding years.

3  
4 **VI.**  
**FUEL AUDIT**

5 Commission Staff retained The Liberty Consulting Group ("Liberty") to conduct an  
6 examination and analysis of the management and operations of fuel and purchased power  
7 functions at APS (the "Fuel Audit" [Staff Exhibit No. 33]), focusing on April through December  
8 2005, during which the PSA applied. As part of its review, Liberty examined the Company's  
9 organization structure, responsibilities, and Staff; policies, procedures, systems, and tools; and  
10 procurement approach, methods, and decisions. (Staff Exhibit No. 28 at 7 [Antonuk]). Liberty  
11 conducted a comprehensive audit examining fuel and purchase-power procurement policy,  
12 strategy and transactions, as well as fuel and purchased-power costs in the Company's PSA. As  
13 a part of its audit, Liberty issued over 200 data requests, conducted on-site interviews, and did  
14 on-site inspections of fuel handling, quality control, performance monitoring and maintenance at  
15 the Company's generating stations. (Staff Exhibit No. 33 at 4-5 [Fuel Audit]). Liberty reviewed  
16 the simulation models used to develop fuel and purchased power forecasts and analyzed the  
17 models used by traders to determine the correct dispatch of resources, as well as reviewing the  
18 Company's hedging, off-system sales and fuel and purchased power contracts. (Staff Exhibit  
19 No. 28 at 7-8 [Antonuk]).

20 The Fuel Audit verified that APS handled fuel and energy procurement and management  
21 in a manner that produced appropriate costs during the audit period. (Staff Exhibit No. 28 at 4  
22 [Antonuk]). Liberty concluded that there were no indications of imprudently incurred fuel and  
23 purchased power costs for 2005. Liberty specifically noted that most of the changes Liberty had  
24 recommended as a result of the Fuel Audit seek to move APS in the direction of utilizing best  
25 practices in terms of procedures and analytical methods, and that these changes would be  
26 incremental improvements to overall management that is already effective. (*Id.* at 21).

27 Regarding the Company's **organization and staffing**, Liberty found that the personnel in  
28 the fuel and power procurement organizations have solid analytical skills and sound experience;

1 that communication within and among these organizations was satisfactory, as was the  
2 Company's program for training and cross training individuals. (Staff Exhibit No. 33 at 6 [Fuel  
3 Audit]). Liberty concluded that APS used adequate procedures and decision processes,  
4 documented decisions sufficiently, operated under established procurement approval limits, and  
5 underwent regular internal auditing. Liberty recommended improvements in procedures for fuel  
6 contract management and administration and in procedures for accepting gas-supply offers. (*Id.*  
7 at 6-7).

8 In response to these recommendations, the Company has agreed to review its procedures  
9 for fuel contract management and administration and, as appropriate, incorporate additional  
10 detail to reflect the processes used. (APS Exhibit No. 45 at 3 [Denman]). The Company has  
11 also improved its acceptance of gas supply offers by expanding the review process to compare  
12 gas transaction prices to market prices through the use of prices captured each hour by an  
13 electronic trading platform. Transactions found to fall outside these market parameters are  
14 documented and reported to the Energy Risk Management Committee ("ERMC"). In the event  
15 the trader has not transacted within the market parameters due to generally acceptable  
16 circumstances (*i.e.*, reliability or system emergencies), the trader will be subject to the terms for  
17 trading violations as provided for in the ERMC guidelines. (APS Exhibit No. 25 at 14-15  
18 [Carlson]).

19 With regard to **fuel management**, Liberty found that APS had effectively managed coal  
20 inventory levels, administered coal contracts, carried out sampling processes, and made  
21 economical use of coal combustion by-products. (Staff Exhibit No. 28 at 13 [Antonuk]). Liberty  
22 also concluded that APS's approach to gas-supply management had been effective. (*Id.*) Liberty  
23 made recommendations to streamline the procedures for handling information on coal weights  
24 and revising the inventory for the coal at the Cholla Station. (*Id.*) Liberty has also stated  
25 concerns about the change in APS's full-requirements arrangement with El Paso Natural Gas  
26 pipeline, in that FERC's interests in unbundled services and pricing has brought changes to El  
27 Paso's rates that will result in enormous increases in El Paso's charges to APS. (*Id.*; Staff  
28 Exhibit No. 33 at 53 [Fuel Audit]). Liberty recommended that APS examine its alternatives for

1 reducing future pipeline-transportation costs and report the results of this analysis to the  
2 Commission within one year. (Staff Exhibit No. 28 at 13-14 [Antonuk]).

3 In response to Liberty's recommendations, APS will work with Cholla Power Plant  
4 management to review the coal inventory target and adjust it to reflect the appropriate inventory  
5 practice. With respect to the increases in El Paso's charges, the Company has investigated and  
6 will continue to investigate alternatives to gas transportation and will continue to work with  
7 Kinder Morgan and TransWestern Pipeline to encourage the construction of new pipelines to  
8 serve Arizona. (APS Exhibit No. 45 at 4 [Denman]). Lastly, the Company will conduct the  
9 recommended analysis of gas purchasing and management under El Paso's revised rate structure  
10 and submit a confidential report within one year of the Commission's decision in this docket.  
11 (*Id.* at 4-5).

12 With regard to the Company's **fuel contracts**, Liberty concluded that APS's long-term  
13 and short-term coal supply agreements were appropriate and effective and that APS used a sound  
14 process to contract for gas commodity. In addition, Liberty found that the Company's  
15 contracting process for fuel oils was effective. (Staff Exhibit No. 28 at 14 [Antonuk]).

16 With regard to **nuclear fuel**, Liberty found that APS conducts nuclear fuel procurement  
17 and management through an effective organization and has developed and used effective  
18 procedures for procuring nuclear fuel. In addition, Liberty found that APS used an appropriate  
19 basis to account for its nuclear fuel costs for ratemaking purposes. (Staff Exhibit No. 33 at 12  
20 [Fuel Audit]).

21 In addressing APS's **purchased power**, Liberty found the Company based its marketing  
22 and trading activities on sound hedging policies and procedures, conducted electricity sales and  
23 purchases consistently with least-cost dispatch guidelines, produced economic transactions, and  
24 traded with diverse counterparties. Liberty concluded that APS was using appropriate tools and  
25 documentation to conduct power trading to achieve least-cost total dispatch. (Staff Exhibit No.  
26 28 at 14 [Antonuk]). In the area of fuel and energy management, Liberty's principal concern  
27 was the physical location of the Company's utility and non-utility trading activities. (*Id.* at 15).  
28 In response to this concern, APS would like to point out that its recent revisions to the Code of

1 Conduct, which were adopted by the Commission and postdate Liberty's audit, include new  
2 policies and procedures that prohibit traders who handle APS's system from providing trading  
3 services for APS energy affiliates. (APS Exhibit No. 5 at 48 [Brandt]). Although Liberty's audit  
4 discovered no indications of any deliberate favoritism to any party, including any APS affiliate,  
5 APS has started implementing additional physical separation and controls, which should be  
6 completed in the immediate future. (*Id.* at 48-49).

7 Liberty also voiced a concern about PWCC's use of a utility transmission corridor that  
8 had generated positive margins of approximately four million dollars during a five month period.  
9 Liberty did note that APS had discovered this issue itself, and had made corrections. APS  
10 received a full credit for the \$4.2 million noted above, which credit was passed along to APS  
11 customers through the PSA. (Staff Exhibit No. 28 at 16 [Antonuk]).

12 In analyzing APS's **off-system sales**, Liberty acknowledged that APS does not have  
13 excess coal and nuclear generation available for substantial portions of the year because its  
14 system load has grown past the Company's coal and nuclear resources. Thus, its sales  
15 opportunities and its margins from off-system sales are constrained. (*Id.* at 17).

16 Liberty found that APS designed and operated a sound **hedging** program, and that it has  
17 been successful in meeting its primary objective to promote price stability. (*Id.* at 17-18). To  
18 promote a common understanding of the hedging program and to verify that it is meeting the  
19 needs and expectations of customers, Liberty encouraged the Company, stakeholders and the  
20 Commission to have a dialogue on what goals a hedging program should have and the extent to  
21 which it should produce hedged prices. (*Id.* at 18). APS generally agrees with this suggestion.  
22 (APS Exhibit No. 5 at 45 [Brandt]). A dialogue with the Commission that promotes a common  
23 understanding of hedging program operations and objectives may facilitate appropriate course  
24 corrections and eliminate any misunderstandings regarding the program and its objectives in the  
25 future. (*Id.* at 45-46). However, APS ultimately must have the freedom to effectuate the  
26 business decisions it deems most appropriate and in the best interests of the Company, its  
27 customers, and its shareholders. (*Id.* at 45).

28 Liberty was not the only third party that has reviewed the Company's hedging practices.

1 As a result of Decision No. 68685, APS was ordered to engage in a benchmarking study of their  
2 fuel costs and hedging practices. The consulting firm, R.W. Beck, performed that review. Their  
3 report, the Arizona Public Service Company Fuel Hedging Program Benchmarking Assessment  
4 (November 1, 2006) ("R.W. Beck Report"), was entered into evidence as APS Exhibit No. 72.  
5 The R.W. Beck Report concluded that "APS has a high-quality energy risk management and  
6 hedging program," that it was "consistent with leading industry practices." (*Id.* at 5-1).

7 Liberty had no recommendations regarding the Company's **forecasting and modeling**.  
8 Liberty found that APS used sufficiently accurate modeling to predict fuel and purchased power  
9 volume and cost; had taken appropriate actions to ensure that it achieves least-cost total dispatch;  
10 had utilized outside reviews appropriately to improve management and operations; and had  
11 maintained adequate documentation to support regulatory oversight and review. (Staff Exhibit  
12 No. 33 at 9 [Fuel Audit]).

13 In regard to **plant operations**, Liberty found that the performance metrics of the  
14 Company's base-loaded coal units demonstrated effective operation, as did the performance  
15 metrics of the large natural gas units. Liberty noted that the performance metrics of the natural  
16 gas units have been adversely affected since the former merchant units were inserted as part of  
17 the APS dispatch order, and that the Company is appropriately dealing with these issues. Liberty  
18 found that capital and O&M expenditure patterns for the APS generating fleet and its individual  
19 units have been consistent with current operational requirements and that APS times and layers its  
20 unit outage schedules effectively, and conducts scheduled outages within reasonable durations.  
21 (Staff Exhibit No. 28 at 18-19 [Antonuk]).

22 Liberty recommended that APS focus on optimizing the performance of the new natural  
23 gas units and improving its economic evaluations related to a minimization of outage time. (*Id.*  
24 at 19). Liberty also recommends that APS evaluate the replacement of boiler sections in some of  
25 its coal plants, and conduct a centralized review of operator and maintenance errors at the coal  
26 plants. (*Id.*). To improve the availability of West Phoenix Unit No. 5, Liberty recommended that  
27 root-cause analysis be undertaken when generation is lost at this facility. (*Id.* at 19-20). Liberty  
28 also recommended that APS analyze system reserve calculations using both a 50/50 and 90/10

1 load forecast, incorporating the constraints of the Phoenix Load Pocket.

2 In response to these recommendations, APS believes it continually works to optimize  
3 performance of its natural gas units and minimize outages. APS has addressed operational and  
4 start-up issues with its natural gas units, Redhawk and West Phoenix CC5. (Staff Exhibit No. 45  
5 at 6 [Denman]). With respect to Redhawk, APS has replaced several by-pass valves and added  
6 additional generator endturn blocking and larger start-up drains. With respect to West Phoenix  
7 CC5, APS has replaced several by-pass and feedwater regulating valves, redesigned the rotor air  
8 cooler system, and plans to redesign and replace the heater retubing and low pressure steam  
9 turbine last stage blades. These efforts allowed Redhawk to operate at a combined equivalent  
10 availability factor ("EAF") of 96.5 percent for 2006 and West Phoenix CC5 to operate at 91.6  
11 percent EAF for 2006. (*Id.*). As to minimizing outage time, APS has a process in place. APS  
12 schedules required planned outages using a production cost model, which produces the least cost  
13 replacement power for the system. (APS Exhibit No. 45 at 6-7 [Denman]). All scheduled  
14 outages are planned to minimize outage time and replacement power cost and to also ensure that  
15 scheduled work is performed at the least cost. (*Id.*). Forced outages are scheduled based on  
16 value to the system, replacement power cost at the time of the outage, and forecasted near term  
17 anticipated dispatch of the unit. (*Id.*). With respect to duration, APS ensures that the appropriate  
18 resources (labor, tools, parts, contract support) are available so the outage is as short as possible.  
19 (*Id.*).

20 As to evaluating the replacement of boiler sections at Four Corners and Navajo  
21 Generating Station, APS has proactively responded to this recommendation through its boiler  
22 tube leak reduction program. (APS Exhibit No. 45 at 8 [Denman]). The program includes  
23 inspection and testing to anticipate leaks, procedures to determine the root cause of leaks, ensure  
24 that repairs are performed properly, require the development of short and long-term corrective  
25 action plans, and monitor implementation of corrective action plans to assure timely completion.  
26 (*Id.* at 8-9).

27 In addition, APS routinely investigates the root causes of all operator and maintenance  
28 errors at its coal plants, including West Phoenix CC5, and at the Navajo Generating Station,

1 which is operated by Salt River Project ("SRP"). (*Id.* at 9, 11). APS regularly reviews reports  
2 on all APS plant operation, lost generation, and plant performance. (*Id.*). APS then conducts  
3 regular operational assessments at each of the base-load and intermediate load plants to assure  
4 that operators are knowledgeable and following good operational practices. (*Id.*). As to the  
5 Navajo Generating Station, SRP provides daily status and monthly lost generation reports to APS  
6 management. (*Id.* at 10). APS representatives also attend quarterly meetings where SRP  
7 provides detailed information about Navajo's operations, including lost generation events, and  
8 identifies corrective actions that it has taken or plans to take. (*Id.*).

9 In using its root cause policy, APS has determined that there is no unusual pattern of  
10 operator errors at Four Corners and Navajo Generating Station. There were seven human  
11 performance errors reported at Four Corners Unit 3 in 2005 – one maintenance and six  
12 operations. Of the six operations errors, five were related to one event – a faulty check valve.  
13 The Company did not correct the historical 2005 data to reflect that these five reported errors  
14 were, in fact, **not** operator errors. The six human performance errors at Navajo Unit 3 in 2005  
15 were related to unit start up and operator experience. Each of these events were investigated and  
16 appropriate action taken by SRP to help insure that human performance errors are kept to the  
17 lowest possible level. (APS Exhibit No. 45 at 10 [Denman]).

18 Lastly, the Company has prepared and analyzed the impacts of "90/10" load forecasts in  
19 the past as part of the Company's routine sensitivity analysis. While the risks of exceeding the  
20 50/50 load forecast are fairly well understood in the Company, the Company will seek ways to  
21 incorporate these forecasts more formally. (APS Exhibit No. 17 at 26 [Ewen]).

22 In its **financial audit of PSA costs**, Liberty concluded that APS's accounting systems  
23 were adequate and reasonably maintained to provide the necessary collection, reporting and  
24 auditing of the PSA filings and that the monthly filings were in general compliance with filing  
25 requirements and the sum total of costs were reasonably accurate. Liberty found the supporting  
26 information for the PSA data to be well documented and reasonably consistent with the values  
27 reported. (Staff Exhibit No. 28 at 20 [Antonuk]). Liberty did recommend a number of minor  
28 improvements in the process.

1 In response to those recommendations, the Company has been and will continue to  
2 closely review and approve adjustments to fuel costs to ensure that supplemental charges and  
3 refunds are recorded properly and that they will flow through the PSA within 30 days of the  
4 adjustment. (APS Exhibit No. 57 at 27-28 [Rockenberger]).

5  
6 **VII.**  
**RATE DESIGN AND COST OF SERVICE**

7 **A. Overview.**

8 Topics with general agreement:

- 9
- 10 ■ Jurisdictional Cost of Service study.
  - 11 ■ Service schedule modifications proposed by APS.
  - 12 ■ Phase-out of frozen rates.
  - 13 ■ Recovery of transmission costs.
  - 14 ■ Rate design concepts.
  - 15 ■ Hook-up fees should be examined in a workshop.
  - 16 ■ Transmission/primary discounts.

17 Topics in dispute:

- 18 ■ Overall rate levels
- 19 ■ Class Cost of Service Demand allocation factor

20 The starting point in the rate design process is the cost of service study, which allocates  
21 the costs of providing service to each of the major classes of customers, as well as various sub-  
22 classes and rate schedules. (APS Exhibit No. 69 at 13 [Rumolo]). Yet, the cost of service study  
23 is not the only determinant for setting rates. (*Id.*).

24 Many other considerations were taken into account in designing the proposed rates,  
25 including rate stability and continuity. (APS Exhibit No. 69 at 14 [Rumolo]). For this reason,  
26 under APS's proposed rate design, the major classes of customers – Residential, General Service,  
27 Irrigation, Street Lighting, and Dusk to Dawn – would each receive a percentage increase that is  
28 approximately the same as the overall requested increase, even though strict adherence to the  
results of the cost-of-service study would indicate higher increases are supportable. (*Id.*). In

1 addition, the individual rate schedules have been designed to depart from strict cost-of-service  
2 adherence as necessary, so that differences in the increases that individual customers will  
3 experience will be moderated to the extent APS believes reasonable. (*Id.*). Additional  
4 considerations in developing the proposed rate schedules were customer understandability and  
5 ease of administration. (*Id.*).

6 **1. Proposed Changes To Residential Rate Schedules.**

7 APS is proposing the following:

- 8 • Each residential rate schedule has been designed to improve cost tracking.
- 9 • Rate Schedule EC-1 will be eliminated in accordance with Decision No. 67744,  
10 and customers will select another rate option or, in the absence of such a new  
11 selection, be transferred to Rate Schedule ECT-1R by default, as meters are  
12 exchanged. The interim rate that will be applied during the transition will be an  
13 increase comparable to the increase the typical EC-1 customers will experience  
14 when moved to Rate Schedule ECT-1R.
- 15 • Rate Schedule E-10 will also be eliminated in accordance with Decision No.  
16 67744. Customers will have the option to choose another rate, or will be  
17 transferred to Schedule E-12 by default if no choice is made.
- 18 • Rate Schedules E-12, ET-1, ECT-1R, ET-2 and ECT-2 will be increased to reflect  
19 increased revenue requirements.
- 20 ▪ The discounts available under the low income and medical equipment rates, Rate  
21 Schedules E-3 and E-4 respectively, will remain unchanged from the levels found  
22 in Decision No. 67744.

23 (APS Exhibit No. 69 at 24 [Rumolo]).

24 APS is also modifying the winter-summer rate differentials to better reflect the higher  
25 energy costs APS faces in the summer months. (*Id.* at 21). The proposed base rate increase for  
26 the residential customer class is approximately 21.1 percent. (*Id.*). On a rate schedule basis, the  
27 proposed increases for Schedules ET-1, ECT-1R, and E-12 are 24.5 percent, 19.7 percent and  
28 15.6 percent<sup>74</sup> respectively, excluding customers who are transferring to these schedules from  
cancelled schedules. (*Id.*). These increases are computed based on total schedule results  
excluding the EIC. (*Id.*).

<sup>74</sup> Percentage based on APS's original requested increase of 21.34 percent. The Company's current requested increase of 20.43 percent would decrease percentages proportionally.

1           **2. Proposed Changes To General Service Rate Schedules.**

2           APS is proposing the following:

- 3           • All rate schedules have increased charges to reflect increased revenue  
4           requirements. The majority of the increases is due to increased fuel and purchased  
5           power expenses and is reflected in the power supply component of the unbundled  
6           rates. Rates were developed with consideration of the impacts on energy sales due  
7           to energy efficiency demand side management programs.
- 8           • TOU Rate Schedules E-21, E-22, E-23, and E-24 will be eliminated and  
9           customers transferred to E-32TOU.
- 10          • Rate Schedule E-32 will be increased to reflect increased revenue requirements,  
11          especially higher energy costs.
- 12          • Rate Schedules E-34 and E-35 will be increased to reflect cost of service and  
13          increased fuel and purchased power expenses.
- 14          • Rate Schedules E-38 and E-38-8T will be eliminated and customers transferred to  
15          Rate Schedule E-221 in accordance with Decision No. 67744.
- 16          • The basis for computing the energy portion of Rate Schedule E-36 will change  
17          from system incremental cost to an index-based cost that is consistent with the  
18          computation of energy imbalance charges under the APS open access  
19          transmission tariff ("OATT").

20           (APS Exhibit No. 69 at 30-31 [Rumolo]).

21           **3. Additional Rate Schedule Changes.**

22           APS is seeking authority to eliminate Schedule EPR-3, Solar 1, and the direct access rate  
23           schedules that were put in effect as a result of the 1999 Settlement Agreement.<sup>75</sup> APS is also  
24           seeking to freeze the Solar Partners program. (See, Decision No. 67744; APS Exhibit No. 69 at  
25           31 [Rumolo]).

26           **4. Service Schedules.**

27           APS has proposed modifications to its Service Schedules that comprise the non-rate  
28           elements of the Company's Electric Tariff. The proposed changes include revision of the  
29           Company's line extension policy (Schedule 3) to a policy that is generally based on equipment  
30           allowances and refinements to clarify other aspects of the extension policy. Except for minor  
31           language changes, the parties do not oppose APS's proposed Service Schedule changes and APS

<sup>75</sup> No customers are served under these direct access rates, so there is no revenue impact resulting from the elimination of those rate schedules.

1 has filed revised language for such Schedules in response to Staff's suggestions. (APS Exhibit  
2 No. 70, Attachments DJR-2RB, DJR-3RB).

3 **5. AECC, Kroger, FEA and DEAA's Rate Design Proposals.**

4 AECC recommended the use of an hourly allocation factor for the fuel and purchased  
5 power element of base rates. AECC raised concerns that APS over-allocated transmission costs  
6 to general service customers based on energy. The current "across the board" energy-based  
7 charge is consistent with the rate designs that were part of the Settlement Agreement that was  
8 incorporated in Decision No. 67744. (APS Exhibit No. 71 at 3 [Rumolo]). APS made no  
9 changes to that method in this case, *i.e.* the transmission element costs were allocated based on  
10 energy. (*Id.*). Transmission costs are incurred by APS for retail sales based on charges found in  
11 the OATT, and are not the result of any allocation method in a retail rate case. (*Id.*). Under the  
12 OATT, each service schedule has a list of charges that are applicable to retail classes of service  
13 based on usage. (*Id.*). OATT charges for residential service and general service customers  
14 without demand meters are based on energy. (*Id.*). The OATT charges for customers with  
15 demand meters are based on the customers' billing demands each month. (*Id.*). Therefore  
16 "allocation" of OATT charges by applying a demand allocator, such as the 4CP allocator, does  
17 not reflect an accurate representation of how the costs are incurred to provide transmission  
18 service and is, therefore, inappropriate. (*Id.*).

19 APS opposes AECC's recommendation that there be an exception for partial  
20 requirements customers using demand for transmission cost recovery, even if transmission costs  
21 are otherwise assessed by the Commission based on demand, as proposed by AECC. (*Id.* at 4-5  
22 [Rumolo]). Partial requirements customers require adequate "wire" capacity for stand-by and  
23 other services and, under the OATT and for general service customers over 20 kW, APS would  
24 pay for transmission service based on the partial requirements customer's demand. (*Id.* at 5).  
25 Therefore, the retail rate should also be demand based, if the transmission service for full  
26 requirement customers is demand based. (*Id.*).

27 AECC, Kroger and FEA all recommended larger increases to residential customers as  
28 compared with general service customers.

1 DEEA opposed demand rates and cost-based ratemaking for general services customers  
2 and proposed a general service rate that it contended is more similar to the one used by Salt  
3 River Project ("SRP"). APS has approximately 108,000 general service customers, and  
4 approximately 86,000 of those customers have loads under 20 kW. (APS Exhibit No. 70 at 12  
5 [Rumolo]). Rate Schedule E-32, as approved in the Settlement Agreement, provides that  
6 customers under 20 kW are billed on the basis of energy with capacity costs recovered in the  
7 energy charges.<sup>76</sup> (*Id.*) APS also offers a time-of-use companion rate that has a similar rate  
8 design, *i.e.* no explicit demand charge for customers under 20 kW.<sup>77</sup> (*Id.*) The remaining  
9 (larger) general service customers are fully capable of understanding and responding to demand  
10 charges. In addition, the 67,000 residential customers who are served on demand/energy rates  
11 have opted for those rates voluntarily, understand capacity charges, and will likely adopt  
12 measures to reduce demand. (*Id.* at 13).

13 **B. Cost Of Service.**

14 APS prepared an embedded class and fully allocated cost-of-service study, with the  
15 twelve-month period ending September 30, 2005 as the test period, when designing its proposed  
16 rates. (APS Exhibit No. 69 at 4 [Rumolo]). The purpose of a class cost-of-service analysis is an  
17 attempt to evaluate the specific costs to serve each type of customer or each customer class for  
18 which APS provides service. (Tr. Vol. XIV at 2778 [Rumolo]). A class cost of service analysis  
19 takes each cost element, whether its production demand or fuel or wires, and through a series of  
20 calculations, assigns the dollars that APS incurs to provide service to each customer class. (*Id.*)  
21 The Test Year data provides the most recent calendar year financial and operational information  
22 and is, therefore, consistent with the Company's revenue requirements. (APS Exhibit No. 69 at  
23 4 [Rumolo]). The Company's analysis includes a number of pro forma adjustments to the Test  
24 Year to reflect known changes and to better match the costs and revenues with the period in  
25

26 <sup>76</sup> This is the exact concept that Mr. Murphy espouses, and APS applies it to 80 percent of our general service  
27 customers. (APS Exhibit No. 70 at 12 [Rumolo]).

28 <sup>77</sup> Mr. Murphy discusses the SRP Time of Use rates in detail but he neglects to inform the Commission that the  
majority of SRP's general service customers are served under SRP Schedule E-36, which is a demand/energy rate for  
all customers and is very similar to the APS rate design prior to Decision No. 67744. (*Id.*)

1 which the proposed rates will be in effect, as well as other adjustments to normalize<sup>78</sup> the test  
2 period. (*Id.*).

3 Because production-related and transmission-related assets, and their associated costs, are  
4 generally designed and built to enable the Company to meet its system peak load, they are  
5 allocated on the basis of the average of the system peak demands occurring in the months of  
6 June, July, August, and September ("4CP"). (*Id.* at 7). Distribution plant, unlike production and  
7 transmission plant, is generally designed to meet a customer class' peak load, which may or may  
8 not be coincident with the system peak load, so allocations of costs related to distribution  
9 substations and primary distribution lines are made on the basis of non-coincident peak loads  
10 ("NCP"). (*Id.*). Allocations of costs related to distribution transformers and secondary  
11 distribution lines are made on the basis of the summation of the individual peak loads or  
12 demands of all customers within a particular customer class ("ΣNCP"). (*Id.*).

13 **1. Staff Proposes The Use Of A "Peak And Average" Method That Allocates A**  
14 **Portion Of Production Capacity Costs Based On Contribution To Peak**  
15 **Demand And A Portion Based On Average Demand.**

16 Staff proposed the use of a "peak and average" method that allocates a portion of  
17 production capacity costs based on contribution to peak demand and a portion based on average  
18 demand. (Staff Exhibit No. 7 at 8 [Brosch]). Specifically, Staff has suggested that APS continue  
19 to use 4CP for the jurisdictional split, but within the retail segment, use the average and peak  
20 methodology ("4-CP&A"). (Tr. Vol. XIV at 2770 [Rumolo]).

21 In contrast, APS's use of the 4CP method in this case is consistent with its use in  
22 previous APS retail rate cases and is consistent with the method that APS was directed to use by  
23 FERC in previous federal rate case litigation. (APS Exhibit No. 70 at 3 [Rumolo]). Because of  
24 the magnitude of the requested revenue increase in this case, APS was concerned that adopting  
25 an alternative demand allocation method for customer class allocations could introduce a higher  
26 degree of rate shock to some customers. (*Id.*). When comparing the results of the cost of service

27 <sup>78</sup> Normalization refers to eliminating the effect of conditions or situations that would not ordinarily occur or be  
28 expected to occur in a normal test year, or that recur periodically, but should be averaged out over a period of years.  
The purpose of normalization is to produce a test year that will be more representative of conditions that will exist  
during the period in which the proposed rates will be in effect. (APS Exhibit No. 69 at 5 [Rumolo]).

1 study under the 4CP method and 4-CP&A, the retail cost allocations shifted between customer  
2 classes when 4-CP&A was used, with more costs being shifted to general service, irrigation and  
3 lighting service customers and reduced cost allocation to residential customers. (*Id.* at 4).  
4 Staff's methodology shifts some of the production cost to an energy base through the averaging  
5 effect instead of just a peak contribution. (Tr. Vol. XIV at 2773 [Rumolo]). The 4-CP&A  
6 methodology would allocate more demand related production costs to higher load factor classes,  
7 compared to 4CP. (*Id.* at 2774).

8 In contrast, the 4CP is strictly a demand allocator and is based strictly on the contribution  
9 to peak. (*Id.* at 2773-2774). That is important because APS's system requirements are  
10 especially peak driven because of the summer air conditioning load in the heat of Arizona. (*Id.*  
11 at 2774). Based upon the system capacity, the demand that APS has to build to meet that load is  
12 driven by that peak. (*Id.*).

13 **2. Although AECC Agrees With APS's Use Of 4CP For Allocating Fixed**  
14 **Production And Transmission Costs, AECC Proposes Using 4CP With Fuel**  
15 **Allocated On Hourly Energy Costs.**

16 AECC proposed using 4CP with fuel allocated on hourly energy costs. (AECC Exhibit  
17 No. 5 at 8 [Higgins]). Although AECC agreed with APS's use of 4CP for allocating fixed  
18 production and transmission costs ("demand") (*Id.* at 3), AECC opposed APS's allocation of fuel  
19 and purchased power costs ("energy costs") based upon the annual number of kilowatt-hours  
20 each customer class consumes. (*Id.* at 8). It is AECC's position that seasonal and time-of-use  
21 information should be used in determining the allocation of energy costs to customer classes.  
22 (*Id.* at 9). APS does not oppose this adjustment to its cost of service study. (Tr. Vol. XIV at  
23 2803, 2805 [Rumolo]).

24 **3. Although FEA Supports APS's Use Of The 4CP Demand Allocation, FEA**  
25 **Recommends Increasing The Discounts For Primary And Transmission**  
26 **Voltage Level Customers Under Rates E-34.**

27 Like AECC, FEA supported APS's use of the 4CP. FEA recommended increasing the  
28 discounts for primary and transmission voltage level customers under Rates E-34. (FEA Exhibit  
No. 3 at 17 [Goins]). APS does not disagree with FEA's recommendation, which is consistent

1 with the results of the APS cost-of-service, but it must be recognized that this recommendation  
2 results in slightly higher bills to customers who are not eligible for the discount. (APS Exhibit  
3 No. 70 at 11 [Rumolo]). As long as the changes are strictly within E-34, it would not affect other  
4 rate schedules. (Tr. Vol. XIV at 2777 [Rumolo]). FEA's proposal would basically shift dollars  
5 from customers who receive the discount within E-34 to customers who do not receive that  
6 discount. (*Id.*).

7 **C. Specific Rate Schedule Issues.**

8 **1. Schedule Modifications.**

9 **a. Schedule 1 – General Terms And Conditions.**

10 APS is proposing modifications to this service schedule to address situations where it  
11 may not be appropriate to bill a Service Establishment Charge, and to add clarifying language  
12 that better reflects APS's envisioned business practices. (APS Exhibit No. 37 at 13 [DeLizio],  
13 Attachment GAD-6). The modifications are as follows:

14 Section 2.2.4: APS is proposing clarifying language to Section 2.2.4. The special  
15 services discussed in this section are performed outside of normal work hours, and  
16 usually require a crew with more than one person. The language clarifies that the \$75.00  
charge is per crew person, per hour.<sup>79</sup> (APS Exhibit No. 37 at 13 [DeLizio]).

17 Section 2.2.5: APS is proposing that the Company have the right to waive the  
18 Service Establishment Charge in instances where either 1) a name change is requested,  
19 but no field trip is necessary, or 2) where the Company has an active Landlord  
20 Agreement in place. The request for a name change typically results when a surviving  
spouse requests that the service be placed in their name after the death of the customer of  
record, or a name has changed as a result of a divorce. (*Id.*).

21 The Company is also proposing to reduce the Service Establishment Charge in those  
22 instances where multiple connect requests are made for the same location, such as a trailer park  
23 that has seasonal visitors. APS is proposing to charge only one Service Establishment Charge  
24 for every two requests for service connects made during the same site visit and placed in the  
25 same name, at the same address, for the same class of service. (APS Exhibit No. 37 at 14

26 <sup>79</sup> The Company is proposing to clarify that the \$75 charge is per crew person, per hour. Staff witness Ms. Andreasen  
27 recommends that the charge remain at \$75 per hour, regardless of how many workers are required. The Company  
28 believes that Staff's recommendation will not appropriately recover the Company's costs and, therefore, will shift  
those costs to other customers. In addition, Staff's proposal will not send the proper price signal to customers as to  
the true costs of requesting after-hours work. (APS Exhibit No. 38 at 29 [DeLizio]).

1 [DeLizio]).

2           Sections 4.3.3 & 4.3.4: APS is proposing to eliminate these sections that permit  
3 the Company to offer incentives for customers who elect to pay electronically and  
4 customers who elect to not receive a paper copy of their bill. (*Id.*).

5           Section 6.6: In Section 6.6, APS is proposing language regarding master metering  
6 to clarify situations where prohibiting master metering is not applicable, such as a high  
7 rise residential unit where units are privately owned and the building is served by  
8 centralized heating (6.6.3), or senior care centers that provide packaged services such as  
9 housing, meals and nursing care (6.6.2). (*Id.* at 15).

10           **b.       Schedule 4 – Totalizing.**

11           Schedule 4 addresses the Company’s practice relative to totalizing of meter readings. It  
12 is applied when customers at a single premise receive service through multiple service points.  
13 APS is proposing language to address the emergence of new metering technology that allows for  
14 electronically totalized demand and energy, in addition to physical wire interconnections. (APS  
15 Exhibit No. 37 at 15 [DeLizio]; *id.* at Attachment GAD-7).

16           **c.       Schedule EPS-1 Environmental Portfolio Standard.**

17           Decision No. 68668 required APS to set aside \$4.25 million for additional funding for the  
18 Environmental Portfolio Standard (“EPS”) Uniform Credit Purchase Program. Staff recommends  
19 that the EPS adjustor rate and caps be increased to recover an additional \$4.25 million through  
20 the Company’s Adjustment Schedule EPS-1. (Staff Exhibit No. 12 at 4 [Keene]; APS Exhibit  
21 No. 38 [DeLizio], Attachment GAD-2RB). As discussed earlier, APS believes that some manner  
22 of reconciliation provision should be provided so “true-up” this \$4.25 million with actual UCPP  
23 costs for 2006 or that there be authorization to carry-forward any unspent funds from 2006 to  
24 subsequent years.

25           Currently, there is \$6,000,000 for renewables in the System Benefits Charge. Staff  
26 recommends that the amount continue to be \$6,000,000. (Staff Exhibit No. 12 at 3 [Keene]).  
27  
28

1           **2.     Partial Service Offerings.**

2                   **a.     Proposed Modifications.**

3           APS is proposing to: (1) eliminate existing rate schedules EPR-3,<sup>80</sup> EQF-S, EQF-M, and  
4 E-52,<sup>81</sup> which are currently frozen and, therefore, not available to new customers. (APS Exhibit  
5 No. 38 at 24 [DeLizio]).

6           EPR-3 is applicable to qualified solar/photovoltaic small power production facilities 10  
7 kW and less and is similar to rate schedule EPR-2 with a few exceptions. Under EPR-3,  
8 there are no monthly service charges based on the type of service and the customer is not  
9 charged for the installation of bi-directional metering. EPR-3 also offers a simultaneous  
10 buy/sell metering arrangement where the customer can elect to have APS provide 100  
percent of their electric requirements while selling 100 percent of the output of the  
generator to APS. This rate is frozen to new customers. (*Id.*)

11           EQF-S is applicable to qualified cogeneration and small power production facilities 100  
12 kW and less capable of producing firm power. This rate offers quantities of standby  
13 power to a customer who is not taking full requirements service from the Company and  
who desires a permanent electric connection as standby power source. The Company  
currently has no customers being served under Schedule EQF-S. (*Id.* at 23).

14           EQF-M is applicable to qualified cogeneration and small power production facilities 100  
15 kW and less capable of producing firm power. This rate offers quantities of contracted  
16 maintenance capacity, taken during scheduled periods, to a customer who is not taking  
full requirements service from the Company and who desires a permanent electric  
17 connection as maintenance power source. The Company currently has no customers  
being served under Schedule EQF-M. (*Id.*)

18           E-52 is a partial requirements service available to customers with an aggregate partial  
19 requirements service load less than 3,000 kW. It contains per day basic service and  
20 generation meter charges, supplemental service charges provided in accordance with the  
rate levels contained in rate schedule E-32, Standby Service charges based on the amount  
21 of capacity reserved by the customer, and maintenance service charges applicable when  
the customer's generator is down for scheduled maintenance. The Company currently  
has no customers being served under Schedule E-52. (*Id.* at 22).

22           The Company is also proposing to close (freeze) existing rate schedules E-32R, and E-55  
23 to new customers and eliminate them in the next rate case.<sup>82</sup> (*Id.* at 24).

24           E-32-R is applicable to general service customers who are also served under Schedule E-

25 <sup>80</sup> The Company believes that the proposed net metering rate EPR-5 and the rate EPR-2, with the proposed changes,  
26 are better options for customers compared with Schedule EPR-3, which currently has no customers on the rate. (APS  
Exhibit No. 38 at 25 [DeLizio]).

27 <sup>81</sup> Schedules E-52, EQF-S, and EQF-M are being replaced by the revised Schedules EPR-2, E-56 and E-57. There are  
currently no customers being served under these rates. (*Id.*)

28 <sup>82</sup> APS's proposed new Partial Requirements Rates Schedules E-56 and E-57 will replace schedules E-32R and E-55.  
The Company is currently serving three customers under E-32R and one customer under E-55. (APS Exhibit No. 38  
at 26 [DeLizio]).

1 32. All billing is in accordance with Schedule E-32 with one exception: the customer's  
2 billing kW is the greater of: 1) the average kW supplied during the 15-minute period for  
3 maximum use during the month; 2) 80 percent of the average of the highest kW measured  
4 during each of the six (6) summer billing months; or 3) the minimum kW specified in the  
agreement for service or individual customer contract. The Company currently has three  
customers being served under Schedule E-32R. (*Id.* at 21-22).

5 E-55 is a partial requirements service available to customers with an aggregate partial  
6 requirements service load of 3,000 kW and above. It contains per day basic service and  
7 generation meter charges, supplemental service charges provided in accordance with the  
8 rate levels contained in rate schedule E-34, Standby Service charges based on the amount  
of capacity reserved by the customer, and maintenance service charges. The Company  
currently has one customer being served under Schedule E-55. (*Id.* at 22-23).

9 The Company is further proposing to eliminate schedule E-51, which is currently frozen,  
10 in the Company's next rate case.<sup>83</sup> (*Id.* at 24).

11 E-51 is an optional electric service for qualified facilities over 100 kW. It contains a daily  
12 basic service and generation meter charges, supplemental service charges provided in  
13 accordance with the rate levels contained in rate schedule E-32 or E-34, Standby Service  
14 charges based on the amount of capacity reserved by the customer, and maintenance  
service charges applicable when the customer's generator is down for scheduled  
maintenance. This rate schedule is frozen to new customers. The Company currently has  
two customers being served under Schedule E-51. (*Id.* at 22).

15 Finally, the Company proposes to consolidate Schedule EPR-4 into the revised Schedule  
16 EPR-2.<sup>84</sup> (*Id.* at 23).

17 EPR-2 would be applicable to qualified cogeneration and small power production  
18 facilities under 100 kW. This rate schedule offers monthly purchase rates for energy the  
19 customer does not use that is delivered to the Company. The customer is responsible for  
20 the additional costs associated with the installation of bi-directional metering in addition  
21 to monthly service charge based on the type of service (e.g. single- or three-phase)  
provided. All other provisions of the customer's otherwise applicable rates schedule will  
continue to apply. (*Id.* at 21).

22 EPR-4 was applicable to qualified small power production facilities 10 kW or less  
23 utilizing renewable resource technologies and is similar to EPR-2 with two exceptions.  
24 Under EPR-4 there are no monthly service charges based on the type of service and the  
customer is not charged for the installation of bi-directional metering. (*Id.*).

25 The Company is also proposing modifications to the existing EPR-2 rate schedule by  
26 updating the buyback rate to incorporate the avoided costs filing of June 30, 2006, which was

27 <sup>83</sup> E-51 will be replaced by the proposed rate E-56. APS currently has two customers served under Schedule E-51.  
(*Id.*).

28 <sup>84</sup> The Company's proposed revisions to Schedule EPR-2 make the provisions of service identical to the existing  
Schedule EPR-4. The Company is currently serving 249 customers under the EPR-4 rate. (*Id.* at 25).

1 required by Decision No. 52345 (July 27, 1981). (*Id.* at 25; *id.* at Attachment GAD-7RB). In  
2 addition, the Company made minor wording changes to be able to use these schedules with the  
3 new residential time-of-use rates ET-2 and ECT-2; eliminated the monthly service charge which  
4 was dependant on the customer's type of service; changed the summer and winter billing cycle  
5 months to match APS's other rate schedules; eliminated the requirement for the Customer to  
6 share in the cost of bi-directional metering; and removed a provision that allowed the customer  
7 to pay the incremental metering costs over a five year period. (*Id.*).

8 **b. Proposed New Offerings.**

9 The Company is proposing two additional partial requirements rate schedules (E-56 and  
10 E-57). (*Id.* at 26).

11 E-56 would be applicable to general service customers having distributed generating  
12 equipment 100 kW or greater capable of supplying all or a portion of its power  
13 requirements. (APS Exhibit No. 38 [DeLizio], Attachment GAD-8RB). The main  
components of the rate schedule include:

- 14 (1) A Basic Service component which is comprised of the unbundled monthly  
15 Basic Service and Revenue Cycle Service charges included in the  
customer's applicable General Service rate schedule;
- 16 (2) Supplemental Service is defined as the demand and energy needs  
17 contracted by the customer to augment the power and energy generated by  
18 the customers' generation facility. Supplemental Service will be provided  
19 in accordance with the monthly rate levels contained in the customer's  
20 applicable General Service rate schedule excluding the monthly Basic  
Service and Revenue Cycle Service Charges (these are already included in  
the above-mentioned Basic Service component); and,
- 21 (3) Standby and Maintenance Service, which is the sum of demand and  
energy charges, derived as follows:

22 Demand Charge: The Demand Charge is the unbundled transmission  
23 charge, if applicable, contained in the Customer's General Service rate  
24 schedule, plus the unbundled delivery charge contained in the Customer's  
25 General Service rate schedule. This summation is then multiplied by the  
26 amount of Contract Standby Capacity. Contract Standby Capacity is  
27 defined as the greater of, a) the measured kW output of each customer  
self-generation unit at the time of start-up testing; or b) the highest 15  
28 minute measured kW output of each generating unit, however, not to  
exceed the Customer's actual load.

1                    Energy Charge: Defined as the electric energy supplied by the Company  
2 to replace power normally supplied by the Customer's generator(s) during  
3 unscheduled full outages, unscheduled partial outages, and scheduled  
4 maintenance periods. The unbundled transmission charge, if applicable,  
5 contained in the Customer's General Service rate schedule plus the per  
6 kWh monthly firm power purchase rates shown in rate schedule EPR-2.

7 (*Id.* at 26-27).

8                    E-57 would applicable to general service customers having solar/photovoltaic generating  
9 equipment greater than 100 kW but less than 1,000 kW capable of supplying all or a  
10 portion of its power requirements. The main components of the rate schedule include:

- 11                    (1) A basic service component that is comprised of the unbundled monthly  
12 Basic Service and Revenue Cycle Service charges included in the  
13 customer's applicable General Service rates schedule;
- 14                    (2) Supplemental Service is defined as the demand and energy needs  
15 contracted by the customer to augment the power and energy generated by  
16 the customers' generation facility. Supplemental Service, to include 100  
17 percent of the customer's energy requirements, will be provided in  
18 accordance with the monthly rate levels contained in the customer's  
19 applicable General Service rate schedule excluding the monthly Basic  
20 Service and Revenue Cycle Service Charges (these are already included in  
21 the abovementioned Basic Service component);
- 22                    (3) A monthly Standby Service component is derived by multiplying the  
23 unbundled delivery charge contained in the Customer's applicable General  
24 Service rate schedule by the 15 minute integrated kW measured on the  
25 customer's generator meter(s) during the customer's monthly peak demand,  
26 and
- 27                    (4) The Company will pay the customer for any excess energy produced by  
28 the distributed generator at the purchase rates specified in the Schedule  
EPR-2 that are based on the Company's avoided cost.

(*Id.* at 27-28).

                  The Company will install, at the customer's expense, a generator meter(s) at the point (s)  
of output from each of the customer's generators. This allows the Company to accurately meter  
customers taking service under this rate schedule. (*Id.* at Attachment GAD-9RB).

**c. Party Opposition.**

                  APS disputes DEAA's general rate design philosophy as being fundamentally flawed and  
its proposed partial requirements rate design philosophy has no basis in cost causation. (*Id.* at  
24). Furthermore, DEAA presented no evidence to support its claim that APS's demand and

1 energy rate schedule components are not cost-based. (*Id.*). In response to DEAA's claims that  
2 the Company's partial requirements rates are complicated and not easy to understand, the  
3 Company is proposing several changes to the partial requirement rate schedules and proposes to  
4 combine several of its partial requirements rates in order to make it easier for a customer with  
5 distributed generation to select the best option. (*Id.*).

6 **D. Line Extension Policy.**

7 APS is proposing to change its line extension tariff, which currently provides residential  
8 customers a 1,000 foot free footage allowance up to a \$5,000 construction allowance for  
9 individual customer extensions and a construction allowance based method for  
10 subdivisions/developments.<sup>85</sup> Both changes will reduce the Company's investment in line  
11 extensions and be easier to administer. (Tr. Vol. XIV at 2812 [Rumolo]). Neither Staff nor  
12 RUCO have objected to proposed changes.

13 No party objected to APS's proposal to change its current line extension policy or has  
14 supported an alternative approach. However, at the hearing, Commissioner Mayes asked the  
15 Company to prepare an analysis of the impact of alternative equipment allowances. (Tr. Vol.  
16 XXIII at 4348-4350 [Mayes]). In response to the request, on December 19, 2006, the Company  
17 filed a letter in the docket that contained an Appendix A which calculated the impact of  
18 variations to its proposed \$5,000 equipment allowance in increments of \$500. (APS Exhibit No.  
19 105). This calculation was made for both individual customer connections and new  
20 subdivisions.

21 **VIII.**  
22 **MISCELLANEOUS**

23 **A. Environmental.**

24 **1. Environmental Improvement Charge.**

25 **a. Overview.**

26 To remain successful in the future, APS must address the ongoing challenge of meeting  
27 Arizona's growing energy demands efficiently, with limited rate impacts, while minimizing the

28 <sup>85</sup> Also referred to herein and at the hearing as "equipment" allowance. A.A.C. R14-2-207(c) requires APS to provide either a maximum footage allowance or an equipment allowance at no charge.

1 environmental impact of its generating plants. (APS Exhibit No. 34 at 3 [Fox]). To provide  
2 reliable electric service to its customers, APS has several generation plants, including three coal-  
3 burning plants<sup>86</sup> that provide a significant part of APS's generation capacity. (*Id.*). The three  
4 coal plants are located near one or more large national parks and wilderness areas designated as  
5 mandatory "Class I Areas" under the Clean Air Act. (*Id.* at 3-4). APS proactively works with  
6 the environmental community and regulators to reduce emissions from its coal-burning plants  
7 and improve the Company's environmental profile in other ways. (*Id.* at 7-8, 10). Due to the  
8 extensive capital required to reduce emissions, the Company must recover the costs of these  
9 capital projects on an annual basis, as the costs are incurred. (*Id.* at 8). Unlike other capital  
10 expenditures, environmental expenditures do not produce revenue that can be used to offset the  
11 cost of the improved facilities. (*Id.* at 9). Regulatory lag compounds the problem with the  
12 inevitable delay between the Company's environmental expenditures and the issuance of a rate  
13 order that allows for the recovery of these expenditures. (APS Exhibit No. 37 at 3 [DeLizio]).  
14 Delayed recovery of these substantial costs adversely affects APS's earnings, which impacts the  
15 Company's financial ability to fund environmental improvements. (APS Exhibit No. 34 at 9  
16 [Fox]; APS Exhibit 37 at 3 [DeLizio]).

17 **b. The Company's EIC Proposal.**

18 As a solution to these problems, APS has proposed the EIC, an adjustor mechanism that  
19 would allow for the timely recovery of investments in environmental improvements on an annual  
20 basis. (APS Exhibit No. 37 at 7 [DeLizio]; *Id.* at Attachments GAD-1, GAD-2).

21 **(1) Costs That Would Qualify For Recovery Under The EIC.**

22 The EIC is designed to collect the expected return, associated tax, depreciation, and other  
23 carrying costs associated with the proposed environmental projects. (Tr. Vol. VII at 1669  
24 [Berry]; Tr. Vol. XII at 2488, 2565 [DeLizio]). It would **not** require customers to pay for the  
25 investment in these projects on a current basis, i.e., this would not be contribution in aid of  
26 construction ("CIAC") but more analogous to CWIP. APS's initial EIC proposal included costs

27 <sup>86</sup> APS's coal-burning generation plants include the Cholla Power Plant located near Joseph City, Arizona; the Four  
28 Corners Power Plant located in the Navajo Nation in northwestern New Mexico; and the Navajo Power Plant located  
in northern Arizona. (APS Exhibit No. 34 at 3 [Fox]).

1 associated with environmental improvements that would reduce emissions from the Company's  
2 Cholla Power Plant, which would cost approximately \$243 million over the next five years.<sup>87</sup>  
3 (APS Exhibit No. 34 at 8 [Fox]; APS Exhibit No. 35, Attachments EZF-3RB, EZF-4RB).  
4 Specifically, the Company plans to retrofit baghouses on Cholla Units 1-3, upgrade sulfur  
5 dioxide ("SO<sub>2</sub>") controls on Unit 1, retrofit SO<sub>2</sub> controls on Unit 3, retrofit low nitrogen oxide  
6 ("NO<sub>x</sub>") burners and carbon injection on Units 1-3, install a lime-slaking project, as well as  
7 construct a slurry disposal project. (*Id.*) The proposed improvements are considered  
8 "traditional" pollution controls that have proven to be effective in reducing emissions and have  
9 been used by many utilities across the country. (Tr. Vol. VII at 1482-81 [Fox]). Benefits from  
10 these projects include significant reductions of SO<sub>2</sub>, NO<sub>x</sub>, particulate matter, and mercury  
11 emissions.<sup>88</sup> (APS Exhibit No. 35 at 12-13 [Fox]).

12 Although the Company's initial request only included costs associated with Cholla Power  
13 Plant improvements, the EIC, as proposed, could be used for the recovery of costs associated  
14 with the reduction of pollutant emissions for APS's other coal-fired plants, reduction of carbon  
15 emissions to quell climate change, and other environmental improvements that the Company  
16 anticipates. (APS Exhibit No. 34 at 8 [Fox]).

## 17 (2) Calculation Of The EIC.

18 APS has proposed an initial request of \$243,000,000<sup>89</sup> for environmental improvements  
19 to the Cholla Power Plant for the next five years to be recovered through the EIC. Customers  
20 would be billed the carrying costs on the portion of this capital cost expended by a particular  
21 year within the five-year period referred above, \$243,000,000 that is to be up front. (Tr. Vol. VII  
22 at 1515 [Fox]; Tr. Vol. VII at 1669 [Berry]; Tr. Vol. XII at 2482, 2488, 2565 [DeLizio]). These  
23 costs would be recovered from customers on a monthly basis. (Tr. Vol. XII at 2566 [DeLizio]).  
24 To determine the monthly charge, APS used both the actual and forecasted expenditures required

25 <sup>87</sup> APS has forecasted a five-year period for the initial EIC for the sole purpose of allowing the Commission to  
26 understand what APS plans to do in the first five years of the EIC's implementation. (Tr. Vol. XII at 2481-82  
[DeLizio]).

27 <sup>88</sup> For example, SO<sub>2</sub> emissions will be reduced from 32,475 tons in 2007 to 5,148 tons in 2010 and beyond. (APS  
Exhibit No. 35 at 12-13 [Fox]).

28 <sup>89</sup> This figure includes six additional projects included in Mr. Fox's Rebuttal Testimony as well as the seven  
identified in APS's original filing. (APS Exhibit No. 35 at 14-15 [Fox]; *Id.* at Attachment EZF-4RB).

1 for the proposed environmental improvement projects. (*Id.*) Using that forecasted amount, APS  
2 then determined how much the environmental improvement projects would cost on an annual  
3 basis and then averaged over 12 months. (*Id.* at 2473, 2566). In this initial EIC request, the  
4 Company used an 18-month period (January 2007 – June 2008) to determine how much the  
5 proposed environment improvement projects would cost per month for the first 18 months.  
6 (APS Exhibit No. 37 at 4 [DeLizio]). Thereafter, the Company would use a 12-month period  
7 and the collected monthly amounts will be subject to a true-up. (Tr. Vol. XII at 2473[DeLizio]).

8 For the first 18 months, the EIC is set for \$0.00016 per kWh and would be effective with  
9 customer bills rendered after January 1, 2007 (the date previously anticipated by APS that the  
10 new rates from this rate application will be effective). (APS Exhibit No. 38 at 2 [DeLizio]). The  
11 EIC (\$/kWh) would apply to all kWh used by Standard Offer customers, but not to customers  
12 subscribed to Schedule SP-1 (Solar Partners), Schedule GPS-2 (Green Power Percent), and  
13 Schedule Solar-2. (APS Exhibit No. 37 at 4 [DeLizio]). The impact to an average residential  
14 customer using 1163 kWh monthly would be an increase of the customer's monthly bill by  
15 approximately 19 cents in 2007. (APS Exhibit No. 38 at 2 [DeLizio]). The average impact on  
16 total Company retail revenues, based on expenditures included in the APS EIC Plan for 2007 is  
17 approximately 0.19 percent. (APS Exhibit No. 38, Attachment GAD-1RB).

### 18 (3) Proposed Process To Determine And True-Up The EIC.

19 Under the Company's proposal, APS would prepare subsequent EIC requests for  
20 Commission review and approval on an annual basis by March 15. (APS Exhibit 37 at 5  
21 [DeLizio]). These subsequent EIC requests would consist of two parts: (1) a true-up of the EIC  
22 revenues that had been approved by the Commission and collected the previous year; and (2) a  
23 proposal of the EIC revenue to be collected for the upcoming year. (*Id.* at 5; Tr. Vol. XII at 2566  
24 [DeLizio]). To true-up the EIC revenues collected, the Company would provide actual data of  
25 the costs of environmental improvements for the previous year and compare that data to the EIC  
26 revenues collected during the same time. (*Id.*) If certain costs were determined to be imprudent  
27 by the Commission or if there was an over-collection of costs, then this amount – plus interest –  
28 would be used to offset the EIC calculation going forward. (Tr. Vol. XII at 2473, 2492, 2567

1 [DeLizio]). Essentially, the true-up mechanism would assure that customers only pay for actual  
2 and prudent costs. (Tr. Vol. XII at 2473, 2566 [DeLizio]). APS would also utilize actual and  
3 forecasted environmental improvement costs to derive the EIC revenues needed for  
4 improvements for the following year. (*Id.*) Commission Staff would review the proposal, seek  
5 clarification or additional information from the Company as needed, and prepare a Staff Report  
6 within 60 days of the Company's filing. (APS Exhibit No. 37 at 5 [DeLizio]).

7 The Commission then would consider the Company's EIC filing in an Open Meeting  
8 within 30 days of the Staff report filing. (*Id.*) Under the Company's proposal, if the  
9 Commission did not take action within this time period, the EIC filing would be deemed  
10 approved, subject to true-up the following year. (*Id.*) In addition to the prudency review of the  
11 Company's annual EIC request, the Commission can review the prudency of the EIC revenues  
12 collected in the Company's future general rate cases. (*Id.* at 6-7).

13 **c. Protecting The Public Health And Environment Is In The Public**  
14 **Interest.**

15 As pointed out by Staff, the Commission has a compelling public interest to protect the  
16 public from pollution. (Tr. Vol. XX at 3738 [Rowell]). By approving surcharges that encourage  
17 the use of renewable energy, implement demand side management programs, and recover the  
18 cost of arsenic remediation, the Commission has already demonstrated that environmental  
19 protection is a compelling public interest and that the use of surcharges is an appropriate  
20 mechanism to establish programs that support environmental protection. (APS Exhibit No. 35 at  
21 3 [Fox]).

22 The EIC allows the Company to comply with existing environmental laws and to engage  
23 in long-term planning of providing service in one of the fastest growing service territories in the  
24 country. (APS Exhibit No. 34 at 7 [Fox]). Anticipating environmental requirements is  
25 appropriate and makes economic and environmental sense, as environmental laws of the United  
26 States have become increasingly stringent since the early 1970s. (Tr. Vol. XX at 3740  
27 [Rowell]). A recent study from the National Association of Regulatory Utility Commissioners  
28 acknowledged this trend, and neither Staff nor any other party has provided testimony to the

1 contrary. (*Id.*; APS Exhibit No. 34 at 16 [Fox]).

2 More stringent environmental laws equates to significant investments in technologies to  
3 decrease the amount of pollution. For example, recent proposed mercury regulations will require  
4 the installation of carbon injection projects for Cholla Units 1 through 3 and the baghouse for  
5 Unit 2 **earlier** than expected. (APS Exhibit No. 35 at 15-16 [Fox]). It is the Company's  
6 experience that once new environmental requirements become effective, the associated  
7 environmental technologies increase in cost. (APS Exhibit No. 34 at 15-16 [Fox]). Another  
8 example is the proposed carbon intensity standard in Arizona. A recent Governor's Climate  
9 Change Task Force issued a report recommending the enactment of a carbon intensity standard  
10 by 2010 or 2012. (Tr. Vol. XII at 1536 [Fox]). The proposed standard is the first of its kind in  
11 Arizona and would call for the decline of carbon emissions over a 15-year period. (*Id.*). The  
12 EIC would, with the input, review and approval of the Commission, provide a process that would  
13 encourage the Company to expedite compliance with new and proposed environmental  
14 regulations and even go beyond what is mandated where appropriate.

15 In addition, APS needs to be certain that it sustains its existing generating plants and  
16 stays ahead of environmental regulatory requirements. (Tr. Vol. XX at 3738 [Rowell]). As  
17 Staff's witness pointed out, coal-fired plants are exposed to expensive retrofits, curtailments, and  
18 possible shutdowns in order to make them more environmentally friendly. (Tr. Vol. XXII at  
19 4114 [Antonuk]). The future costs of coal are uncertain in light of these environmental  
20 improvement requirements for coal-fired plants. (*Id.*). The failure to anticipate environmental  
21 regulatory requirements has resulted in lawsuits against utility companies by the Environmental  
22 Protection Agency and environmental groups. The result is that, in addition to the costs to  
23 expeditiously start and complete environmental improvement projects to meet regulatory  
24 requirements, these utility companies are also faced with the significant costs of litigation and  
25 regulatory fines. (Tr. Vol. XII at 1450 [Fox]; Tr. Vol. XIII at 1668 [Berry]; APS Exhibit No. 34  
26 at 15-16 [Fox]). The EIC would reduce the chance of APS being sued or fined by enabling APS  
27 to proactively reduce emissions beyond simple mandates. (Tr. Vol. VIII at 1665 [Berry]).

28 As a supporter of the proposed EIC, WRA summed it up best, stating that the EIC

1 mechanism is needed in Arizona because it highlights the environmental impacts of resource  
2 choices, encourages utilities to take actions that reduce environmental damages, and reduces the  
3 risk of complying with environmental regulations. (WRA Exhibit No. 1 at 19 [Berry]). APS  
4 echoes WRA's sentiments and urges the Commission to approve the EIC and find that it is in the  
5 public interest.

6 **d. "Timing" Objections To The EIC Do Not Justify Rejection Of This**  
7 **Important Public Policy Initiative.**

8 No party disputes the fact that APS has the right to recover its capital expenditures for  
9 environmental improvements, nor does any party dispute the method of calculation of the EIC.  
10 Rather, any objection to the EIC stems from the timing of recovery of environmental  
11 improvements. (Tr. Vol. VII at 1448 [Fox]). Staff and RUCO argue that recovery of  
12 environmental improvement costs outside of a rate case violates traditional ratemaking  
13 principles. The Company strongly disagrees with this position because the Commission can  
14 exercise its ratemaking authority by adopting automatic adjustor clauses as part of the utility's  
15 overall rate structure. *Residential Utility Consumer Office v. Arizona Corp. Comm'n*, 199 Ariz.  
16 588, 591, 20 P.3d 1169, 1172 (App. 2001). Automatic adjustment clauses can only be  
17 established after a full rate hearing in order to meet the due process standards and ensure that the  
18 utility's rates are fair and reasonable. (*Id.* at 593-94, 20 P.3d at 1173-1174 (citing *Scates v.*  
19 *Arizona Corp. Comm'n*, 118 Ariz. 531, 534-535, 578 P.2d 612, 615-616 (App. 1978)).  
20 Furthermore, automatic adjustment clauses may be designed to recover specific and identifiable  
21 expenses. (*Id.*)

22 As a rate adjustment mechanism, the EIC satisfies these requirements because the EIC  
23 has been proposed in a rate case, and it is designed to recover only environmental improvement  
24 costs. The Commission can also be assured that the amounts collected through the EIC would be  
25 subject to true-up, which ensures that the Company would only recover its actual costs. (APS  
26 Exhibit No. 34 at 9 [Fox]). If an over-collection should occur, the amount of the over-collection,  
27 plus interest, would offset the EIC requests going forward.

28 In addition, Staff's witness conceded that adjustor mechanisms are exceptions to

1 traditional single issue ratemaking restrictions. (Tr. Vol. XX at 3733 [Rowell]). Since all  
2 adjustor mechanisms are in some sense "single-issue" ratemaking, this concept is not a  
3 compelling reason to deny the EIC. (APS Exhibit No. 38 at 5 [DeLizio]). In consideration of  
4 important public policy concerns, such as environmental protection, the Commission has  
5 evidenced that adjustors and surcharges are appropriate by approving renewable energy,  
6 demand-side management, and arsenic remediation recovery mechanisms.

7 Staff contends that the denial of timely recovery of environmental improvements would  
8 not impose a significant financial burden on APS. (*Id.* at 3-4 [DeLizio]). However, Staff has  
9 missed one of the key points, if not **the** key point in this entire proceeding: capital is at a  
10 premium for APS. (*Id.*). APS is already under-earning and without the EIC, it will continue to  
11 do so. Without the EIC, environmental projects are just another capital need in a very long line  
12 of competing needs, which mostly likely will affect the ability to allocate capital to  
13 environmental improvement projects until such time as the projects become mandated, by which  
14 time they are likely to be more expensive and the environmental benefits in the interim will be  
15 lost. (*Id.*).

16 **e. Innovation Is Not A Valid Criticism.**

17 Although some parties have opposed the EIC because it appears to be new and unique,  
18 innovation is not a valid criticism of the EIC. (APS Exhibit No. 38 at 3 [DeLizio]; Tr. Vol. VIII  
19 at 1668 [Berry]). The Commission has established surcharges to pre-collect money when  
20 important public policy is in question such as the EPS and DSM. Establishing the EIC to  
21 expedite the prevention and control of pollution from conventional sources of electricity is an  
22 innovation to be embraced, not criticized. While the EIC may be innovative in its approach,  
23 there is nothing new about this Commission breaking new ground to achieve sound public  
24 policy. (APS Exhibit No. 35 at 10-11 [Fox]). The Commission has shown its leadership in  
25 concern for environmental impacts of decisions under its jurisdiction, including the EPS rules,  
26 which led the nation on renewables when first proposed. (*Id.* at 11).

27 Moreover, Arizona would not be the first state to have a mechanism that would allow  
28 utilities to recover the costs of environmental projects between rate cases. (Tr. Vol. VII at 1474-

1 75 [Fox]). Florida, Indiana, Kentucky, and West Virginia all have enacted environmental  
2 recovery mechanisms. (*Id.*). Specifically, Florida, Indiana,<sup>90</sup> and Kentucky allow utilities to  
3 submit environmental compliance plans outside of a general rate case to recover **projected**  
4 expenses associated with environmental compliance through a cost recovery mechanism. (APS  
5 Exhibit No. 34 at 17-18 [Fox] (citing Fla. Stat. § 366.8225 (2005), Burns Ind. Code Ann. § 8-1-  
6 27 *et seq.* (2004), K.R.S. § 278.183 (2004), *Kentucky Industrial Utility Customers, Inc. v.*  
7 *Kentucky Pub. Serv. Comm'n*, 983 S.W.2d 493, 500, 1998 Ky. LEXIS 165 (Dec. 1998)). In  
8 West Virginia, the Public Service Commission authorizes ratemaking allowances for electric  
9 utility investments in clean coal and clean air technology facilities or electric utility purchases of  
10 power from clean coal technology facilities in West Virginia pursuant to statute. (*Id.* at 18  
11 (citing W. Va. Code § 24-2-1g (2005)).

12 In addition, WRA also testified that Public Service Company of Colorado **voluntarily**  
13 engaged in SO<sub>2</sub> and NO<sub>x</sub> emission reduction in the Denver metropolitan area and recovered the  
14 costs of those projects through an air quality improvement rider, which is somewhat similar to  
15 the EIC. (Tr. Vol. VIII at 1666 [Berry]). The Commission and the State of Arizona have been  
16 national leaders in protecting the environment and public health. With other states enacting  
17 environmental recovery mechanisms, and with the environmental, economic, and public health  
18 benefits of the EIC, the EIC should be adopted by the Commission.

19 **B. Net Metering.**

20 **1. The APS Proposal.**

21 APS is seeking Commission approval of its proposed Rate Schedule EPR-5, which would  
22 create a three year pilot net metering program for customers that have renewable resource  
23 generation facilities of 10 kW or less, where the customer's generator(s) and load are located at  
24 the same premise. (APS Exhibit No. 37 at 9 [DeLizio]; *id.* at Attachment GAD-5). EPR-5 sets a  
25 proposed 15 MW<sup>91</sup> cap on total aggregate participation in the EPR-5 net metering pilot program.

26 \_\_\_\_\_  
27 <sup>90</sup> When the Indiana General Assembly enacted its environmental recovery mechanism, it noted that that Indiana  
needed to continue to be successful in attracting new businesses and jobs during its time of robust population and  
economic growth. (APS Exhibit No. 34 at 17 [Fox] (citing Burns Ind. Code Ann. § 8-1-8.8-1)).

28 <sup>91</sup> Staff agrees that 15MW aggregate amount is reasonable and in line with what most other states do as well. (Tr.  
Vol. XIX at 3530-3531 [Keene]).

1 (APS Exhibit No. 38 at 14 [DeLizio]). Renewable resources eligible to participate in this pilot  
2 program include solar and other renewable resources, as defined in the Commission's  
3 Environmental Portfolio Standard, A.A.C. R-14-2-1618. (APS Exhibit No. 37 at 9-10  
4 [DeLizio]). Qualifying standard retail rate schedules for service under this pilot program would  
5 be limited to Rate Schedules E-12, ET-1, ET-2, ECT-IR and ECT-2 for residential customers and  
6 Rate Schedules E-32 and E-32TOU for general service customers with a monthly maximum  
7 demand of 20kW or less. (*Id.* at 10).

8 The EPR-5 rate is proposed as a pilot program and is, therefore, designed to be a limited  
9 offering to provide an incentive for small customers to participate in the Company's Solar  
10 Partners Incentive Program (credit purchase program). (APS Exhibit No. 38 at 14-15 [DeLizio]).  
11 The Company has proposed that the EPR-5 net metering rate be available to residential  
12 customers and general service customers with monthly demands less than or equal to 20 kW.  
13 (*Id.* at 16). The net metering program, as proposed within this rate schedule, is intended to  
14 attract small customers to install renewable generation by providing an additional incentive  
15 beyond the credit purchase under the Company's Solar Partners Incentive Program. (*Id.*).

16 By setting a participation limit of 15 MW<sup>92</sup> and limiting it to customer-owned renewable  
17 resource generation facilities with a nameplate rating of 10 kW or less, the Company has targeted  
18 customers who have renewable energy facilities for the primary purposes of meeting their own  
19 energy needs, but occasionally have excess energy to provide to the Company. (APS Exhibit  
20 No. 37 at 12 [DeLizio]). Although EPR-5 permits excess energy to be carried from month to  
21 subsequent months, the customer's excess supply provided to the Company would be reset to  
22 zero at the end of each calendar year. (*Id.*).

23 The proposed 10 kW cap on the individual generator size is appropriate for net metering,  
24 even in light of an expanded program under the proposed Renewable Energy Standard ("RES"),  
25 because the Company already offers net billing rate options for all distributed generation systems  
26 up to 100 kW, which options do not have any cap on aggregate participation. (APS Exhibit No.  
27 38 at 13 [DeLizio]). APS also currently offers rate Schedule EPR-2, which is available to all

28 <sup>92</sup> Even with a 15MW cap, APS estimates potentially 5,000 3kW-unit customer installations. (Tr. Vol. VIII at 1811 [DeLizio]).

1 Qualifying Facilities (“QF”), cogeneration and small power production facilities, up to 100 kW.  
2 (*Id.*). The Company further offers Rate EPR-4 for renewable distributed generation up to 10 kW,  
3 and, in addition, provides partial requirement rates for distributed generators larger than 100 kW.  
4 (*Id.* at 14). Finally, the Company has proposed a partial service requirement rate, E-57,  
5 for solar installations up to 1MW with no aggregate cap.

6 As part of this pilot program, the Company would install the necessary bi-directional  
7 metering to measure power flow both to and from the customer. (APS Exhibit No. 37 at 10  
8 [DeLizio]). The Company would have to make changes to its customer information systems, so  
9 participation under this schedule is subject to the availability of enhanced metering and billing  
10 system upgrades. (*Id.*). Renewable resource energy generated by the customer in excess of their  
11 monthly consumption would be accumulated on a kWh basis, and credited to the customer’s  
12 future monthly bills within the same calendar year. (*Id.*). Under net billing,<sup>93</sup> excess power is  
13 purchased at an avoided cost rate,<sup>94</sup> while under net metering the excess power would be credited  
14 against power that the customer purchases from the Company in future billing periods and  
15 would, therefore, be compensated at full retail rates.<sup>95</sup> (APS Exhibit No. 37 at 3 [DeLizio]).

## 16 2. Uncollected Fixed Costs Or “Net Lost Revenues”.<sup>96</sup>

17 EPR-5 would not yield appropriate revenue to cover fixed costs because customers that  
18 took service under this schedule and produced their own generation would not pay appropriate  
19 transmission and distribution costs, nor will they pay the full amount of non-avoidable charges,  
20 such as the Competition Rules Compliance Charge (“CRCC”), EPS Surcharge, DSM Cost  
21 Adjustment, PSA (for deferred fuel costs incurred during prior periods) and Transmission Cost

22 \_\_\_\_\_  
23 <sup>93</sup> APS currently utilizes the net billing methodology for customers taking service under rate schedules EPR-2 and  
EPR-4. (APS Exhibit No. 38 at 13 [DeLizio]).

24 <sup>94</sup> Avoided costs are based on wholesale generation market rates for on-peak and off-peak generation by season.

25 <sup>95</sup> The Energy Policy Act of 2005 defines net metering as “...service to an electric consumer under which electric  
26 energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local  
27 distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer  
during the applicable billing period...” (APS Exhibit No. 38 at 12 [DeLizio]). Net Billing, as defined in the  
Proposed Rulemaking for the Renewable Energy Standard and Tariff Rules (Decision No. 68566), “...is a system of  
28 billing a customer who installs an eligible Renewable Energy Resource generator on the customer’s premises for  
retail electricity purchased at retail rates while crediting the customer’s bill for any customer-generated electricity  
sold to the Affected Utility at avoided cost.” (*Id.*).

<sup>96</sup> In discussing the Company’s net metering proposal, “uncollected fixed costs” have also been referred to as “Net  
Loss Revenues,” and are not to be confused with DSM related net lost revenues.

1 Adjustment. (APS Exhibit No. 37 at 11 [DeLizio]).

2 Under the Company's proposal, the incremental cost for net metering would be funded  
3 through revenues collected through the current EPS surcharge. (*Id.* at 10). In addition,  
4 infrastructure costs, such as changes to the customer billing systems, would also be funded  
5 through the EPS surcharge. (*Id.*). Revenue associated with transmission and distribution, as well  
6 as non-avoidable costs that are not recovered from EPR-5 customers would also be funded by the  
7 EPS surcharge. (*Id.*).

8 The Company believes that it is appropriate to recover its uncollected fixed costs under  
9 EPR-5, which offers a special financial subsidy to customers as a means to promote small  
10 renewable distributed generation systems. (APS Exhibit No. 38 at 18 [DeLizio]). With regard to  
11 the proposed RES energy requirement associated with distributed generation, the Company is  
12 seeking recovery of the fixed costs component and expenses associated with the infrastructure  
13 necessary to connect customers to the grid. (Tr. Vol. VIII at 1784 [DeLizio]). The Company is  
14 not requesting to collect the generation energy component or the fuel component of such costs.  
15 (Tr. Vol. XII at 2576 [DeLizio]).

16 The potential loss of kWh sales and the related uncollected fixed costs from the proposed  
17 net metering program would occur for two reasons. First, the Company would be providing a  
18 subsidy through the net metering rate to encourage customers to install renewable distributed  
19 generation, which will reduce kWh cost recovery that the Company would otherwise have  
20 achieved absent the program. (Tr. Vol. XII at 2576 [DeLizio]). Although the customer would be  
21 providing a portion of their own energy needs through their distributed generator, they would  
22 still be connected to the grid and would rely on APS to back up their distributed generator and  
23 provide their remaining energy needs. (*Id.*). Because the proposed net metering rate does not  
24 include a customary standby charge to recover such costs, the customer would not pay their full  
25 costs for transmission, distribution or other fixed costs, especially for rate schedules that recover  
26 these costs through energy-based charges. (APS Exhibit No. 38 at 19 [DeLizio]).

27 Second, excess power that the customer generates above their own needs, which flows  
28 back to the grid, would be compensated at an amount that is above the Company's avoided cost.

1 (*Id.*). The customer would receive a credit equal to the entire energy charges in their applicable  
2 rate schedule, which includes generation, transmission, distribution, system benefits, DSM, PSA,  
3 regulatory assessment, CRCC, EPS and other energy-based charges. (*Id.*)

4 The Company would incur foregone kWh cost recovery equal to the customer's total  
5 kWh generation and incur the associated fixed costs consistent with the customer's otherwise  
6 applicable rate schedule. (APS Exhibit No. 38 at 19 [DeLizio]). The customers' generation  
7 kWh output would be calculated by applying a capacity factor to each customer's actual installed  
8 kW of generation. (*Id.*). The uncollected fixed costs would be derived by applying the average  
9 kWh charges in the customer's otherwise applicable rate schedule to the lost kWh. (*Id.*). The  
10 basic service charge and any kW charges would not typically be included in this calculation  
11 because the associated revenues are not likely to be reduced with distributed generation. (*Id.*).  
12 These uncollected fixed costs would be calculated for each billing month for each participating  
13 customer. (*Id.*)

14 The uncollected fixed costs would be netted against the associated avoided generation  
15 costs that the Company would not incur as the result of the distributed generation. (APS Exhibit  
16 No. 38 at 20 [DeLizio]). Both the generation energy and capacity cost savings from net metering  
17 would be based on the Company's PURPA avoided costs, which are used to purchase excess  
18 energy from qualifying small distributed generators in the EPR-2 rate schedule. (*Id.*). The  
19 uncollected fixed costs would be reflected within the EPS budget, collected through the EPS  
20 surcharge, and reported to the Commission as part of the reporting requirements of the EPS  
21 program. (*Id.*)

### 22 3. Staff's Recommendation.

23 Although Staff supported APS's recovery of uncollected fixed costs through the EPS,  
24 Staff would limit such recovery to the customers' excess generation,<sup>97</sup> not total generation. Staff  
25 also recommended that the limit on facility size be increased to 100kW and that participation not  
26 be limited by rate schedule. The Company's proposed recommendations already attempt to

27  
28 <sup>97</sup> The difference between the retail value of the kWh that's rolled over to the next month and the Company's avoided  
cost. (Tr. Vol. XIX at 3510-3511 [Keene]).

1 strike a delicate balance between providing incentives to promote distributed renewable  
2 resources and the amount of such incentive being paid by other customers who would not be  
3 participating in the net metering program. (Tr. Vol. XII at 2429 [DeLizio]). Staff's position  
4 would upset that balance and provide an even greater subsidy to program participants at the  
5 expense of other APS customers.

6 Staff also recommended that the Company not necessarily require the use of bi-  
7 directional meters; rather Staff recommended the use of two separate meters if more economical.  
8 It is the Company's position that while the EPR-5 net metering rate could technically be  
9 implemented with two standard meters, a single bi-directional meter would be a better option  
10 because any initial savings realized with two standard meters would be eliminated due to  
11 additional electrical infrastructure costs, such as an additional meter base, sockets, adaptors and  
12 other meter-service costs. (APS Exhibit No. 38 at 17 [DeLizio]). The Company also prefers the  
13 operational benefits of the bi-directional meter for this application, which includes reduced meter  
14 inventory requirements, fewer meter sets and less meter reading, and it is already using a single  
15 bi-directional meter for the current distributed generation (partial service requirements) rates,  
16 EPR-2 and EPR-4. (*Id.*). In addition, the use of a bi-directional meter is consistent with industry  
17 and regulatory practice throughout the country. (*Id.*).

#### 18 4. Solar Advocates' Proposal.

19 The Solar Advocates proposed that the cap on individual system size be increased to 2  
20 MW, that the overall program cap be increased to some higher level commensurate with an  
21 expanded RES program, and that the rate be made available to larger commercial customers.  
22 Solar Advocates also opposed the recovery of uncollected costs resulting from the Company's  
23 proposed net metering program.

24 APS believes that the proposed 10 kW cap on the individual generator size is appropriate  
25 for net metering, even in light of an expanded RES program, because the Company already  
26 offers net billing rate options for distributed generation systems up to 100 kW (EPR-2), which do  
27 not have any cap on aggregate participation. (APS Exhibit No. 38 at 13 [DeLizio]). Under EPR-  
28 2, the customer's excess generation is compensated at an avoided cost rate, while EPR-5 would

1 allow the excess energy to be netted against energy purchased from APS in subsequent months.  
2 (*Id.* at 14). In addition, the Company has proposed a net metering generation only rate, E-57, for  
3 solar installations up to 1 MW with no aggregate cap.

4 Most other jurisdictions that offer net metering have relatively small caps on the  
5 individual size of participating generators as well as the overall aggregate level of program  
6 participation. (APS Exhibit No. 38 at 15 [DeLizio]). Out of the 41 states referenced by the  
7 Interstate Renewable Energy Council that offer net metering, 33 have caps on generator size at or  
8 below 100 kW. (*Id.*). The Company believes that its proposal of 10 kW for the EPR-5 rate is  
9 consistent with these other jurisdictions, including Arizona, because the Company already offers  
10 net billing rates, which provide most of the benefits of net metering, for customers with  
11 generators up to 100 kW in size. (*Id.*).

12 Although Solar Advocates cited several states with relatively high caps for individual  
13 generator size and for total MW allowed on a net metering program, in fact, only two states  
14 allow participation in net metering of generators up to 2 MW. (APS Exhibit No. 38 at 15-16  
15 [DeLizio]). Furthermore, in each of the states that Solar Advocates cited as examples, other than  
16 Colorado, the utilities have divested generation as part of retail competition and are facing very  
17 different generation procurement situations compared to APS. (*Id.*).

18 Solar Advocates also proposed that the overall cap of 15MW proposed by the Company  
19 should be increased. (Solar Exhibit No. 8 at 4-5 [Smeloff]). In contrast, the Company-proposed  
20 15 MW cap on total aggregate participation in the EPR-5 net metering pilot program is  
21 appropriate, because (1) it is a pilot program designed to be a limited offering to provide an  
22 incentive for small customers to participate in the Company's Solar Partners Incentive Program  
23 (credit purchase program), and (2) the Company already offers other net metering/net billing  
24 type rates that do not have any aggregate cap on participation. (APS Exhibit No. 38 at 14-15  
25 [DeLizio]).

26 Solar Advocates opposed the recovery of uncollected costs from the Company's  
27 proposed net metering program and claimed that such recovery is unnecessary, because the  
28 Company is experiencing rapid growth in its service territory. However, the issue of whether

1 APS sales are growing, remaining flat, or declining is irrelevant to the issues of uncollected fixed  
2 costs. Sales will be less than they would have been absent the distributed generator. (APS  
3 Exhibit No. 39 at 6 [DeLizio]). That particular customer will still have avoided paying for the  
4 cost of providing service to such customer. Moreover, APS's rapid growth also carries with it  
5 the additional costs to serve the Company's increasing customer base. (*Id.*). This additional  
6 financial burden heightens, not lessens, the importance of preserving the margins for fixed  
7 delivery costs from customers participating in public benefit programs like net metering. (*Id.*).

8 The Commission must make a policy decision as to the scope of the proposed net  
9 metering program, given the fact that there are uncollected fixed costs that need to be recovered  
10 and must determine whether it is more appropriate to recover such costs through the EPS or  
11 RES, or defer recovery of such costs until a general rate case and spread such costs among all  
12 classes through the cost of service. APS requests the Commission approve Rate Schedule EPR-  
13 5, without modification for customers that have renewable resource generation facilities of 10  
14 kW or less. As part of EPR-5, APS proposes that the Commission enact a 15 MW cap on total  
15 aggregate participation in the EPR-5 net metering pilot program. The Company also requests  
16 Commission authorization to recover its uncollected fixed costs associated with the  
17 implementation of EPR-5, which offers a special financial subsidy to customers in order to  
18 promote small renewable distributed generation systems.

19 In response to an inquiry by Commissioner Mayes, the Company has submitted  
20 Appendix C (attached to APS Exhibit 105), which is a recalculation of APS Exhibit 73 using  
21 Staff's modified recommendation that only when a metered customer is producing a surplus of  
22 energy will there be unrecovered fixed distribution costs through the EPS or RES.<sup>98</sup> It is  
23 noteworthy that the aggregate level of unrecovered fixed distribution costs remains unchanged  
24 from APS Exhibit 73. These unrecovered costs are an undeniable aspect of net metering and, if  
25 not recovered through the RES, will impact base rates charged to non-participating customers.

26 <sup>98</sup> APS Exhibit 73 entitled "RES Surcharge Calculations for Impacts of Uncollected Fixed Costs under Net Metering"  
27 sets forth the calculation that was requested to show the revenue impact of uncollected fixed costs due to net  
28 metering. It includes distribution costs plus items such as system benefits and other kilowatt hour, or non-fuel non-  
purchased power, power supply fuel or related costs. (Tr. Vol. XXIII at 4313 [Rumolo]). Exhibit 73 makes the  
assumption that every three years the uncollected dollars from distributed net-metered customers would be rolled into  
the revenue requirements in a rate case. (*Id.*).

1 (Tr. Vol. XXIII at 4419 [Rumolo]).

2 **C. Renewable Procurement.**

3 **1. Renewables As A Hedge.**

4 **a. Cost Of Renewable Energy Is Higher Than Natural Gas.**

5 WRA has proposed that the Company use an increased amount of renewable energy as a  
6 hedge against high natural gas prices. While renewable energy will offset some of the need for  
7 generation from natural gas, this displacement comes at a higher cost than natural gas, based on  
8 current prices. (APS Exhibit No. 47 at 2 [Dinkel]). In general, there is a cost premium for any  
9 “hedge”, and careful consideration of the cost is required. (*Id.*). While renewable generation  
10 may be “effective” as a hedge due to its displacement of future gas needs, the critical questions  
11 are whether they are a cost effective hedge and whether the added costs are acceptable from the  
12 perspective of APS customers. (*Id.*). Natural gas hedges can be secured at a relatively small cost  
13 over prevailing market prices, yet renewable energy is currently only available at a more  
14 expensive premium to the cost of conventional, gas-fired energy resources. (*Id.*). Although  
15 there may be recent projects in certain states where renewable energy can be procured at or  
16 below the cost of conventional resources, APS’s experience in acquiring renewable resources  
17 indicates that such resources include paying a significant premium over the cost of conventional  
18 energy resources utilizing natural gas. (*Id.* at 3).

19 Arizona’s renewable resources are limited and APS’s choices are to procure out-of-state  
20 renewable resources in direct competition with other utilities, or to acquire the limited in-state  
21 resources at a higher cost. (*Id.*). Project specific analysis is required to adequately measure the  
22 economic value of each renewable project. (*Id.*). Because renewable energy is an intermittent  
23 source of power, this uncertainty means it may be difficult to schedule the gas purchases needed  
24 to counterbalance the renewable resource intermittency, resulting in increased costs. (*Id.* at 4).

25 **2. Independent Evaluation / Solicitation Process.**

26 Interwest Energy Alliance (“Interwest”) has proposed that the Commission mandate the  
27 Company to use an independent evaluator when evaluating future renewable Request For  
28

1 Proposals ("RFPs"). APS believes that an independent evaluator is unwarranted. First, the RES  
2 requires utilities to have procedures for selecting resources and also required certification by an  
3 independent auditor that the procedures are fair and unbiased and have been appropriately  
4 applied. (APS Exhibit No. 19 at 8 [Lockwood]). In addition, because it is a requirement of  
5 APS's compliance filing, it is appropriate for APS to work with the independent auditor to  
6 review its processes and procedures before applying them to select a resource. (APS Exhibit No.  
7 20 at 7 [Lockwood]).

8 APS also plans to commission a Wind Integration Study to be conducted by academic  
9 and industry participants to assist in establishing guidelines to be used for RFP evaluations of  
10 wind projects. (APS Exhibit No. 47 at 4 [Dinkel]). Finally, the cost of an independent evaluator  
11 to review an RFP would be between \$90,000 and \$125,000. (APS Exhibit No. 19 at 8  
12 [Lockwood]). Such additional costs are an unnecessary use of customers' money because of the  
13 clarity and rigor provided by the Wind Integration Study and RES requirements. (*Id.*). In  
14 addition, the RES does not mandate an RFP.

### 15 **3. Mandated Procurement Schedules.**

16 Interwest has also proposed that the Commission mandate RFPs related to renewable  
17 procurement. APS believes that determinations about how and when to procure renewable  
18 energy should be left to the Company, so that it can have the flexibility it needs to best serve its  
19 customers. (APS Exhibit No. 19 at 8-9 [Lockwood]). APS is committed to engaging the market  
20 in an open and fair manner, and anticipates conducting additional renewable energy RFPs in the  
21 future; however, mandated procurement schedules and procedures would not be in APS's  
22 customer's best interests. (*Id.*).

### 23 **4. Wind Integration Study.**

24 Both Interwest and WRA have raised concerns about APS's methodology for calculating  
25 wind integration costs in its renewable RFP's. APS believes it is in the public interest to study  
26 the impact of the integration of renewable resources into its portfolio. (APS Exhibit No. 47 at 4  
27 [Dinkel]). To determine the system impacts and costs associated with effectively integrating  
28 potential wind projects into APS's system, APS is currently in discussion with Northern Arizona

1 University ("NAU") for the coordination of a Wind Integration Study. (*Id.*) The study is being  
2 designed to answer the question of what are the system impacts and costs associated with  
3 effectively integrating potential wind projects into APS's system. (*Id.* at 5). It will address the  
4 nuances of APS's system, and the known characteristics of probable wind projects that may be  
5 made available to APS to better predict and evaluate the costs and impacts of integrating specific  
6 renewable resource technologies into APS's system, particularly those which demonstrate  
7 intermittency like wind and solar. (*Id.*).

8 The purpose of the study is to develop experience with actual renewable resources so  
9 APS will have the ability to better predict and evaluate the costs and impacts of integrating  
10 specific renewable resource technologies into APS's system, particularly those which  
11 demonstrate intermittency like wind and solar. (*Id.*). NAU would conduct the analysis with the  
12 direct involvement of industry experts, with the scope, technical process, and results overseen by  
13 a Technical Advisory Committee. (*Id.*). In addition, a Stakeholder Advisory Committee is being  
14 formed to provide review from a variety of stakeholders including other utilities and renewable  
15 energy advocates. (*Id.*). A timeframe is currently being evaluated, but APS expects the  
16 integration cost study to be complete in approximately 6 to 8 months. (*Id.*).

17 Interwest supported APS's efforts to conduct the study and indicated that the study would  
18 provide valuable information to assist the Company in understanding the costs and technical  
19 issues of integrating a substantive amount of wind into their system. (IEA Exhibit No. 5 at 2  
20 [Ormond]). In addition, Interwest supports the Company's proposal to utilize a Technical  
21 Advisory Committee to provide expertise and guidance in the development of the study. (*Id.*).

22 **D. DSM.**

23 **1. DSM Spending Should Remain At Its Current Level.**

24 APS's demand-side management programs, in accordance with Decision No. 67744, are  
25 budgeted to spend \$48 million by year-end 2007. (APS Exhibit No. 32 at 2 [Orlick]; Decision  
26 No. 67744, Settlement Agreement ¶ 40). However, as a result of delayed DSM program  
27 approvals, the time it takes to ramp up DSM spending, and the lag inherent with spending on  
28 energy efficient **new** construction projects, APS will not spend that \$48 million by year-end

1 2007. (APS Exhibit No. 32 at 2 [Orlick]). Rather, the Company proposes, and SWEEP and  
2 Staff agree, that any unspent funds should be carried over and spent in subsequent years. (*Id.* at  
3 3; SWEEP Exhibit No. 2 at 2 [Schlegel]; Staff Exhibit No. 17 at 2 [Anderson]). While DSM  
4 programs have been successfully rolled out, the Company disagrees with RUCO's assessment  
5 that the programs are "up and running," and believes that RUCO's proposed \$4,000,000 increase  
6 in spending is unnecessary at this time given the flexibility of the DSM Adjustor.

7 Both Staff and the Company expect that DSM spending will continue at its present  
8 ordered level, until such time as APS files and the Commission approves modifications to the  
9 program design and budget requirements. (*Id.* at 3; Staff Exhibit No. 16 at 6 [Anderson]). In  
10 fact, the nature of the funding mechanism is comprised of 2 elements – one element is in base  
11 rates (\$10,000,000) and the other element flows through the DSM Adjustor – that allow for DSM  
12 programming to continue and grow as cost-effective program opportunities emerge. (APS  
13 Exhibit No. 32 at 3 [Orlick]). Although APS will promote cost-effective DSM, such an  
14 aggressive escalation in spending is premature. The current funding program is sufficient for the  
15 development of the DSM programs; any increases at this time would be an inefficient use of  
16 funds.

17 **a. It Is Premature And Not Cost Effective To Adopt SWEEP's**  
18 **Aggressive Energy Efficiency Standard.**

19 APS's demand-side management programs have recently been approved by the  
20 Commission and APS needs time to get its DSM programs up to speed, gauge progress, and  
21 evaluate what is actually being achieved through the Measurement, Evaluation and Research  
22 ("MER") process. (APS Exhibit No. 32 at 4 [Orlick]). As such, Staff and the Company believe  
23 it is premature to make substantial changes by implementing the Energy Efficiency Standard  
24 ("EES") or savings target. (*Id.* at 3; Staff Exhibit No. 17 at 3 [Anderson]). The Commission  
25 appears to share this concern, as it only approved the non-residential DSM programs on an  
26 interim basis. This allowed APS to begin moving forward with DSM program implementation  
27 while evaluating program effectiveness. (APS Exhibit No. 32 at 4 [Orlick]; Decision No. 68488  
28 at 6).

1                   **b. SWEEP's Proposed Savings Goal Is Unnecessary And Its Cost Is**  
2                   **Uncertain.**

3                   Furthermore, SWEEP's proposal to switch to a savings goal, as opposed to a spending  
4 target, is unnecessary. (APS Exhibit No. 32 at 4 [Orlick]). The present DSM spending  
5 requirement adequately and reliably meets DSM needs, was approved by the Commission after  
6 review by Staff and the Collaborative Working Group, and promotes cost-effective program  
7 development. (*Id.* at 4-5). In fact, SWEEP's aggressive savings target exceeds that of many  
8 states with well established DSM programs. (*Id.* at 6).

9                   SWEEP's savings goal incorporates an estimated funding level of 2 mills per kWh, which  
10 for 2007 alone is a significant annual funding increase of \$28,000,000 over current base rates  
11 and a \$22,000,000 increase over the target level of \$16,000,000 per year. (*Id.* at 7-8). SWEEP's  
12 funding estimate is based on APS achieving DSM savings at an average cost of approximately  
13 1.1 cents per lifetime kWh saved. This optimistic funding assumption neglects to account for the  
14 full range of DSM costs, which may be much higher than the 1.1 cents estimated by SWEEP.  
15 (APS Exhibit No. 32 at 7 [Orlick]). As such, even a slight increase in assumed cost under  
16 SWEEP's proposal would significantly increase the funding necessary to reach the savings goal.  
17 Even SWEEP acknowledges that actual funding, based on the proposed savings target, may vary.  
18 (SWEEP Exhibit No. 2 at 5 [Schlegel]).

19                   **c. SWEEP's Proposed 12 Year Implementation Plan Is Not An Efficient**  
20                   **Use Of Planning Resources.**

21                   In addition to the EES and savings target, SWEEP suggests that a 12-year  
22 implementation plan should be developed within eight months of a decision in this matter. Since  
23 long term results are difficult to predict, this will likely be of little value; rather, APS suggests  
24 that shorter term horizons will actually prove more fruitful. (APS Exhibit No. 32 at 8 [Orlick]).  
25 In fact, the DSM Portfolio Plan establishes such a timeframe in the form of biennial updates  
26 following the 13-month DSM filing required by Decision Nos. 68488 and 68648. (*Id.* at 9).  
27 SWEEP agrees that the biennial plans will be valuable; and the remaining 10-year period would  
28 be conceptual only. (SWEEP Exhibit No. 2 at 6 [Schlegel]).

1           **2. Interest On Unrecovered DSM Costs.**

2           In Decision No. 67744, the Commission approved a DSM Adjustor Clause ("DSMAC")  
3 allowing APS to collect, on a deferred basis, DSM expenditures over and above rate base.  
4 Decision No. 67744 at ¶¶ 43-44. The DSMAC enables APS to timely recover costs associated  
5 with new and expanding DSM programs. (APS Exhibit No. 32 at 10 [Orlick]). Due to the  
6 deferred nature of cost recovery under the DSMAC, the Company believes that an interest  
7 charge is appropriate. (APS Exhibit No. 69 at 15 [Rumolo]). As such, the Commission should  
8 allow APS to accrue interest in accordance with a revised Plan of Administration. (*Id.* at 15-16).

9           Staff did not oppose "the inclusion of interest earning on the unrecovered DSMAC  
10 account balance ... [measured] using the one-year Nominal Treasury Constant Maturities rate  
11 that is contained in the Federal Reserve Statistical Release H-15 or its successor publication."  
12 (Staff Exhibit No. 16 at 8 [Anderson]).

13           Although RUCO believed that DSMAC interest may be recoverable at a later time,  
14 RUCO contended that recovery is inappropriate now. According to RUCO, interest recovery  
15 was not addressed in the Settlement Agreement (Decision No. 67744) because the parties  
16 anticipated over-collection of DSM funds during "ramp up." RUCO further argued that the  
17 current interest free adjustor mechanism is reasonable given that APS is collecting DSM funds  
18 from rate base without paying interest to customers.

19           APS and Staff disagreed with RUCO, and acknowledged that APS should be allowed to  
20 recover DSM interest. RUCO has incorrectly claimed that APS's failure to spend its full amount  
21 of DSM funds should preclude it from interest recovery. Although APS could not, for reasons  
22 wholly outside its control, immediately meet the spending requirements allocated for DSM  
23 during the initial start-up period, it will shortly eclipse the \$10,000,000 a year mark as DSM  
24 programs mature. Both Staff and APS agreed that the Company should be compensated for  
25 advancing DSM funds by permitting the Company to earn interest on the DSMAC.

1           **3. Performance Incentive.**<sup>99</sup>

2           Consistent with Decision No. 67744, and to encourage further DSM development and  
3 reward successful programming, Staff, RUCO, and APS all agreed that the Company should  
4 receive a DSM performance incentive. (APS Exhibit No. 33 at 2 [Orlick]; RUCO Exhibit No. 26  
5 at 12 [Diaz Cortez]; Staff Exhibit No. 16 at 9 [Anderson]). Initial net benefit determinations  
6 should be based upon current and regionally similar energy savings data. (APS Exhibit No. 33 at  
7 2 [Orlick]; Staff Exhibit No. 17 at 4 [Anderson]). However, beginning with the July-December  
8 2007 semi-annual DSM report, net benefits going forward should be based upon measured  
9 savings as developed by the MER contractor. (*Id.*). APS also agreed with Staff's  
10 recommendation to set the performance incentive share at 10 percent of the net benefits from the  
11 energy efficiency achieved through approved DSM programs and that the incentive should be  
12 capped at 10 percent of spending, inclusive of the performance incentive. (APS Exhibit No. 32  
13 at 10 [Orlick]; Staff Exhibit No. 16 at 10 [Anderson]).

14           Net benefits should be calculated as of the time DSM measures are placed into service  
15 and expenditures are incurred. (Staff Exhibit No. 16 at 12 [Anderson]). Furthermore, to  
16 calculate net DSM benefits, APS will continue to use the Societal Cost Test, which it also used  
17 to calculate net benefits in Decision Nos. 68488 and 68648. (APS Exhibit No. 32 at 11 [Orlick]).

18                   **a. The DSM Performance Incentive And The Proposed Conservation**  
19                   **Adjustment<sup>100</sup> To Test Period Sales Are Not Mutually Exclusive.**

20           In addition to the performance incentive, APS proposed that the Commission authorize a  
21 conservation adjustment normalizing APS's lost revenues to account for successful DSM  
22 programming. (APS Exhibit No. 17 at 10 [Ewen]). Staff and RUCO disagreed, arguing that  
23 such a conservation adjustment, when collected in conjunction with a DSM performance  
24 incentive, would allow the Company to be compensated twice for the same effort. First of all,  
25 this assertion is factually inaccurate. The proposed performance incentive is capped at 10

26 <sup>99</sup> The Company filed for approval of a performance incentive as part of APS's application for approval of the DSM  
27 programs consistent with Decision No. 67744. While the Commission approved these programs, the Commission  
never addressed the Company's request for a performance incentive.

28 <sup>100</sup> The term "conservation adjustment" has been used interchangeably with "net lost revenues". To avoid confusion  
with the "net lost revenues" or "uncollected fixed costs" that have been discussed related to the Company's net  
metering program, the term "conservation adjustment" is used in this discussion.

1 percent of the Company's DSM spending in a given year. (Tr. Vol. XIX at 3660-61  
2 [Anderson]). This is far less than the lost margins attributable to these programs. Therefore,  
3 disallowing the conservation adjustment would almost certainly constitute a taking of APS's  
4 property, given that its lost revenues from the DSM programs will exceed this 10 percent cap.  
5 But, the two are not mutually exclusive – the conservation adjustment **accounts** for revenues lost  
6 to the successful implementation of DSM measures, while the performance incentive is a  
7 financial **reward** because the programs delivered net benefits to customers. The incentive is  
8 intended to be over and above the cost of the program, including net lost revenues. Otherwise, it  
9 is not an incentive at all, but merely partial compensation for a cost otherwise recoverable  
10 through rates. This Commission approved a combined incentive/net lost revenue conservation  
11 adjustment program for APS in a 1996 rate case settlement, and at no time did Staff or any other  
12 party suggest that such was inappropriate or somehow constituted a double recovery of program  
13 costs. *See*, Decision No. 59601 at 7.

#### 14 **4. Demand Response.**

15 The Company agreed with Staff and RUCO that Demand Response programs have the  
16 ability to benefit the system, and concurred with their findings that a study group should be  
17 assembled to evaluate various Demand Response options. Demand Response programs, which  
18 are distinct from the Company's DSM offerings, rely upon market conditions and tiered pricing  
19 to reduce peak load. (Staff Exhibit No. 22 at 31-32 [Andreasen]). APS agreed with Staff and  
20 RUCO that Demand Response may be able to provide effective supply-side options for meeting  
21 system needs, in addition to introducing greater elasticity in energy demand and use. (APS  
22 Exhibit No 47 at 6 [Dinkel]). To be effective, Demand Response programs must be carefully  
23 designed to adequately address reliability requirements and provide economics that are favorable  
24 compared to other supply-side options. (*Id.*).

25 In creating a reliable, efficient, and effective Demand Response program, there are a  
26 variety of considerations, including implementation costs, benefits, infrastructure needs, and  
27 complexity of administration. (*Id.*). For those reasons, a thorough study is necessary to  
28 determine which programs would be likely to produce the most cost effective benefits. (*Id.* at 6-

1 7). APS and RUCO agreed that the Company should conduct the initial evaluation of Demand  
2 Response options. (*Id.* at 7; RUCO Exhibit No. 26 at 28 [Diaz Cortez]). This study will enable  
3 APS to narrow the list of Demand Response options to those that are most efficient and  
4 economical. (APS Exhibit No. 47 at 7 [Dinkel]).

5 RUCO recommended that APS establish a Demand Response task force to consider  
6 further development of load shaving and shifting opportunities. (RUCO Exhibit No. 24 at 6, 42  
7 [Diaz Cortez]). However, prior to creating the task force, RUCO agreed with the Company that  
8 APS should conduct a preliminary Demand Response study. (RUCO Exhibit No. 26 at 28 [Diaz  
9 Cortez]). Preliminarily evaluating the programs is an efficient use of resources and will offer the  
10 task force a starting point when determining which programs are the best to use. (*Id.*). RUCO  
11 recommended that the Demand Response task force include APS, Staff, RUCO, and other  
12 stakeholders. (RUCO Exhibit No. 24 at 42 [Diaz Cortez]).

13 Staff agreed with APS that expansion of Demand Response may include “several  
14 unknowns.” (Staff Exhibit No. 22 at 35 [Andreasen]). Staff further asserted that expansion will  
15 likely prove costly and should only occur when a properly designed Demand Response program  
16 has been developed. (*Id.*). Accordingly, Staff recommended a cost benefit analysis to determine  
17 the most appropriate ways in which to expand APS’s Demand Response programs, as well as the  
18 establishment of a forum to explore Demand Response issues. (*Id.* at 35-36). Staff proposed  
19 that this analysis, which should outline beneficial Demand Response options and identify “which  
20 customer segments would be most likely to respond to such programs,” should occur within  
21 eight months of the Commission’s decision in this rate case. (*Id.* at 36). In addition, Staff  
22 contended that, concurrent with filing the Demand Response study, APS should file for  
23 Commission approval of one or more Demand Response programs. (*Id.* at 36-37).

24 Although Staff has proposed an eight-month feasibility study, the Company believes that  
25 truly effective Demand Response programs cannot be implemented, analyzed, and introduced to  
26 all customers in such a short amount of time. (APS Exhibit No. 47 at 7 [Dinkel]). In July 2006,  
27 APS implemented two new time-of-use rate schedules, offering alternative on-peak pricing as a  
28 means of evaluating customer interest in Demand Response. (APS Exhibit No. 69 at 16

1 [Rumolo]). Eight months is an insufficient amount of time to implement the rates and then  
2 evaluate customer response. Indeed, a time-of-use rate implemented in this eight-month window  
3 may completely bypass the summer months – Arizona’s busiest time from a peak load  
4 perspective. It would be imprudent for APS to evaluate its proposed Demand Response  
5 programs with such a small sampling of data. As such, APS disagrees with Staff’s eight-month  
6 proposal as being untenable and impractical. (APS Exhibit No. 47 at 7 [Dinkel]).

7 Funding for additional Demand Response programs is provided for in Decision No.  
8 67744, and APS may request funding for Demand Response as part of its DSM program costs.  
9 (Decision No. 67744 ¶ 49). Demand Response programs funded through the DSM Adjustor  
10 mechanism would be filed with the Commission for approval prior to implementation in a  
11 manner similar to the DSM programs. (APS Exhibit No. 47 at 8 [Dinkel]).

12 **5. Heat Island Effect.**

13 In order to mitigate rising energy costs, APS and WRA<sup>101</sup> agree that urban heat island  
14 reduction measures should be taken. In urban areas, such as Phoenix, the large concentration of  
15 pavement and buildings has created an urban heat island effect and increasingly high  
16 temperatures, which strain the electric grid, requiring increased generation from intermediate and  
17 peaking power plants. (WRA Exhibit No. 1 at 15-16 [Berry]). APS is aware of this issue and is  
18 a founding lifetime sponsor of the Arizona State University (“ASU”) Global Institute for  
19 Sustainability, which has been designated as the EPA Center for Excellence in working toward  
20 solutions to his growing problem. (APS Exhibit No. 32 at 12 [Orlick]; Tr. Vol. VII at 1385-86  
21 [Orlick]).

22 Although APS agrees that it should study the benefits of a heat island reduction program,  
23 the Company disagreed with WRA’s recommendation to expedite the adoption of “pre-  
24 approved” DSM programs. (APS Exhibit No. 32 at 14 [Orlick]). APS is willing to hold a DSM  
25 Collaborative Working Group meeting to further analyze these issues, and believes the current  
26 DSM custom project option is a viable tool for addressing the urban heat island effect. (*Id.* at 13;

27 <sup>101</sup> WRA expressed concern about this situation and suggested a pre-approved DSM offering, which would include  
28 shade trees, cool roofs and cool pavements. (WRA Exhibit No. 2 at 3 [Berry]). The Commission found cool roofs to  
be a cost ineffective DSM program in Decision No. 68488 at 33.

1 WRA Exhibit No. 2 at 3 [Berry]). In light of APS's long relationship with ASU, the unique  
2 nature of addressing urban heat island issues, and the valuable research APS anticipates over the  
3 next few years, adopting WRA's approach would not be a prudent course of action at this time.  
4 (APS Exhibit No. 32 at 14 [Orlick]).

5 **6. Low Income Programs.**

6 APS's modifications to the Low Income Plan of Administration are a valuable way to  
7 promote further enrollment in the Company's successful Energy Support Program ("E-3") and E-  
8 4 programs. APS's E-3 program offers discounts up to 40 percent off the cost of electricity for  
9 customers who meet certain income guidelines and exempts those same customers from PSA  
10 charges. (APS Exhibit No. 32 at 15 [Orlick]). The E-4 program provides additional discounts to  
11 eligible E-3 customers for their use of durable medical care equipment. (*Id.*). Participation in  
12 the E-3 program is of unlimited duration, provided the applicant continues to meet the income  
13 guidelines. (*Id.*).

14 Thus far, APS's new enrollment techniques, including pre-paid postage for applications  
15 and an electronic application pilot program, have been successful, with a total enrollment by  
16 August 2006 of over 36,000, including 566 Tribal customers, which is an increase of almost 30  
17 percent. (*Id.* at 20; Tr. Vol. VII at 1429 [Orlick]). In addition to various marketing efforts, APS  
18 has begun sending program information and applications to all residential customers who are not  
19 already enrolled in E-3 and E-4. (APS Exhibit No. 32 at 19-20 [Orlick]). Applications are also  
20 distributed at APS offices, social service agencies and are downloadable on aps.com. (*Id.* at 19).  
21 The Arizona Department of Economic Security ("DES") is responsible for processing the  
22 applications, determining eligibility, and notifying APS to enroll applicants in the program.  
23 (*Id.*).

24 APS, consistent with Decision No. 68585, has evaluated additional ways to automatically  
25 enroll participants in the E-3 and E-4 programs. (*Id.* at 16; Decision No. 68685 ¶ 62). The  
26 Company's efforts, however, have been impeded by regulations that preclude DES from  
27 transmitting confidential client information to a party outside of DES. (APS Exhibit No. 32 at 16  
28 [Orlick]). Alternatively, APS established an electronic application for E-3 that uses the APS

1 Electronic Agency Guarantee (“EAG”) website and allows authorized community agencies to  
2 verify a client’s account data and enroll federal Low Income Home Energy Assistance Program  
3 clients in the APS program. (*Id.* at 17). The pilot EAG program has proven successful, and APS  
4 is seeking to expand it to additional agencies and other programs that use the same income  
5 guidelines. (*Id.* at 18).

6 APS is proposing to modify the Plans of Administration for Schedules E-3 and E-4 in  
7 order to facilitate the automatic enrollment process. (*Id.* at 19). This modification will provide  
8 APS the flexibility to pursue other enrollment options, such as allowing community agencies that  
9 have access to APS’s EAG website the ability to also enroll their clients into E-3. (*Id.*). This  
10 plan will broaden the reach of the E-3 and E-4 programs, and is supported by DES. (*Id.*).

11 **E. Reliability.**

12 Staff conducted a quality of service assessment for calendar years 2000 through 2005 and  
13 concluded that all electric facilities observed during the assessment were operational and well  
14 maintained. Staff thereby concluded that APS’s Test Year improvements were used and useful.  
15 These findings were incorporated into an Engineering Report Utilities Division Arizona  
16 Corporation Commission, dated August 18, 2006 (“Engineering Report”), which was attached to  
17 the Direct Testimony of Staff witness Jerry Smith.<sup>102</sup> (Staff Exhibit No. 25). Staff concluded:

- 18 1. The scope of system improvements since the Westwing and Deer Valley  
19 Substation fires was substantial and impressive to observe in the field;
- 20 2. Most electric transmission systems including substations were well maintained in  
21 terms of security in and around the substations, and of proper maintenance of  
22 equipment in the yard and in the switchgear rooms; and
- 23 3. Poor performing substations and distribution feeders are being maintained,  
24 refurbished and repaired in a logical and sound manner. Some of these  
25 improvements being made to the facilities serving tribal territories are effectively  
26 improving service; and as recommended by APS Consultant EPRI Solutions, Inc.,  
27 APS formed a predictive maintenance team to focus on predictive and preventive  
28 maintenance activities to find and repair equipment prior to failure. Staff  
determined that all electric facilities observed during the assessment were  
operational and well maintained; thereby concluding that APS’s test year  
improvements were used and useful.

<sup>102</sup> At the hearing, this testimony and Engineering Report was adopted by Mr. Prem Bahl.

1 (Id. at 6-7).

2 Staff identified seven items associated with 2005 Test Year capital improvements that  
3 APS is aware of and has either rectified or is in the process of making such improvements.<sup>103</sup>

4 Staff also raised some issues regarding the quality of service in APS's Southeast  
5 Division, particularly the portions of the APS system that provide service to the communities of  
6 Douglas and Bisbee. APS acknowledged that reliability in the Southeast Division deserves  
7 heightened attention, and indicated that the Company has made significant efforts to improve  
8 reliability. APS continues to patrol underperforming feeders and has performed a substantial  
9 amount of maintenance to feeders in the Southeast Division. (APS Exhibit No. 30 at 9  
10 [Bischoff]). In 2004, APS began to route and construct a new 69 kV transmission line to  
11 energize a new substation being located in the Palominas area. (Id.). In addition, the main  
12 portion of the distribution feeder is being reconstructed on the same poles and will improve  
13 reliability of the feeder when completed. (Id.). A new Palominas 69/12 kV substation will be  
14 placed in service by June 1, 2008, and APS recently completed the rebuilding of a portion of the  
15 line along Highway 92 that was planned for 2006. (Id.).

16 In addition, as part of an agreement between APS, Sulphur Springs Valley Electric  
17 Cooperative ("SSVEC") and Southwest Transmission Cooperative ("STC"), these utilities are  
18 performing additions and improvements that will allow for a second emergency tie between  
19 APS's Palominas Substation and SSVEC's Miller Substation. (Id.). Upon completion in 2009,  
20 APS will be able to carry the entire APS load in the region through use of the two emergency ties  
21 without the need for the local generation at APS's Fairview (Douglas) Plant. (Id. at 9-10).

22 While the Engineering Report raised some concern regarding sustained service  
23 interruptions to customers in 2005, APS responded that when significant or unusual weather

24  
25 <sup>103</sup> (1) APS is currently in discussion with the City of Prescott regarding an expansion of the well field and the Chino  
26 Wells Substation will be rebuilt to accommodate the increased demand; (2) the inadequate capacity at the Fairview  
27 generator and an emergency 69 kV tie at Sulphur Springs Valley Electric Cooperative's McNeal Substation in the  
28 Southeast Division is expected to be remedied by the end of the year; (3) the Humbug transformer oil retention basin  
will be in compliance with the new Company standard by the end of 2006; (4) approximately 75 of the old wood  
poles have been removed on the Laguna Feeder #1; (5) APS replaced the 69 kV steel pole just north of Laguna  
Substation; (6) the auger bit at the Paulden substation has been removed from the yard; and (7) repairs to the roof of  
the control house at the San Luis Substation have been completed. (APS Exhibit No. 30 at 6-9 [Bischoff]; Tr. Vol.  
VI at 1346 [Bischoff]).

1 events were removed from the computation, there was no significant difference in outage rates  
2 from 2003 through 2005. (*Id.* at 10). At hearing, the Staff witness concurred that when those  
3 events were removed from the computation, there was no statistically significant difference in  
4 reliability metrics. (Tr. Vol. XXI at 3859 [Bahl]).

5 At hearing, Staff confirmed its satisfaction with the Company in meeting the  
6 requirements of Decision No. 67744 to place greater focus on service quality, particularly on the  
7 Navajo and Hopi Reservations. (Tr. Vol. XXI at 3853 [Bahl]). Specifically, APS has taken  
8 action on each of Staff's recommendations for the Hopi Reservation area to improve the  
9 reliability of service. (*Id.*). In addition, APS has added a capacitor bank and has changed out a  
10 transformer at the Tuba City Substation to correct the voltage level at the Cameron Substation  
11 and to provide voltage support for Tuba City. (*Id.* at 3853-3854). APS is currently negotiating  
12 with the City of Page to install a 69 kV circuit breaker at the Powell Substation (which belongs  
13 to the Western Area Power Administration) to replace an existing manual switch. (*Id.* at 3854).  
14 For the Hopi Reservation, APS has installed fault locators on the 70-mile long line which  
15 stretches from Cholla to Keams Canyon. The fault locators will facilitate the location of  
16 problems and allow the Company to quickly dispatch crews to correct the fault. (*Id.* at 3855).

17 **F. Renewable Energy Resources ("Green Power").**

18 **1. APS Supports The Intent Of The RES And The Development And**  
19 **Integration Of Renewable Energy Into Its Energy Portfolio.**

20 In a letter dated July 17, 2006, Commissioner Mayes requested that Parties to this Docket  
21 consider exploring the implementation of the RES in this rate proceeding. (APS Exhibit No. 19  
22 at 2 [Lockwood]). APS supports the intent of the RES and the development and integration of  
23 renewable energy into our energy portfolio. (*Id.* at 3). Renewable energy diversifies the  
24 Company's energy supply, which provides many benefits to APS customers and helps manage  
25 the environmental impacts of electricity generation. (*Id.*).

26 **a. Green Power Rate Schedules.**

27 APS is proposing to provide a mix of renewable energy resources to its customers. The  
28

1 Company is offering Green Power to customers who wish to purchase renewable energy at a  
2 surcharge cost of \$0.01 per kWh.<sup>104</sup> (APS Exhibit No. 38 at 7 [DeLizio]). APS's proposed  
3 Green Power rates are based on the actual cost of renewable energy from three projects for which  
4 APS has contracted. (APS Exhibit at 5-6 [Lockwood]). The renewable energy projects included  
5 in APS's proposed Green Power Rate Schedules include a geothermal project that entered  
6 service in January 2006, and two wind projects, one of which was scheduled to enter service in  
7 late-2006, and the second is scheduled to enter service in early-2007. (APS Exhibit No. 20 at 8  
8 [Lockwood]). The cost for each of the three projects was weighted based on the specific contract  
9 price structure and projected energy production to establish an average annual portfolio price.  
10 (APS Exhibit No. 19 at 6 [Lockwood]).

11 If the initial amount of Green Power is fully subscribed, APS will seek to procure  
12 additional Green Power to serve additional customers under the Green Power schedules. (APS  
13 Exhibit No. 38 at 8 [DeLizio]). APS will compute a new Green Power premium associated with  
14 the additional Green Power costs and the most recently approved avoided cost filing. (*Id.*) If  
15 the new premium is different than the current premium, the Company will file new Green Power  
16 rates with the Commission for approval to accommodate the increased demand for the program.  
17 (*Id.*) These new Green Power rates will be in addition to the current Green Power rates, which  
18 will not be changed outside of a rate case. (*Id.* at 8-9). The initial offering of Green Power will  
19 be served under the proposed Green Power Rate Schedules GPS-1A and GPS-2A. (*Id.* at 9).

20 The energy provided under the Green Power rates will be in excess of the EPS/RES and  
21 Decision No. 67744 requirements. (APS Exhibit No. 20 at 8 [Lockwood]). A generation project  
22 may provide energy to both EPS/RES and Green Power requirements, but the energy will not be  
23 double-counted. (*Id.*).

24 As suggested by WRA, APS agreed:

25 \_\_\_\_\_  
26 <sup>104</sup> The Company has modified the premium charge and the block size for the Green Power Schedules, GPS-1A and  
27 GPS-2A as proposed in its initial filing. (APS Exhibit No. 38 at 7 [DeLizio]). The premium has changed from  
28 \$0.03/kWh in the Company's initial filing to \$0.01 per kWh. (*Id.*) The Company has also increased the block size  
from 25 kWh to 100 kWh per month. (*Id.*) As a result, the monthly premium for Green Power in Schedule GPS-1A,  
has been changed from \$0.75 for a 25 kWh for block of Green Power, to \$1.00 for a 100 kWh block. (*Id.*) The  
Company has also made commensurate changes in the Green Power premiums for the various percentages of  
monthly consumption in Schedule GPS-2A. (*Id.*).

- 1 1. To provide reports on customer participation, kWh sales, and revenue in  
2 its annual EPS/RES filings;
- 3 2. That the green schedule should be based on actual project costs;
- 4 3. To pursue green-e certification for its Green Power products;
- 5 4. To change the minimum block size in GPS-1 to 100 kWh/month.; and
- 6 5. To change the 30 percent option in GPS-2 to 35 percent to better coincide  
7 with recent changes to the Leadership in Energy and Environmental  
8 Design (LEED) standard for new buildings.

9 (APS Exhibit No. 19 at 6-7 [Lockwood]).

10 The Company requests that the Commission approve the Company's proposed Green Power  
11 Rates GPS-1A and GPS-2A for customers who wish to purchase renewable energy at a surcharge  
12 cost of one cent per kWh.

13 **2. Total Solar.**

14 **a. APS Seeks Commission Approval Of Its Total Solar Rate (Schedule  
15 Solar-3) At The Premium Rate Of \$0.166 Per kWh.**

16 Because APS is aware of its customers' interest in renewable energy and, in particular,  
17 solar energy, APS is seeking Commission approval of a Total Solar Rate (Solar-3) as part of a  
18 pilot program. (APS Exhibit 19 at 7 [Lockwood]). APS currently has approximately 4,400  
19 customers enrolled in its Solar Partners Rate Program, which allows customers to purchase 15  
20 kilowatt hour blocks of solar energy. (*Id.* at 7-8). To date, 835 of APS's customers have chosen  
21 to participate in its Solar Partners Incentive Program to install their own solar energy system.  
22 (*Id.* at 7). However, many of APS's customers who are interested in solar energy may not wish  
23 or be able to own and operate their own system. (*Id.*). With Solar-3, APS takes on the  
24 responsibility for the generation and provides clean, renewable, solar energy to the customer.  
25 (*Id.*). Under Solar-3 Rate Schedule, customers would have the opportunity to support solar  
26 energy by purchasing APS-generated solar energy to offset either 50 percent or 100 percent of  
27 their energy consumption. (*Id.*)

28 The Solar-3 Rate Schedule would apply to customers who choose to participate in this  
program, in addition to their otherwise applicable rate schedule. (APS Exhibit No. 38 at 10

1 [DeLizio]). Customers would be charged a premium for the solar power and credited for  
2 avoided generation costs, which would be based on the Company's avoided costs filing. (*Id.*).

3 Several parties to this action raised concerns as to the cost of APS's Total Solar Rate.  
4 After APS filed its rejoinder testimony on October 6, 2006, APS issued a Request For Proposals  
5 ("RFP") for solar energy to provide energy for its proposed total solar rate. (Tr. Vol. V at 937-  
6 938 [Lockwood]). APS expected to receive quality proposals that would result in a total Solar  
7 Rate that would be substantially less than the original proposal. (*Id.* at 938). Although APS did  
8 not receive bids for this RFP, APS executed a Memorandum of Understanding and term sheet for  
9 a 50 percent interest in a total solar project associated with the Gila River Indian Community that  
10 will provide about one-half a megawatt of solar power to serve a portion of its current Solar  
11 Partners Rate Program, as well as the solar energy needed for the proposed Total Solar Rate  
12 program. On December 22, 2006, APS filed its revised (reduced) Total Solar Rate of \$0.225 per  
13 kWh. (APS Exhibit No. 86).

14 **G. Other.**

15 **1. Hook-Up Fees.**

16 On August 31, 2006, Commissioner Mayes filed request that the Parties (specifically  
17 Staff, RUCO and the Company) file testimony on the implementation of hook-up fees in the  
18 Company's service territory.<sup>105</sup> The letter specifically referenced a March 28, 2006 letter from  
19 Commissioner Mundell which was also filed in this docket, where he wrote "[g]iven the  
20 significant peak load growth rate that APS is experiencing and the amount of CAPEX necessary  
21 to meet that load, I think it is time to explore the option of using hook-up fees so that existing  
22 customers are not continually subject to exorbitant rate increases." In response to  
23 Commissioners Mayes' and Mundell's request, the Company, RUCO and Staff analyzed the  
24 feasibility of using hook-up fees to help fund capital expenditures. All three parties presented  
25 evidence recommending that the Commission explore the feasibility of utilizing hook-up fees in  
26 a Commission-sponsored workshop.

27  
28 <sup>105</sup> A hook-up fee is a fee that is charged to connect the utility-owned distribution facilities to the customer. Typically, the point of connection is the meter.

1           Based upon the Company's analysis as set forth in its testimony, a hook-up fee program  
2 would be an expensive vehicle for financing system improvements because of the accounting  
3 and tax implications to the Company. (APS Exhibit No. 70 at 21-22, 25 [Rumolo]). When an  
4 investor-owned utility receives contributed capital, such as through a hook-up fee, an immediate  
5 income tax liability is created because the payment is considered taxable income. Consequently,  
6 an additional "gross-up" or charge to the customer would be required to produce the same  
7 amount of after-tax cash. Additionally, under Generally Accepted Accounting Practices  
8 ("GAAP"), funds from contributions in aid of construction are booked as an offset to capital  
9 expenditures and are not treated as revenues to the Company. (*Id.*). Therefore, the revenue from  
10 the hook-up fees would not directly flow into the calculation that determines the Company's  
11 FFO. Instead, that revenue would, in fact, decrease the Company's FFO, because of the resultant  
12 increase in current income taxes. (APS Exhibit No. 64).

13           In contrast, entities (such as water and wastewater companies) that have limited access to  
14 capital markets use hook-up fees as an only readily available capital source for projects such as  
15 new water wells or treatment facilities. (APS Exhibit No. 70 at 22 [Rumolo]). Also, private  
16 water companies often grossed-up contributed capital to cover tax consequences. (*Id.*).  
17 Municipal corporations, which commonly use hook-up fees to pay for growth, do not have tax  
18 consequences of contributed capital that a utility like APS would face. After 1996, private water  
19 and sewer utilities were also exempted from tax on hook-up fees. (*Id.*).

20           The Company, Staff and RUCO all agreed that such a program should not be undertaken  
21 without careful study because the program would have "wide ranging ramifications" if it were to  
22 be implemented for an electric utility such as APS. For that reason, an examination should be  
23 conducted in the context of a generic workshop. (APS Exhibit No. 70 at 19 [Rumolo]; RUCO  
24 Exhibit No. 24 at 34 [Diaz Cortez]; Staff Exhibit No. 22 at 31 [Andreasen]). APS believes that  
25 significant policy issues would first have to be examined by all utilities and other interested  
26 parties at such a workshop. Those policy issues include:

- 27           ▪       What would be the impact on growth in the service territories of regulated  
28           entities, vis-à-vis non-regulated utilities, and correspondingly the impact on

1 government entities that rely on tax revenues from growth?

- 2 ■ What would be the impact on housing affordability?
- 3 ■ Which capital expenditures (e.g., all distribution plant or only local facilities,  
4 generation plant, general plant) should be included in the hook-up fee  
5 computation?
- 6 ■ What are the long-term impacts on the financial health of regulated companies?
- 7 ■ What are the short and long term rate impacts to customers?
- 8 ■ Should the amount of the hook-up fee include tax effects (i.e., gross-up vs. self  
9 pay);
- 10 ■ Could existing customers be responsible for hook-up fees?
- 11 ■ What would be the impact on homebuilders and the construction industry?

12 (APS Exhibit No. 70 at 19-20 [Rumolo]).

13 Staff also did not recommend that the Commission adopt hook-up fees at this time; it  
14 agrees that there remain numerous unanswered questions that should first be addressed. (Staff  
15 Exhibit No. 22 at 31 [Andreasen]). Staff pointed out that hook-up fees have been generally  
16 adopted by the Commission in the water and wastewater industries as a way of providing  
17 accelerated recovery to a utility for the installation of infrastructure necessary to serve customers.  
18 (*Id.* at 26). As noted above, both the financial and tax circumstances of such industries are  
19 different from those electric utilities. Staff recommended that if the Commission wished to  
20 pursue hook-up fees for electric and gas utilities, that it do so by opening a generic docket where  
21 parties could provide feedback and the Commission could evaluate the adoption of such fees for  
22 the energy industry. (*Id.* at 31). Staff further enumerated issues that need to be explored before  
23 a hook-up fee can be designed. They included:

- 24 ■ Should generation capacity be included in a hook-up fee given the complexities  
25 associated with determining and designing a rate to recover the cost associated  
26 with generation capacity?
- 27 ■ What type of generation unit or related index should be utilized as a proxy for  
28 calculating marginal cost for generation capacity?
- Should a study of marginal costs be required as a means of calculating a unit of  
demand, energy and distribution including customer-related cost?

- 1       ▪     Should operation and maintenance expenses be included, as well as capital  
2            expenditures?
- 3       ▪     What is the appropriate customer growth or customer decline assumption?
- 4       ▪     Over what timeframe should costs be accrued for purposes of setting a rate?
- 5       ▪     How should the cost be allocated to different customer classes and collected from  
6            individual customers?
- 7       ▪     What is the impact on direct access customers, where a customer chooses to  
8            receive generation supply from a competitive electric service provider?
- 9       ▪     What are the economic impacts of adopting hook-up fees within APS's service  
10           territory?
- 11       ▪     If hook up fees are adopted for APS, would there be any impacts for natural gas  
12           suppliers within APS service territory?

11    (*Id.* at 28-29).

12           Given the significant amount of questions and issues that the Company, Staff and RUCO  
13    have identified, as well as the financial implications to the Company, and the potential impacts to  
14    other utilities and stakeholders, the Company believes that the Commission should defer  
15    consideration of the implementation of a hook-up fee program to a generic proceeding on this  
16    issue.

## 17           2.     **Advanced Metering Infrastructure.**

18           APS is rolling out approximately 1000 "smart meters" a week as part of its Advanced  
19    Metering Infrastructure ("AMI"). (Tr. Vol. XXIII at 4364 [Rumolo]). The initial distribution  
20    has occurred in APS's more dense service segments of its service territory, including apartments  
21    and condominium projects. (*Id.*) APS estimates it will have installed approximately 12,000 of  
22    these meters by the end of 2006. (*Id.* at 4365). An advantage of an AMI program in light of the  
23    Company's high customer turnover rate, is that by installing the AMI infrastructure, APS can  
24    connect and reconnect customers without sending a crew to conduct two separate meter reads.  
25    (*Id.*) Another advantage is that APS would no longer have to physically reprogram meters if  
26    Time-of-Use ("TOU") rates changed. (*Id.* at 4394).

27           APS will be unable to achieve 100 percent penetration with AMI because the technology  
28

1 requires cellular communications, which is not available in all areas of Arizona. (Tr. Vol. XIV at  
2 2859; APS Exhibit No. 105 at 2). In addition, APS does not meter all customers (e.g., street  
3 lighting). (APS Exhibit No. 105 at 2). The Commission can facilitate the AMI "roll-out"  
4 through four discreet actions:

- 5       ▪ First, the Commission could adopt some of the ratemaking techniques suggested  
6       by APS in this rate case and improve the Company's financial condition.
- 7       ▪ Second, the Commission should both authorize accelerated depreciation  
8       rates/lives for meters (presently lasting 30 years), thus minimizing the potential  
9       for stranded metering costs, and adopt a policy assuring recovery of meter costs  
10      for existing meters retired in favor of AMI.
- 11      ▪ Third, the Commission consider authorization of an alternative funding  
12      mechanism, such as a per meter surcharge or pre-approval of recovery of  
13      investment of an AMI system.
- 14      ▪ Lastly, the Commission's Electric Competition Rules, specifically A.A.C. R14-2-  
15      1615, prohibit APS from providing metering services to many non-residential  
16      customers selecting direct access. Although retail electric competition has not yet  
17      re-appeared in Arizona and this specific regulation awaits Attorney General  
18      Certification per the *Phelps Dodge* decision to become effective, the above  
19      provision potentially discourages the use of sophisticated APS metering for this  
20      category of APS customer. It should be modified to permit APS (at the  
21      customer's discretion) to continue to provide metering services to all direct access  
22      customers. (APS Exhibit No. 105 at 2-3).

### 23       **3. House of Worship Rates.**

24       APS is **not** proposing to eliminate Schedule E-20, which is available only to houses of  
25       worship. (APS Exhibit No. 70 at 14 [Rumolo]). E-20 was frozen as part of the Settlement  
26       Agreement in Decision No. 67744. (*Id.*) It would remain frozen under APS's and Staff's  
27       proposals.

28       The Settlement Agreement also provided for the elimination of a series of already frozen,  
experimental, time of use Rate Schedules E-21, E-22, E-23 and E-24. This case merely  
implements the actions of the Commission in the last case. (*Id.* at 14-15). These rates were  
limited participation rates that were established on an experimental basis several years ago. (*Id.*  
at 15).

APS now offers an improved Schedule E-32 TOU, which is open to all customers who

1 can take advantage of lower off-peak prices. (*Id.*). New “houses of worship” and other general  
2 service customers whose primary hours of operation are evenings or weekends can likely save  
3 relative to the Company’s standard general service rate schedule. (*Id.*).

4 APS has found that E-20 has historically caused administrative problems due to the  
5 difficulty in determining what classifies a customer for this particular rate. (Tr. Vol. XIV at  
6 2818 [Rumolo]). Specifically, APS runs into problems when trying to classify a mixed use  
7 facility and whether such facility is eligible for the E-20 rate. (*Id.* at 2819-2820). In addition, it  
8 is always likely to produce unintended problems when one takes a subset of any group of  
9 customers and deem them to be different from the general service classification as a whole based  
10 solely on end use. (*Id.* at 2820 [Rumolo]).

#### 11 **4. Critical Peak Pricing.**

12 The Energy Policy Act of 2005 (“EPACT 2005”) identified several time-based rate  
13 options, including critical peak pricing, for utilities to consider offering. Critical peak pricing is  
14 a time-based rate schedule where time-of-use prices are in effect except for certain peak days  
15 when prices may reflect the costs of generating and/or purchasing electricity at the wholesale  
16 level and when consumers may receive additional discounts for reducing peak period energy  
17 consumption. (EPACT 2005 § 1252(a); Tr. Vol. XIV at 2851 [Rumolo]; Tr. Vol. XV at 3050-51  
18 [Higgins]).

19 APS has begun looking at critical peak pricing as a time-based rate option, but  
20 such a rate schedule is not part of this proceeding. (Tr. Vol. XIV at 2848 [Rumolo]). If APS  
21 believes critical peak pricing is viable option in the future, then it will propose a critical peak  
22 pricing rate schedule in a future rate proceeding where the Commission can review the proposal  
23 and adopt it.

### 24 **IX.**

#### 25 **PALO VERDE PRUDENCE REVIEW**

##### 26 **A. Introduction And Summary Of Matters Remaining In Dispute.**

27 On February 2, 2006, APS filed with the Commission an application for approval of a  
28 PSA surcharge. APS is seeking recovery of \$44.6 million plus accumulated interest in

1 replacement power costs that were a result of outages at Palo Verde during 2005. The Staff  
2 retained GDS Associates, Inc. ("GDS") to examine the prudence of APS's actions associated  
3 with eleven outages at Palo Verde during calendar year 2005. These included two refueling  
4 outages and nine other forced and short notice outages. At the conclusion of its review, GDS  
5 submitted a report on August 17, 2006 and Direct Testimony by its Vice President, William  
6 Jacobs, on August 18, 2006. No other witnesses contested the prudence of any of the 2005 Palo  
7 Verde outages. For the reasons discussed hereinafter, all of the requested replacement power  
8 costs should be recovered, and the Commission should authorize a Step 2 PSA Surcharge  
9 coincident with a final order in this proceeding.

10 GDS concluded that APS had acted prudently in connection with both 2005 refueling  
11 outages as well as with respect to five of the nine forced or short notice outages. Thus, the  
12 prudence of the 2005 refueling outages as well as the following forced or short notice outages are  
13 not at issue in this proceeding.

- 14       ▪ Unit 1 February 9 to February 19, 2005 outage
- 15       ▪ Unit 1 August 11 to August 28, 2005 outage (except for 2 days of that outage due  
16       to a reactor trip on August 26)
- 17       ▪ Unit 2 August 22 to August 26, 2005 outage
- 18       ▪ Unit 3 May 22 to June 24, 2005 outage
- 19       ▪ Unit 3 July 6 to July 13, 2005 outage
- 20       ▪ Unit 3 October 2 to October 7, 2005 outage

21 Staff (through GDS) does challenge the prudence of APS's actions in connection with the  
22 following outages:

- 23       ▪ Unit 1 March 18 to March 21, 2005 outage (diesel generator governor failure)
- 24       ▪ Unit 1 August 26 to August 28, 2005 outage extension (reactor trip due to  
25       operator error)
- 26       ▪ Unit 2 October 11 to October 20, 2005 outage (refueling water tank ("RWT") line  
27       declared inoperable)
- 28       ▪ Unit 3 October 11 to October 20, 2005 outage (RWT line declared inoperable)

29 The Unit 1 March 18 to March 21, 2005 outage pre-dates the PSA. In his Direct  
30 Testimony, Dr. Jacobs of GDS initially recommended that \$1.623 million not be eligible for  
31 consideration in establishing base fuel costs in the rate proceeding. (Staff Exhibit No. 47 at 4  
32 [Jacobs]). However, during the hearing of this matter, Dr. Jacobs and Staff counsel

1 acknowledged that this recommendation was irrelevant because no costs for this outage were  
2 included in the adjusted Test Year fuel costs proposed by any party to this proceeding. (Tr. Vol.  
3 XXIX at 5276-78 [Jacobs]).

4 With respect to the remaining three outages whose prudence Staff challenges, GDS  
5 initially calculated the replacement power costs for those outages as follows:

6	▪ Unit 1 August 26-August 28, 2005 outage extension	\$1.134 million
7	▪ Unit 2 October 11-October 20, 2005 outage	\$6.905 million
	▪ Unit 3 October 11-October 20, 2005 outage	<u>\$6.905 million</u>
8		Total: \$14.944 million

9 (Staff Exhibit No. 46 at Attachment 15 [GDS Report]).

10 In addition to the \$14.944 million in replacement power costs, the GDS Report also  
11 recommended disallowance of \$2.103 million for what it described as margins on lost  
12 opportunity sales, plus interest on this total.

13 In response to the GDS Report and Dr. Jacobs' Direct Testimony, APS submitted  
14 Rebuttal Testimony by James Levine, Roger Mattson, Robert Denton, George Fitzpatrick and  
15 Peter Ewen. As a result of reviewing that testimony, Dr. Jacobs agreed to certain modifications  
16 to his recommended disallowances. He agreed to decrease the proposed disallowance for the  
17 October 11 to October 20, 2005 Unit 3 outage by \$1.1 million and the proposed disallowance for  
18 the August 26 to August 28 reactor trip by \$0.088 million (i.e., from \$1.134 million to \$1.046  
19 million). (Staff Exhibit No. 48 at 45 [Jacobs]). Thus, the Staff's current proposed disallowance  
20 is \$13,756,000 in replacement power costs plus \$2,103,000 for alleged margins on lost  
21 opportunity sales, for a total of \$15,859,000 plus interest.

22 As demonstrated below, APS has established, first, that no disallowances are appropriate  
23 because APS management acted prudently with respect to the outages in question. As NRC  
24 Regional Administrator Mallett told this Commission when he appeared before it in January of  
25 2006, the RWT outages at Units 2 and 3 in October of 2005 were due to a new question the NRC  
26 posed regarding the adequacy of Palo Verde's design, a question that the NRC determined APS  
27 should not have anticipated, and APS took the appropriate step in shutting the plant down until  
28 the question was safely answered. For the Commission to conclude that APS was imprudent

1 with respect to these outages would require rejection of Dr. Mallett's assessment on what the  
2 Staff's own witness, Dr. Jacobs, acknowledges is a technically complex issue. With respect to  
3 the reactor trip, this event was caused by an individual operator's error, not management  
4 imprudence. The system in question had not caused a reactor trip before the August 2005 event,  
5 and all operators had been trained in use of the system when it was installed.

6 Second, APS has established that, with respect to the two RWT outages, APS prudently  
7 conducted work that would have necessitated an outage even if the RWT outage had not  
8 occurred. At a minimum, as the Rebuttal and Rejoinder Testimony of James Levine and Peter  
9 Ewen establish, an offset of \$5,100,000 in replacement power costs to any disallowance is  
10 appropriate. Moreover, as Mr. Ewen's Rebuttal Testimony demonstrates, an additional offset of  
11 \$10,000,000 would be appropriate to reflect the better than expected performance of APS's  
12 baseload coal units. Finally, Mr. Fitzpatrick demonstrates that if one compares the performance  
13 of APS coal units against that of the industry, this superior performance totally eliminates the  
14 disallowances Staff proposes.

15 Third, regarding the \$2,103,000 proposed disallowance for alleged margins on lost  
16 opportunity sales, the GDS analysis is based on the unwarranted assumption that, totally lacking  
17 in any support, APS would have sold all 187,000 MWh that Palo Verde could have produced if it  
18 was operating at 100 percent capacity factor on the outage days in question. Dr. Jacobs admitted  
19 that this assumption was unrealistic. (Tr. Vol. XXIX at 5304 [Jacobs]). Mr. Ewen submitted  
20 both Rebuttal and Rejoinder Testimony establishing through precise dispatch modeling that the  
21 correct quantity of off-system sales that would have been made if Palo Verde had been available  
22 was 9,000 MWh, for a total margin of \$322,000, not the \$2,103,000 that Dr. Jacobs proposes.  
23 Mr. Ewen also demonstrated that Dr. Jacobs had failed to account properly for replacement  
24 power costs already expensed in base rates, requiring a further reduction of \$515,000 in any  
25 replacement power cost disallowance. Thus, even if the Commission were to conclude that APS  
26 had acted imprudently in connection with the outages in question, and were to reject APS's  
27 argument that no disallowance is appropriate because of the superior performance of the  
28 generation system as a whole, Dr. Jacobs' proposed disallowance of \$15,859,000 would still

1 have to be reduced to \$8,444,000 (reflecting the reduction of \$5,100,000 due to the time spent on  
2 other prudent work during the Unit 2 October outage, \$1,800,000 in unsupportable off-system  
3 sales margins and \$515,000 for replacement power costs already expensed in base rates).

4 In addition to the recommended disallowances for replacement power costs and margins  
5 on lost sales, Dr. Jacobs made several other recommendations in his Direct Testimony. He  
6 recommended that the Commission should implement a nuclear performance standard. He also  
7 recommended that the Commission should order APS to submit semi-annual reports on plant  
8 performance and two reports 120 days after the Commission's order in this case addressing (1)  
9 APS programs for receipt inspection and verification of parts prior to installation and (2)  
10 evaluating management of aging equipment issues. Finally, although he found APS action in  
11 connection with outages that were the result of failure of vendor-supplied equipment to have  
12 been prudent, Dr. Jacobs recommended that the Commission should address the degree to which  
13 APS has sought appropriate remedies.

14 As set forth in Mr. Levine's testimony, the Company is willing to file the reports  
15 recommended by Dr. Jacobs to the extent possible.<sup>106</sup> As for the Company's actions in  
16 connection with pursuing vendors for remedies resulting from equipment failure, Mr. Levine  
17 testified regarding the appropriateness of the Company's actions, and that testimony is  
18 undisputed.

19 The issue of a nuclear performance standard is more complex. The Staff and APS remain  
20 in dispute regarding the need for and appropriateness of such a standard. However, there would  
21 appear to be little or no dispute that, even if the Commission were inclined to adopt some type of  
22 performance standard, the current record provides an inadequate basis upon which to do so.

23  
24  
25  
26 <sup>106</sup> For example, as Mr. Levine testified, INPO information would have to be requested on a case-by-case basis and  
27 would be available for review only. (APS Exhibit No. 94 at 6 [Levine]). Similarly, with respect to the two other  
28 reports he recommended, Dr. Jacobs acknowledged that he did not have any specific plants in mind that had  
successfully managed such issues. Thus, the reports will address the issues identified in the recommendations but  
may not be in a format of assessing "programs established at other nuclear plants that have been successful in  
managing" these issues, as Dr. Jacobs initially recommended. (Staff Exhibit No. 46 at 4 [GDS Report]; APS Exhibit  
No. 94 at 6 [Levine]).

1 **B. Although Staff Witness Jacobs Correctly Articulates The Prudence Standard, He**  
2 **Fails To Properly Apply The Standard In His Analysis.**

3 **1. The Arizona Prudence Standard.**

4 The Arizona Administrative Code provides a definition for “prudently invested” which  
5 should guide the current prudence review of the 2005 Palo Verde outages:

6 “Prudently invested” -- Investments which under ordinary circumstances would be  
7 deemed reasonable and not dishonest or obviously wasteful. All investments shall be  
8 presumed to have been prudently made, and such presumptions may be set aside only by  
9 clear and convincing evidence that such investments were imprudent, when viewed in the  
light of all relevant conditions known or which in the exercise of reasonable judgment  
should have been known, at the time such investments were made.

10 (Ariz. Admin. Code § R14-2-103(A)(3)(I) (2004)).

11 The Administrative Code standard is consistent with the prudence standard provided by Dr.  
12 Jacobs and GDS in their report, which states that APS’s performance should be compared to “the  
13 reasonable decisions and actions of a qualified and experienced utility manager given what was  
14 known or should have been known at the time without the benefit of hindsight.” (Staff Exhibit  
15 No. 46 at 19 [GDS Report]).

16 The above definition from the Arizona Administrative Code and Dr. Jacobs’ prudence  
17 standard are similar to the prudence standards used in other jurisdictions. For example, FERC’s  
18 long-held standard for evaluating prudence is set forth below:

19 [W]e reiterate that managers of a utility have broad discretion in conducting their  
20 business affairs and in incurring costs necessary to provide services to their customers.  
21 In performing our duty to determine the prudence of specific costs, the appropriate test to  
22 be used is whether they are costs which a reasonable utility management (or that of  
23 another jurisdictional entity) would have made, in good faith, under the same  
24 circumstances, and at the relevant point in time. We note that while in hindsight it may  
be clear that a management decision was wrong, our task is to review the prudence of the  
utility’s actions and the costs resulting therefrom based on the particular circumstances  
existing either at the time the challenged costs were actually incurred, or the time the  
utility became committed to incur those expenses.

25 (*New Eng. Power Co.*, 31 FERC ¶ 61,047 at 61,084 (1985), *aff’d sub nom.*, *Violet v. FERC*, 800  
26 F.2d 280 (1st Cir. 1986)).

27 All these definitions of prudence highlight that, in any situation confronting a utility,  
28 there may be a number of possible decisions that would be considered prudent. In other words, a

1 utility is not imprudent as long as the decisions of a utility's management are reasonable, even if  
2 better decisions were possible, and the actual decision resulted in a power plant outage.

3 The Commission has addressed the issue of prudence in a number of decisions, some of  
4 which relate to Palo Verde. First, the Commission has held that prudence does not require  
5 perfection. In a 1984 decision, the Commission addressed prudence with respect to the  
6 construction of the Palo Verde nuclear plant, and considered, among other things, whether  
7 construction work in progress costs for Palo Verde should be included in APS's rate base.  
8 (Decision No. 54204 (Oct. 11, 1984)). With respect to the prudence of constructing Palo Verde,  
9 the Commission stated as follows:

10 . . . Certainly errors were made in Palo Verde's construction. . . . After all, Palo Verde is  
11 being **built by human beings, not mistake-proof automata**. Only a comprehensive and  
12 independent construction audit can assure us that Palo Verde's total cost is reasonable,  
13 i.e., **that instances of good judgment and prudent management outweighed the**  
14 **inevitable examples to the contrary**.

15 (*Id.* at 15 (emphasis added)).

16 Second, the Commission has ruled that costs associated with outages should be carefully  
17 reviewed and are not per se unrecoverable. In Decision No. 55118, the Commission addressed  
18 arguments by Intervenor RUCO regarding purchased power costs due to extended outages.  
19 (Decision No. 55118 at 13 (July 24, 1986)). The Commission stated as follows:

20 To the extent that RUCO means that purchased power costs attributable to "extended"  
21 outages should be carefully reviewed prior to their being passed on to ratepayers, we are  
22 in total agreement . . . . If RUCO means that such purchased power costs should be **per**  
23 **se unrecoverable**, we find that to be an **unreasonable and draconic position**.

24 (*Id.* (emphasis added)).

25 Therefore, the Commission has clearly recognized that the mere fact that an outage is "extended"  
26 is not a basis for a finding of imprudence. Indeed, as Staff counsel admitted in his Opening  
27 Statement, a utility is entitled to a presumption that its expenditures have been prudent. (Tr. Vol.  
28 XXVI at 4901 [Kempley]). That presumption can only be defeated by "clear and convincing  
evidence" of imprudence (Ariz. Admin. Code § R14-2-103(A)(3)(l)), or as the Federal Energy  
Regulatory Commission describes it, "reliable, probative, and substantial evidence" that casts  
serious doubt on the prudence of the utility's expenditure. *Wisconsin Power Co.*, 73 FERC ¶

1 63,019 at 65,225 (1995), *aff'd in relevant part*, 98 FERC ¶ 61,233 (2002).

2 Third, in rejecting RUCO's claims regarding "APS's poor management of its base load  
3 generating facilities," including its 1985 maintenance schedule and "the series of forced outages  
4 experienced in the summer and fall of that year," (Decision No. 55118 at 20), the Commission  
5 held:

6 **[B]road assertions of "mismanagement" cannot substitute for hard evidence of**  
7 **specific acts of imprudence.** APS's scheduling of maintenance, although greater than in  
8 prior years, appeared to be reasonable given the facts known when the schedule was set.  
9 **The forced outages appear to have been purely unforeseen or the result of**  
10 **appropriate safety concerns.**

11 (*Id.* (emphasis added)).

12 Therefore, the imprudence of a specific power plant outage can only be demonstrated through  
13 evidence of specific imprudent acts by management. If an outage is unforeseen or results from  
14 appropriate safety concerns, it is not imprudent.

15 Finally, the Commission has held that both successes and failures should be analyzed  
16 when evaluating the performance of a power plant. RUCO argued that the Commission should  
17 disallow certain APS costs, based on APS's poor "operating performance." (*Id.* at 20). The  
18 Commission disagreed with RUCO's exclusive use of capacity factor for determining operating  
19 efficiency, and "its failure to give APS proper credit for performance above the historical  
20 average." (*Id.*). The Commission stated that "a realistic analysis of operating performance **must**  
21 **look at both the 'successes' and the 'failures'** if it is to avoid setting unobtainable goals of  
22 absolute perfection." (*Id.* (emphasis added)).

23 **2. The Staff's Witness Does Not Present Clear And Convincing Evidence Of**  
24 **Imprudence But Instead Improperly Uses Hindsight And Unduly Relies On**  
25 **NRC, INPO And APS Documents.**

26 Dr. Jacobs was the only witness to contest the prudence of any of the Palo Verde outages.  
27 Although he has some nuclear power plant experience, he has never held any type of  
28 management position with a nuclear utility, and his last management position of any sort  
involving a nuclear power plant was working for Westinghouse at plants in Yugoslavia and the  
Philippines in the early 1980s prior to those plants commencing operation. (Tr. Vol. XXIX at

1 5243-45 [Jacobs]). Nor has he ever worked for the Nuclear Regulatory Commission (“NRC”).  
2 (*Id.* at 5244).

3 Dr. Jacobs’ analysis in this case violates the prudence standard set forth above in a  
4 number of significant ways. For example, although he recognizes that it is inappropriate to use  
5 hindsight in a prudence review, he quotes extensively from NRC documents and APS root cause  
6 analyses on the ground that such documents “do not rely on hindsight” and constitute a  
7 “contemporaneous investigation by Company personnel.” (Staff Exhibit No. 48 at 15 [Jacobs]).  
8 The claim that these documents do not rely on hindsight is contradicted by Dr. Jacobs’ own  
9 deposition testimony in a matter before the Texas Commission where he stated that utility root  
10 cause reports “can use hindsight.” (APS Exhibit No. 98; Tr. Vol. XXIX at 5261-63 [Jacobs]).  
11 Indeed, Dr. Jacobs’ prior testimony regarding root cause analyses’ use of hindsight is consistent  
12 with that of Dr. Roger Mattson and Robert Denton.

13 In contrast to Dr. Jacobs, who has never worked for the NRC, Dr. Mattson spent almost  
14 17 years at the NRC and was the Director of several NRC divisions having responsibility for  
15 much of the technical review of applications for construction permits, operating licenses and  
16 safety evaluations for plants under construction and operation, including Palo Verde. (APS  
17 Exhibit No. 87 at 4, 52-53 [Mattson]). In contrast to Dr. Jacobs’ lack of nuclear utility  
18 management experience, Robert Denton served in various utility management capacities in a  
19 career spanning over 30 years, including Vice President of Nuclear Energy at Baltimore Gas &  
20 Electric Co. and President and CEO of Constellation Nuclear which owned and operated the  
21 Calvert Cliffs and Nine Mile Point Nuclear Units. (APS Exhibit No. 89 at 1-2 [Denton]). Both  
22 Dr. Mattson and Mr. Denton concur with Dr. Jacobs’ earlier testimony that company self-  
23 assessments and NRC reports use hindsight, rendering such documents generally inappropriate  
24 for use in a prudence review. (*Id.* at 7, 10-11). At most, such documents must be looked at very  
25 carefully and critically to determine whether their inherent hindsight bias can be discounted, a  
26 task not always achievable. (APS Exhibit No. 87 at 8 [Mattson]; APS Exhibit No. 88 at 21-24  
27 [Mattson]). As Dr. Jacobs admitted during the hearing, root cause evaluations do not necessarily  
28 distinguish between whether facts discussed in a root cause report were discovered during the

1 course of the investigation following the event or whether such facts were known or should have  
2 been known to utility management at the time of the event in question. (Tr. Vol. XXIX at 5263-  
3 64 [Jacobs]).

4 Finally, with respect to Dr. Jacobs' claim that root cause reports constitute a  
5 "contemporaneous investigation," he acknowledged during the hearing that the Wisconsin  
6 Commission rejected this same claim as recently as last year. (*Id.* at 5264). Because such root  
7 cause reports did not provide evidence that certain repairs to the Kewaunee nuclear plant should  
8 have been made earlier, the Wisconsin Commission held that "as a consequence, the record does  
9 not present sufficient evidence to demonstrate that imprudent past management practices lead to  
10 the 2005 outage." (APS Exhibit No. 87 at 14, 63 [Mattson]; APS Exhibit No. 88 at 22  
11 [Mattson]).

12 The Commission should reach the same result. Much of Dr. Jacobs' testimony, both with  
13 respect to overall Palo Verde performance and with respect to the outages that he maintains were  
14 due to APS management imprudent conduct, consists of simple block quoting of NRC and  
15 Company documents. (*E.g.*, Staff Exhibit No. 46 at 13-14, 25-26, 33-35 [GDS Report]; Staff  
16 Exhibit No. 48 at 26-27, 28-30 [Jacobs]). Because he fails to recognize that such documents  
17 freely use hindsight and are not contemporaneous reflections of what management knew or  
18 should have known at the time, Dr. Jacobs' testimony quoting these documents does not  
19 constitute evidence of imprudence.

20 Dr. Jacobs also relies extensively on INPO reports and INPO grades (Staff Exhibit No. 46  
21 at 15-18 [GDS Report]) even though he admitted that INPO does not use the prudence standard  
22 in its evaluations (Tr. Vol. XXIX at 5245 [Jacobs]), but rather that INPO's "function is to  
23 promote excellence in nuclear power." (*Id.* at 5246). It is for this reason (as well as because,  
24 like NRC and Company root cause reports, INPO uses hindsight) that Mr. Denton testified that it  
25 is inappropriate to rely on INPO evaluations or reports in making a prudence assessment. (APS  
26 Exhibit No. 89 at 6-10 [Denton]).

27 Thus, Dr. Jacobs has not presented clear and convincing evidence of imprudence, and the  
28 presumption of prudence remains intact. However, even if there were any questions as to

1 whether the burden had shifted to APS, as demonstrated below with respect to each of the  
2 outages in question, the evidence establishes that APS acted prudently and that no disallowances  
3 are appropriate.

4 **3. Dr. Jacobs' Description Of Palo Verde Performance Is Inaccurate And His**  
5 **Testimony Is Inconsistent Regarding The Relevance Of Past Performance.**

6 Although Dr. Jacobs states in his Surrebuttal Testimony that past performance is  
7 "irrelevant" and not "appropriate" to consider in a prudence determination (Staff Exhibit No. 48  
8 at 3 [Jacobs]), significant parts of both the GDS Report and his testimony focus on past Palo  
9 Verde performance. For example, the GDS Report states that "the performance of Palo Verde  
10 during the 2003 to 2005 period was at the bottom of the U.S. nuclear industry." (Staff Exhibit  
11 No. 46 at 9 [GDS Report]).

12 In fact, Dr. Jacobs acknowledged at the hearing that Palo Verde's 2003 performance was  
13 "perfectly average." (Tr. Vol. XXIX at 5251-52 [Jacobs]). Dr. Jacobs also acknowledged that  
14 had Palo Verde Unit 2 not gone through a steam generator replacement outage in 2003, Palo  
15 Verde performance would not have been just average, it would have been significantly above  
16 average. (*Id.* at 5254-55 [Jacobs]). Dr. Jacobs was thus forced to acknowledge that the data  
17 from a Nuclear News article that he relied on for his claim of "bottom of the industry"  
18 performance for the period 2003 to 2005 was skewed by the clearly lower performance during  
19 2005 and that he was not contesting 2003 and 2004 performance. (*Id.* at 5255-56 [Jacobs]).  
20 Indeed, faced with this data, Dr. Jacobs stated several times during the course of cross-  
21 examination that "my evaluation was focused on 2005" and that "the scope of my testimony and  
22 my evaluation was the year 2005." (*Id.* at 5246 [Jacobs]).

23 Dr. Jacobs also initially sought to portray Palo Verde's regulatory performance as having  
24 declined over a several year period. The GDS Report states that the NRC issued a yellow  
25 finding to Palo Verde in 2004. (Staff Exhibit No. 46 at 11 [GDS Report]). In fact, the yellow  
26 finding was not issued until April of 2005. (APS Exhibit No. 87 at 40 [Mattson]). Dr. Jacobs  
27 acknowledged that this was the case during cross-examination. (Tr. Vol. XXIX at 5258  
28 [Jacobs]). Dr. Jacobs was also asked why GDS had not included in its report a positive NRC

1 inspection report from August 2004 giving APS good marks for its problem identification and  
2 resolution efforts. His response was that "Again, I was looking at 2005. And things can change,  
3 as we have seen, quite quickly." (*Id.* at 5259 [Jacobs]). Thus, Dr. Jacobs essentially abandoned  
4 his claim that Palo Verde management could have recognized a declining performance trend in  
5 2003 and implemented unspecified measures to address the decline "without Palo Verde sinking  
6 to the bottom of the nuclear industry." (Staff Exhibit No. 48 at 4 [Jacobs]). Indeed, as Dr.  
7 Mattson testified, recognizing any "decline" in 2003 would have been difficult given the good  
8 capacity factor performance the units were having (excluding the steam generator replacement  
9 outage) and the favorable NRC and INPO grades. (APS Exhibit No. 88 at 18 [Mattson]).

10 Turning to the question of whether Dr. Jacobs' characterizations of Palo Verde  
11 performance in 2005 as "poor" (Staff Exhibit No. 46 at 8 [GDS Report]) and "abysmal" (Staff  
12 Exhibit No. 48 at 6 [Jacobs]) are accurate, APS acknowledges that 2005 performance fell short  
13 of its own high standards. (APS Exhibit No. 94 at 10 [Levine]). However, Dr. Jacobs does not  
14 contest the prudence of most of the outages that led to Palo Verde's lower capacity factor in  
15 2005. In fact, he challenges only 23 outage days as being due to imprudence. (Tr. Vol. XXIX at  
16 5248 [Jacobs]). As Dr. Mattson testified, and Dr. Jacobs does not contest, those 23 outage days  
17 constitute a reduction in Palo Verde capacity factor of only 2.1 percent. (APS Exhibit No. 88 at  
18 19 [Mattson]; Tr. Vol. XXIX at 5248 [Jacobs]). Thus, although Palo Verde's capacity factor in  
19 2005 was less than desirable, the reasons for that lower performance make it inaccurate and  
20 unfair to characterize performance as "poor," much less "abysmal."

21 **4. A Focus On A Longer Time Period And On The Performance Of All APS**  
22 **Baseload Generation Is Consistent With Commission Precedent And**  
23 **Demonstrates That APS Performance Has Conferred Substantial Benefits On**  
24 **Customers More Than Offsetting Any Potential Disallowance.**

25 Dr. Jacobs rejects the APS position that Palo Verde performance should be analyzed over  
26 a longer period than the snapshot he offers in his testimony. (Staff Exhibit No. 48 at 4 [Jacobs]).  
27 He also rejects any consideration being given to the superior performance of the balance of the  
28 Company's baseload generation system. (*Id.* at 45 [Jacobs]). In these respects, Dr. Jacobs'  
testimony again is inconsistent with the principles established in prior Commission decisions.

1 As noted above, the Commission has stated that “a realistic analysis of operating performance  
2 must look at both the ‘successes’ and the ‘failures’ if it is to avoid setting unobtainable goals of  
3 absolute perfection.” (Decision No. 55118 at 20). Such a realistic analysis entails looking at  
4 Palo Verde performance over a longer time frame and taking into account the superior  
5 performance of the Company’s coal plants.

6 With respect to Palo Verde performance, Messrs. Levine and Fitzpatrick demonstrated  
7 that Palo Verde performance over the period 1995 through 2004 had conferred substantial  
8 benefits on APS customers. (APS Exhibit No. 91 at 4 [Fitzpatrick]; APS Exhibit No. 94 at 9-10  
9 [Levine]). Comparing Palo Verde performance only against other pressurized water reactor  
10 (“PWR”) nuclear plants resulted in a net benefit of \$91.8 million. This result is based on the  
11 difference between Palo Verde’s capacity factor over this period of 89.5 percent to 87.4 percent  
12 for all PWRs over 600 megawatts. (APS Exhibit No. 91 at Attachment GLF-5RB [Fitzpatrick]).  
13 Moreover, over this same period, Palo Verde performed even better when compared to the  
14 industry as a whole, i.e., 89.5 percent to 82 percent. (APS Exhibit No. 94 at 9 [Levine]). As Dr.  
15 Jacobs acknowledged during the hearing, the net benefit is much greater than \$91.8 million when  
16 the comparison is against the entire industry. (Tr. Vol. XXIX at 5256 [Jacobs]).

17 Finally, turning to Dr. Jacobs’ claim that “a nuclear power plant represents a bargain  
18 between the Company and its ratepayers” (Staff Exhibit No. 48 at 35 [Jacobs]), and that  
19 customers are not getting the benefit of the bargain (Tr. Vol. XXIX at 5324 [Jacobs]), even if one  
20 acknowledged this analogy to be correct,<sup>107</sup> which APS would not, the expectation for Palo  
21 Verde performance back at the time it was being built was an average capacity factor of only 75  
22 percent, which the plant has greatly exceeded. (APS Exhibit No. 94 at 10 [Levine]; Tr. Vol.  
23 XXVII at 5073 [Fitzpatrick]). Staff’s assertion that prior to the implementation of the PSA, this  
24 superior performance “flowed through to the APS bottom line” is inaccurate. (Tr. Vol. XXVI at  
25 4904 [Kempley]). Had Palo Verde not performed in this superior fashion, APS would not have  
26 been able to agree to the rate decreases its customers enjoyed. (Tr. Vol. XXVII at 5073

27 <sup>107</sup> Dr. Jacobs claims that “the Company receives its reward in the form of a guaranteed rate of return” on its  
28 investment in Palo Verde. (Staff Exhibit No. 48 at 35 [Jacobs]). However, as Dr. Jacobs acknowledged at the  
hearing, it is possible that a utility will not achieve its authorized rate of return and that this has happened to APS in  
recent years. (Tr. Vol. XXIX at 5282 [Jacobs]).

1 [Fitzpatrick]). For specific example, Decision No. 59601 provided for an immediate rate  
2 decrease of \$48,500,000 based on costs (including savings from base generation performance)  
3 for the 12 months ending June 30, 1995 and provided for future decreases to be based on a  
4 cost/kWh formula that also would have explicitly included the impact of such generating plant  
5 performance. (Decision No. 59601 at 3-4 (April 24, 1996)).

6 With respect to the Company's other baseload generation performance, Mr. Fitzpatrick  
7 testified that it was appropriate to consider those plants' performance because, like nuclear  
8 plants, they enjoy a significant cost advantage over purchased power and have the potential to  
9 confer a substantial benefit on APS's customers when run successfully. (APS Exhibit No. 91 at  
10 10 [Fitzpatrick]). And APS's coal plants have been run very successfully. As Mr. Ewen  
11 testified, the Company's coal plants set an all-time high for capacity factor in 2005. (APS  
12 Exhibit No. 17 at 25 [Ewen]). The plants had 40 percent less unplanned outage time than the  
13 normalized amount included in the Company's base rates, and this "better than normal"  
14 performance reduced fuel costs by \$10,000,000. (*Id.* [Ewen]). As Mr. Ewen explained further at  
15 the hearing, had the coal plants not performed so well, there would have been 300 gigawatt hours  
16 more of unplanned outages that would have had to have been replaced at a cost of \$10,000,000.  
17 (Tr. Vol. XXVIII at 5223 [Ewen]). That \$10,000,000 savings is not reflected in the replacement  
18 power costs for Palo Verde, and, thus, it is an appropriate offset to these costs. (*Id.* at 5222  
19 [Ewen]).

20 APS coal plant performance is even more exceptional when one compares it – not against  
21 APS's own high expectations of what a "normal" year should be, as Mr. Ewen did – but against  
22 APS's coal plants' industry peers. Over the same 10-year period of 1995 to 2004, APS coal  
23 units' superior performance resulted in a net benefit of \$149,000,000. (APS Exhibit No. 91 at 13  
24 [Fitzpatrick]). Even looking at 2005 alone, APS's coal plant superior performance resulted in  
25 purchased power cost savings (compared to peer plants) of \$27,492,000. As Mr. Fitzpatrick  
26 testified, this more than offsets the amounts that Dr. Jacobs recommends be disallowed. (*Id.*  
27 [Fitzpatrick]).

28

1    **C.    APS Management Was Not Imprudent Regarding The Four 2005 Palo Verde**  
2    **Outages At Issue In This Proceeding.**

3           **1.    The Unit 2 And Unit 3 October 2005 Outages Resulted From A New Question**  
4           **From The NRC About Air Entrainment And Not From Imprudent Actions**  
5           **Of APS Management.**

6                   **a.    Background.**

7           In October 2005, the NRC conducted a follow-up inspection at Palo Verde to determine  
8 whether APS had implemented appropriate corrective actions regarding the voided sump suction  
9 line which resulted in a yellow finding in April 2005. (APS Exhibit No. 87 at 47 [Mattson]; APS  
10 Exhibit No. 88 at 3 [Mattson]; APS Exhibit No. 94 at 14 [Levine]; Staff Exhibit No. 46 at 31  
11 [GDS Report]). APS had conducted an extensive design basis implementation review in  
12 response to the yellow finding and in advance of the October 2005 NRC follow-up inspection,  
13 including a review of the possibility of air entrainment in the RWT suction line leading to the  
14 emergency cooling pumps. (APS Exhibit No. 88 at 3 [Mattson]).

15           Early in the October 2005 follow-up inspection, an NRC contract inspector questioned  
16 whether the possibility of air entrainment had been considered in the design of the suction line  
17 between the RWT and the emergency cooling pumps. (*Id.* [Mattson]; Staff Exhibit No. 46 at 31  
18 [GDS Report]). APS responded to the contract inspector that air entrainment was considered in  
19 the design of this line and that certain design features that were approved by the NRC to preclude  
20 air entrainment problems were implemented in the construction of the Palo Verde plant. (APS  
21 Exhibit No. 87 at 49 [Mattson]; APS Exhibit No. 88 at 3-4 [Mattson]). APS provided the  
22 contract inspector with documentation from the original licensing review in 1976 to demonstrate  
23 this. (APS Exhibit No. 88 at 4 [Mattson]; APS Exhibit No. 99; Tr. Vol. XXIX at 5266-69  
24 [Jacobs]). APS showed the inspector that the NRC-approved calculations required 16 feet of  
25 elevation difference between the water in the containment sump and the pump suction header,  
26 and that Palo Verde greatly exceeds this requirement by including 40 feet of elevation difference.  
27 (APS Exhibit No. 87 at 52-54 [Mattson]).

28           The contract inspector nonetheless challenged APS's response, stating that the earlier  
calculations approved by the NRC were only based on "static" principles, and did not include

1 “dynamic” considerations for the movement of the air and water in the suction line. (APS  
2 Exhibit No. 88 at 4 [Mattson]). The calculations the contract inspector requested to address  
3 these “dynamic” considerations had never been performed at Palo Verde or at any other plant of  
4 its type. (*Id.* [Mattson]). APS initially engaged Westinghouse to provide an answer to the new  
5 question from the contract inspector, but it became apparent that Westinghouse would not be  
6 able to readily provide the calculations requested. (APS Exhibit No. 87 at 56-57 [Mattson]).  
7 Palo Verde’s technical specifications, as is the case at all nuclear plants, require that the plant  
8 shut down if the operability of a safety system under all possible situations cannot be absolutely  
9 verified in a relatively short amount of time. (APS Exhibit No. 88 at 4 [Mattson]; Staff Exhibit  
10 No. 46 at 31 [GDS Report]).

11 On October 11, 2005, based upon the Plant’s technical specifications, APS declared the  
12 Unit 2 and Unit 3 RWTs inoperable and shut these two units down. (APS Exhibit No. 88 at 4  
13 [Mattson]; Staff Exhibit No. 46 at 31 [GDS Report]). Unit 1 was already shut down for a  
14 scheduled refueling outage. (APS Exhibit No. 88 at 4 [Mattson]). APS quickly engaged a  
15 leading expert in the field of dynamic, two-component flow phenomena and developed an  
16 answer to the contract inspector’s questions, which was provided to the NRC inspection team on  
17 October 17. (APS Exhibit No. 88 at 4 [Mattson]; APS Exhibit No. 94 at 16 [Levine]). The NRC  
18 reviewed and accepted APS’s answers and Units 2 and 3 were restarted on October 20. (APS  
19 Exhibit No. 88 at 4 [Mattson]).

20 No changes were made or were necessary to the RWT, its associated systems, or any  
21 procedures prior to restarting Units 2 and 3. (*Id.* [Mattson]; APS Exhibit No. 94 at 16 [Levine]).  
22 Similarly, no changes have been made to the RWT systems for any of the units since this event.  
23 (APS Exhibit No. 88 at 4 [Mattson]). As stated by Dr. Jacobs, “APS ultimately concluded and  
24 demonstrated to the NRC that air entrainment from the RWT was not a safety issue.” (Staff  
25 Exhibit No. 46 at 31 [GDS Report]). Dr. Mattson stated that “[i]n the final analysis, the original  
26 design of the RWT suction piping was shown to be adequately safe to justify resumption of  
27 operations of the two units with the same plant equipment, operating procedures and training that  
28 existed prior to their shutdown and the same ones that are in use at all three Palo Verde units

1 today.” (APS Exhibit No. 87 at 64 [Mattson]).

2 Shortly after this event, on January 26, 2006, NRC Region IV Administrator Bruce  
3 Mallett met with the Commission to discuss the 2005 Palo Verde outages, including the October  
4 RWT outages. (APS Exhibit No. 104). Commissioner Mayes questioned Dr. Mallett about  
5 “why in the world it took so long for someone to discover a flaw that required NRC to shut Palo  
6 Verde down.” (*Id.* at 43). Dr. Mallett responded as follows:

7 In the October time frame, when we raised this issue about the design flaw, **it was a new**  
8 **question**, okay, one that we hadn’t come up across before, nor had they to the best of my  
9 recollection. And so **they did what we expected**. They searched that out and said we  
10 can’t answer the question -- I am oversimplifying -- so that would put us in a condition  
11 that we don’t believe is within our design. If you can’t answer at NRC, and we can’t  
12 answer it within this certain time frame, we have to shut the plant down by our technical  
13 specification until we get it resolved. And that’s what they did. . . . [I]t was a question we  
14 raised and **they did the right thing** when they couldn’t answer the question.

15 (*Id.* at 45-46 (emphasis added)).

16 Indeed, Dr. Jacobs agreed that once APS declared the RWTs inoperable, it had to shut down the  
17 units. (Tr. Vol. XXIX at 5386 [Jacobs]).

18 Commissioner Mayes then asked whether this was a question that APS should have asked  
19 itself earlier. (APS Exhibit No. 104 at 46). Dr. Mallett responded that “we do evaluate whether  
20 they should have found it before us” and “[i]n this instance, we didn’t determine that they should  
21 have found it beforehand.” (*Id.*). In summary, Dr. Mallett told this Commission that the NRC  
22 asked a new question, the NRC evaluated whether APS should have asked itself the question,  
23 and the NRC determined that APS should not have raised the question before the NRC did so.  
24 (*Id.* at 45-46).

25 **b. Staff’s Position.**

26 Dr. Jacobs concludes that the October outages in Units 2 and 3 regarding the RWT were  
27 “avoidable and imprudent.” (Staff Exhibit No. 46 at 35, 40 [GDS Report]). Dr. Jacobs believes  
28 that the October 2005 RWT air entrainment question is “closely related” to the 2004 yellow  
finding for the voided sump. (*Id.* at 32 [GDS Report]; Staff Exhibit No. 48 at 25 [Jacobs]). Dr.  
Jacobs stated that “[e]ven though the RWT was within the boundary of the evaluation of the  
yellow finding event, and the primary concern was the potential for damage to safety related

1 pumps due to air entrainment, APS personnel did not identify the RWT concern until it was  
2 pointed out by NRC inspectors during the 95002 inspection in October 2005.” (Staff Exhibit No.  
3 46 at 32 [GDS Report]). He further believes that “[a] more comprehensive root cause evaluation  
4 with a broader focus should have identified this concern in 2004.” (*Id.* at 32 [GDS Report]).

5 Dr. Jacobs initially recommended a disallowance of \$7,672,000 (\$6,905,000 after 90/10  
6 sharing) for the October Unit 2 outage and \$7,672,000 (\$6,905,000 after 90/10 sharing) for the  
7 October Unit 3 outage. (*Id.* at Attachment 15 [GDS Report]). Dr. Jacobs later agreed with Mr.  
8 Ewen’s conclusion that the proposed disallowance for the October Unit 3 RWT outage was  
9 overstated by \$1,200,000 (\$1,100,000 after 90/10 sharing), and should be \$5,805,000 after 90/10  
10 sharing. (APS Exhibit No. 17 at 21 [Ewen]; Staff Exhibit No. 48 at 43 [Jacobs]).

11 **c. APS’s Position.**

12 APS’s position is that its actions were not imprudent regarding the October 2005 RWT  
13 outages at Units 2 and 3. (APS Exhibit No. 87 at 68 [Mattson]; APS Exhibit No. 94 at 15  
14 [Levine]). Palo Verde was constructed using a design based on the static calculations that were  
15 approved by the NRC. Dr. Mattson explains in detail why Dr. Mallett was clearly correct when  
16 he told this Commission that the question regarding dynamic calculations raised by the contract  
17 inspector was a new question that APS should not have anticipated prior to it being raised in  
18 October 2005. (APS Exhibit No. 87 at 47-59 [Mattson]; APS Exhibit No. 88 at 3-15 [Mattson];  
19 APS Exhibit No. 94 at 15-16 [Levine]). As Dr. Mattson testified, dismissing the conclusions of  
20 Dr. Mallett, the most senior NRC official involved in the matter, would be wrong. (APS Exhibit  
21 No. 88 at 13 [Mattson]).

22 Dr. Jacobs offers no probative evidence to contest Dr. Mallett and Dr. Mattson and to  
23 support his claim that APS should have identified the RWT issue in 2004. His argument that the  
24 RWT is within the boundary of APS’s response to the yellow finding is of no consequence. APS  
25 did examine the RWT system as part of its response to the yellow finding and confirmed that  
26 unlike the dry pipe section that resulted in the yellow finding, the RWT lines were filled with  
27 water. (Tr. Vol. XXVII at 5022-23 [Mattson]; Tr. Vol. XXVII at 5150-51 [Levine]; Tr. Vol.  
28 XXVIII at 5188-91 [Levine]).

1           APS quickly took the actions necessary to obtain an answer to the new question and  
2 restarted the units as soon as possible without any changes to the system. (APS Exhibit No. 87 at  
3 64 [Mattson]; APS Exhibit No. 94 at 16 [Levine]). Moreover, even if Dr. Jacobs is correct that  
4 APS should have identified the RWT issue during its investigation following the yellow finding,  
5 since the yellow finding was not issued until April 2005, any identification of an air entrainment  
6 issue involving the RWT in response to this finding would have occurred during the PSA period,  
7 and could have had even a greater economic effect had it been identified during the summer peak  
8 period or while Unit 1 was not in a refueling outage. (APS Exhibit No. 88 at 6 [Mattson]; Tr.  
9 Vol. XXVI at 4966, 4974 [Mattson]). Thus, APS shut down Units 2 and 3 for reasons that were  
10 “purely unforeseen or the result of appropriate safety concerns” (Decision No. 55118 at 20), and  
11 consequently was not imprudent.

12                           **d.     Analysis.**

13           There is no doubt that NRC Regional Administrator Mallett’s view is that air entrainment  
14 in the RWT suction line was a new question that should not have been anticipated by APS.  
15 (APS Exhibit No. 104 at 45-46). In response to Commissioner Mayes’ question whether APS  
16 should have anticipated the issue, Dr. Mallett expressly stated that the NRC did “evaluate  
17 whether they should have found it before us” and that “we didn’t determine that they should have  
18 found it beforehand.” (APS Exhibit No. 94 at 15 [Levine]; APS Exhibit No. 95 at 4 [Levine];  
19 APS Exhibit No. 104 at 43, 46). Thus, it was not a situation where Dr. Mallett was simply  
20 stating that the NRC had not made a determination one way or the other. (Tr. Vol. XXVIII at  
21 5199-5200 [Levine]). Rather, Dr. Mallett clearly stated that the NRC had made a determination  
22 of whether APS should have asked itself the question regarding air entrainment in the RWT  
23 suction line prior to the contract inspector raising the issue in October 2005 and concluded that  
24 APS should not have done so. (APS Exhibit No. 87 at 12, 48-49 [Mattson]; APS Exhibit No. 94  
25 at 15 [Levine]; APS Exhibit No. 104 at 46).

26           Dr. Mallett and his staff addressed the issue of whether APS should have identified the  
27 question earlier in order to assess whether the NRC should impose a violation for APS failing to  
28 do a proper extent of condition review (which it did not impose). (Tr. Vol. XXVI at 4924

1 [Mattson]; Tr. Vol. XXIX at 5389 [Jacobs]). Although Dr. Mallett was not making a prudence  
2 determination when he conducted this analysis, his conclusion that APS should not have raised  
3 the new question before it was raised by the NRC nonetheless demonstrates that APS was not  
4 imprudent.

5 Dr. Jacobs clearly recognized that Dr. Mallett's view was contrary to his own. (Staff  
6 Exhibit No. 48 at 33 [Jacobs]). Dr. Jacobs also recognized that the "technical issues [involved in  
7 the RWT air entrainment question] are quite complicated" (*Id.* at 24 [Jacobs]), and admitted at  
8 the hearing that Dr. Mallett was in a better position than this Commission to determine whether a  
9 question asked by one of his inspectors in this technically complex area was a new question or  
10 not. (Tr. Vol. XXIX at 5270 [Jacobs]). Nor did Dr. Jacobs claim to have more expertise than  
11 Dr. Mallett with regard to this issue. (*Id.* at 5390 [Jacobs]). Nonetheless, when asked: "So you  
12 think that this Commission should accept your recommendation and reject that of the NRC's  
13 highest officer who was responsible for this matter?" Dr. Jacobs replied: "In this case, yes."  
14 (*Id.* [Jacobs]).

15 As to why the Commission should accept his view over that of Dr. Mallett, Dr. Jacobs'  
16 only response was that "I think it's possible for qualified and competent individuals to reach  
17 different opinions given the set of circumstances, and that's what's happened in this case." (*Id.*  
18 [Jacobs]). However, as pointed out above, Dr. Jacobs has never worked at the NRC and has  
19 never held a management position with a U.S. nuclear utility. For this Commission to agree with  
20 Dr. Jacobs and conclude that APS should have identified a question regarding air entrainment in  
21 the RWT system earlier, then this Commission must also conclude that Dr. Mallett was wrong  
22 when he spoke to this Commission in January 2006 regarding this outage, and must reject the  
23 overwhelming evidence presented by Dr. Mattson explaining why the question was new and one  
24 that should not have been anticipated – none of which evidence Dr. Jacobs even addresses.

25 The yellow finding was issued to APS because APS had maintained a section of piping  
26 dry even though the design required the section of piping to be filled with water. (APS Exhibit  
27 No. 87 at 40 [Mattson]; Tr. Vol. XXVII at 5147 [Levine]). Following the yellow finding in  
28 April 2005, APS evaluated various systems, including the RWT system, to determine if similar

1 problems existed. (Tr. Vol. XXVII at 5022-23 [Mattson]; Tr. Vol. XXVII at 5150-51 [Levine];  
2 Tr. Vol. XXVIII at 5188-91 [Levine]). APS did not identify any voided portions of the RWT  
3 system. (Tr. Vol. XXVIII at 5188-91 [Levine]). During the October 2005 NRC inspection, the  
4 NRC asked the new question of whether the RWT system design that the NRC had approved  
5 back in 1976 prevented air from entering the system and damaging pumps during a plant  
6 accident. (APS Exhibit No. 87 at 53 [Mattson]; Staff Exhibit No. 46 at 31 [GDS Report]; Tr.  
7 Vol. XXVI at 4920-21 [Mattson]). This was a different issue from that which resulted in the  
8 yellow finding. Mr. Levine was questioned at the hearing about this difference between the  
9 yellow finding and the RWT air entrainment question. (Tr. Vol. XXVIII at 5190-91 [Levine]).  
10 He responded that the “[RWT] met the design basis, and we felt that we had the adequate backup  
11 information to support that. And it’s really – again, it’s two different things. You had a situation  
12 where the pipe was literally dry, it was maintained dry, versus another case where the pipe was  
13 full.” (*Id.* at 5191 [Levine]). Thus, there is no basis to conclude that APS should have identified  
14 the RWT air entrainment question in response to the yellow finding for the voided sump suction  
15 line. (APS Exhibit No. 88 at 7 [Mattson]; Tr. Vol. XXVI at 4921 [Mattson]; Tr. Vol. XXVII at  
16 5022-23 [Mattson]; Tr. Vol. XXVII at 5147, 5150-52 [Levine]). The Staff simply has not  
17 provided the type of “clear and convincing” evidence necessary to rebut the presumption of  
18 prudence on the part of APS management.

19 Dr. Jacobs made no attempt to interview Dr. Mallett regarding these events. (Tr. Vol.  
20 XXIX at 5265 [Jacobs]). Instead, he interviewed one of Dr. Mallett’s subordinates, senior  
21 resident inspector Warnick (Staff Exhibit No. 46 at 32 [GDS Report]), who was not even  
22 involved in the inspection in question. (APS Exhibit No. 88 at 14 [Mattson]). Dr. Jacobs seems  
23 to believe that if Mr. Warnick considered this outage was avoidable, then Palo Verde must have  
24 been imprudent. (Staff Exhibit No. 46 at 32 [GDS Report]). Although there is no transcript of  
25 Mr. Warnick’s comments, it appears likely that Mr. Warnick was simply speaking from the NRC  
26 perspective of continuous improvement using hindsight, rather than from the ACC perspective of  
27 prudence given information reasonably available at the time. (APS Exhibit No. 87 at 27  
28 [Mattson]; APS Exhibit No. 88 at 14 [Mattson]). As he did throughout his testimony, Dr. Jacobs

1 fails to distinguish between what **could** have been done (NRC standard) and what **should** have  
2 been done (prudence standard). (APS Exhibit No. 88 at 11 [Mattson]). Significantly, Dr. Jacobs  
3 never states that Mr. Warnick said that APS **should** have avoided the outage. Of course, even if  
4 Mr. Warnick had told Dr. Jacobs that APS should have anticipated the issue, such a conclusion  
5 would directly contradict Dr. Mallett, and would be entitled no weight given the fact that Mr.  
6 Warnick was not even a member of the inspection team that raised the issue and the inspection  
7 report did not issue a violation to APS for not finding the issue beforehand. (APS Exhibit No. 88  
8 at 14-15 [Mattson]; APS Exhibit No. 94 at 17 [Levine]; Tr. Vol. XXIX at 5359 [Jacobs]). Again,  
9 reliance on an ambiguous oral hearsay statement by an NRC inspector not involved in the  
10 inspection in question and in the face of clearly contrary evidence from the NRC Regional  
11 Administrator does not constitute clear and convincing evidence of imprudence.

12 Finally, as Dr. Mattson explained, the Company must again emphasize that even if APS  
13 had identified the question of air entrainment in the RWT suction line in response to the yellow  
14 finding, it still would have had to shut down the Palo Verde units. (APS Exhibit No. 88 at 6  
15 [Mattson]). Since the yellow finding was not issued until April 2005, any identification of a  
16 potential air entrainment issue in the RWT system in response to the yellow finding would have  
17 occurred during the PSA period. (Tr. Vol. XXVI at 4966 [Mattson]). This outage would have  
18 had a much larger economic impact if it had occurred when all three units were operating (Unit 1  
19 was in a scheduled refueling outage during the October RWT outage) or if it had occurred during  
20 the peak summer months. (*Id.* at 4974 [Mattson]). No matter when an issue such as this is  
21 identified, all of the units must be shut down if the operability determination cannot ensure safe  
22 operation. (Tr. Vol. XXVII at 5028 [Mattson]).

23 **e. Any Imprudent Costs Should Be Offset In The Amount Of \$5,100,000**  
24 **Due To Concurrent Prudent Maintenance That Prevented Later**  
25 **Outages.**

26 **(1) Background.**

27 Even if the Commission disallows costs related to the October RWT outages at Units 2  
28 and 3, it must consider whether a portion of any disallowed costs should be offset due to prudent

1 maintenance performed during the outage on the Unit 2 Reactor Coolant Pumps ("RCPs") that  
2 prevented later outages and corresponding replacement power costs. Of course, if the  
3 Commission determines that APS was prudent regarding the October RWT outage, then it is  
4 unnecessary for the Commission to assess the impact of maintenance performed during the  
5 outage.

6 The replacement power costs associated with the 160 hours of outage time claimed to be  
7 avoided by performing the RCP maintenance during the Unit 2 RWT outage are \$5,636,000  
8 (\$5,100,000 after the 90/10 share). (APS Exhibit No. 17 at 21-22 [Ewen]). Dr. Jacobs has not  
9 disputed the accuracy of this calculation. This offset is separate and apart from any of the other  
10 offsets recommended by APS. (Tr. Vol. XXVIII at 5223-24 [Ewen]). Therefore, Staff's  
11 recommended disallowance for the October Unit 2 RWT outage of \$6,905,000 would be reduced  
12 by \$5,100,000, for a total of \$1,805,000 if the Commission concurs that the RCP maintenance  
13 avoided an outage and corresponding replacement power costs. As discussed in Section IX.F.1  
14 below, this would also result in a corresponding deduction in margins on lost opportunity sales.

15 **(2) APS's Position.**

16 APS's position is that even if the October RWT outage had not occurred, Unit 2 would  
17 have had to shut down to perform maintenance on certain RCPs due to oil leakage. (APS Exhibit  
18 No. 94 at 19 [Levine]; APS Exhibit No. 95 at 6 [Levine]). APS presented substantial evidence  
19 regarding the need to take the plant out of service to perform maintenance on the RCPs. (APS  
20 Exhibit No. 95 at 5-7, Attachment JML-1RJ [Levine]).

21 **(3) Staff's Position.**

22 Dr. Jacobs' position is that APS's claim constitutes "pure speculation" and that "APS has  
23 provided no evidence that a subsequent outage was planned or would have occurred." (Staff  
24 Exhibit No. 48 at 40 [Jacobs]).

25 **(4) Analysis.**

26 The record contains substantial evidence that Palo Verde would have had to shut down  
27 Unit 2 to perform RCP maintenance had the October RWT outage not occurred. (APS Exhibit  
28

1 No. 94 at 19-20 [Levine]; APS Exhibit No. 95 at 6 [Levine]). Prior to the RWT outage, the oil  
2 leakage from the Unit 2 RCP 2A thrust bearing oil seals had worsened to the point that a  
3 shutdown was imminent. (APS Exhibit No. 95 at 7 [Levine]). Palo Verde measures the oil  
4 leakage based on the frequency that oil must be pumped into the RCP oil reservoir to replenish  
5 oil that has leaked out, also known as the “pump-up” rate. (*Id.* at 7, Attachment JML-1RJ  
6 [Levine]). A more frequent pump-up rate means that the oil leakage is worse. (*Id.* at Attachment  
7 JML-1RJ [Levine]). The pump-up rate for the Unit 2 RCP 2A was approximately 9 hours at the  
8 time of the October RWT outage. (*Id.* at 7, Attachment JML-1RJ [Levine]; Tr. Vol. XXVIII at  
9 5210 [Levine]).

10 Prior to the RWT outage, Unit 3 was shut down to perform maintenance on RCP 1A  
11 when the pump-up rate was at 12 hours. (APS Exhibit No. 95 at 7, Attachment JML-2RJ  
12 [Levine]). Therefore, at the time of the RWT outage, the oil leakage in Unit 2 was already worse  
13 than when Palo Verde had shut down Unit 3 earlier in the month to perform identical  
14 maintenance. (*Id.* at 7 [Levine]; Tr. Vol. XXVIII at 5210 [Levine]). Importantly, Dr. Jacobs  
15 concluded that these earlier outages, including the outage for Unit 3 RCP 1A, to perform the  
16 identical maintenance to the RCP were “reasonable and prudent.” (Staff Exhibit No. 46 at 39  
17 [GDS Report]). Whether or not there is any merit to Dr. Jacobs’ claim that APS’s rebuttal  
18 testimony on this issue was speculative is rendered moot by the further detail provided in APS’s  
19 discovery responses to Dr. Jacobs and in Messrs. Levine’s and Ewen’s Rejoinder Testimony.  
20 Therefore, an offset of \$5.1 million should be applied to any disallowance if the Commission  
21 determines that the RWT outage was imprudent.

22 **2. The Unit 1 August 2005 Reactor Trip Was Caused By An Individual**  
23 **Operator Error, Not Management Imprudence.**

24 **a. Background.**

25 On August 26, 2005, the reactor tripped at Palo Verde Unit 1 due to a high level in one of  
26 the steam generators. (APS Exhibit No. 94 at 22 [Levine]; Staff Exhibit No. 48 at 20-21  
27 [Jacobs]). “The unit tripped due to an **operator error** in controlling the feedwater to the Steam  
28 Generator.” (Staff Exhibit No. 46 at 24 (emphasis added) [GDS Report]). This reactor trip

1 occurred when Palo Verde was starting up Unit 1 and the secondary control room operator  
2 switched the system used to control steam generator water level from manual to automatic  
3 control. (APS Exhibit No. 94 at 21 [Levine]). The operator did not believe the automatic control  
4 was properly controlling level, and switched the system back to manual, but without requesting  
5 concurrence or informing his supervisors. (*Id.* [Levine]). Thereafter, the operator switched  
6 between manual and automatic control several times while trying to maintain proper level in the  
7 steam generator, again without notice to or concurrence from supervision. (*Id.* at 22 [Levine]).  
8 These "errors by the secondary control room operator while attempting to place the Main  
9 Feedwater control in automatic resulted in an excessive feed rate to the steam generator and  
10 ultimately to a reactor trip on high steam generator water level." (*Id.* [Levine]; Staff Exhibit No.  
11 48 at 20-21 [Jacobs]; Tr. Vol. XXVII at 5143-44 [Levine]).

12 **b. Staff's Position.**

13 Although Dr. Jacobs acknowledges that this event was caused by the errors of the  
14 secondary control room operator, he also argues that the reactor trip was the result of  
15 management imprudence. (Staff Exhibit No. 46 at 27 [GDS Report]). Dr. Jacobs' primary  
16 arguments are that this event is an example of human performance and problem resolution  
17 problems at Palo Verde, and that problems with the system that resulted in the outage were well  
18 known and the training of the operators did not correspond to the difficulties of the system. (*Id.*  
19 at 26-27 [GDS Report]).

20 Dr. Jacobs initially recommended a disallowance of \$1,134,000 for this August outage,  
21 but later agreed with Mr. Ewen's correction that this amount was overstated by \$88,000, for a  
22 total recommended disallowance by Dr. Jacobs for this outage of \$1,046,000. (APS Exhibit No.  
23 17 at 24 [Ewen]; Staff Exhibit No. 46 at Attachment 15 [GDS Report]; Staff Exhibit No. 48 at 43  
24 [Jacobs]).

25 **c. APS's Position.**

26 APS's position is that this reactor trip occurred because of the failure of the secondary  
27 control room operator to follow procedures, and was not the result of imprudent actions by APS  
28 management. (APS Exhibit No. 94 at 21-23 [Levine]; APS Exhibit No. 95 at 8 [Levine]). APS

1 bases this conclusion on a number of different factors. First, Palo Verde management was not  
2 involved in the cause of the reactor trip; rather, the operator's individual actions, without the  
3 knowledge of management and contrary to express procedures to inform his supervisor of the  
4 actions he planned to take, resulted in the reactor trip. (APS Exhibit No. 94 at 21 [Levine]; APS  
5 Exhibit No. 95 at 8 [Levine]). Second, had the operator simply followed procedures and left the  
6 level control system in automatic, the reactor would not have tripped. (APS Exhibit No. 95 at 8  
7 [Levine]). Third, Palo Verde provided the appropriate amount of training to the operators on this  
8 system, especially given that the issue had never caused an earlier reactor trip. (APS Exhibit No.  
9 94 at 23 [Levine]). As Mr. Levine states, "[w]e train our operators based on our best judgment  
10 of what the most significant issues are and what will best assist in the safe and efficient operation  
11 of the plant." (*Id.* [Levine]). Finally, Palo Verde has had relatively few unplanned reactor trips.  
12 (*Id.* at 22 [Levine]).

13 **d. Analysis.**

14 APS and Dr. Jacobs agree that this outage was caused by the errors of an individual  
15 operator, whose actions allowed the steam generator water level to rise too high and trip the  
16 reactor. (Staff Exhibit No. 46 at 24, 26 [GDS Report]; Staff Exhibit No. 48 at 20-21 [Jacobs]).  
17 However, Dr. Jacobs incorrectly believes that the errors of this operator may be imputed to APS  
18 management. First, as noted above, prudence does not require perfection. Just as the  
19 Commission stated in 1984 that Palo Verde was "built by human beings, not mistake-proof  
20 automata," Palo Verde is also operated by human beings, not machines. (Decision No. 54204 at  
21 15). Prudence does not require that there never be a reactor trip at a nuclear power plant. Dr.  
22 Jacobs admits this. (Tr. Vol. XXIX at 5271 [Jacobs]). He further admits that all nuclear plants  
23 have reactor trips caused by operator errors, and that every trip caused by human error is not  
24 necessarily imprudent. (*Id.* at 5271, 5339 [Jacobs]).

25 Moreover, although he acknowledges the fact that the operator "failed to communicate  
26 his actions with shift management," (Staff Exhibit No. 46 at 26 [GDS Report]), Dr. Jacobs is  
27 silent on how this fact impacts the prudence analysis. Because the operator did not even notify  
28 his immediate supervision of his actions, APS management had no knowledge of the events that

1 led to the reactor trip. In violation of procedures and policies, the operator's supervisors were  
2 not given the chance to approve or prevent the operator's actions. (Tr. Vol. XXVIII at 5195  
3 [Levine]).

4 Dr. Jacobs' arguments that additional training should have been provided are likewise  
5 flawed. APS had provided training to all the operators when the system was upgraded from  
6 digital to analog in 2003. (Tr. Vol. XXVII at 5133 [Levine]). Moreover, APS also provides  
7 what is called "just-in-time" ("JIT") training before start-up. As Mr. Levine testified, "we run  
8 them through certain portions of the startup [in the simulator]. We don't do it all because the  
9 startup is a very long evolution." (*Id.* at 5131 [Levine]). Prior to this outage, APS focused its  
10 JIT training on other evolutions that had caused problems during startup in the past, and did not  
11 conduct JIT training on the steam generator level control system, because there had not been  
12 significant difficulties in the past. (*Id.* at 5131-32 [Levine]). In fact, there had never been a  
13 reactor trip due to the system. (*Id.* at 5131 [Levine]). At the hearing, the Staff questioned Mr.  
14 Levine about what his response would have been if he had been asked prior to the reactor trip  
15 whether he thought the operator "had been trained, was knowledgeable, had adequate  
16 procedures, and would be able to execute the startup effectively." (*Id.* at 5133 [Levine]). Mr.  
17 Levine responded "Yes," illustrating that his reasonable belief at that time was that the operator  
18 was adequately prepared to perform the evolution. (*Id.* [Levine]).

19 Dr. Jacobs attempted to argue that "[o]perators' concerns about the ability of the DFWCS  
20 were well known and long standing." (Staff Exhibit No. 48 at 22 [Jacobs]). However, at the  
21 hearing, Judge Farmer questioned Dr. Jacobs about how he knew this. (Tr. Vol. XXIX at 5362  
22 [Jacobs]). Dr. Jacobs' response was "[f]rom reading the root cause evaluation of this event."  
23 (*Id.* [Jacobs]). When further questioned by APS about his support for this statement, Dr. Jacobs  
24 was unable to identify anything specific in the root cause evaluation that demonstrated that APS  
25 management was aware of any operator concerns with the DFWCS system. (*Id.* at 5395-97  
26 [Jacobs]). Dr. Jacobs was only able to identify statements referring to knowledge of the  
27 operators. (*Id.* at 5396-97 [Jacobs]). Likewise, when Judge Farmer repeated her question, Dr.  
28 Jacobs could not demonstrate from the root cause evaluation that the perceived, but in fact non-

1 existent, problems with the system were known or should have been known by APS  
2 management. (*Id.* at 5399-5400 [Jacobs]).

3 Finally, any attempt by Dr. Jacobs to claim that post-outage modifications regarding  
4 training or procedures show imprudence is an exercise in impermissible hindsight and directly  
5 contradicts the NRC's Policy Statement cautioning state public utility commissions against  
6 undue reliance on such actions. (APS Exhibit No. 87 at 45 [Mattson]; APS Exhibit No. 101).

7 The NRC stated the following:

8 The [NRC] is also concerned about State public utility commission ratemaking actions  
9 that might be interpreted as penalizing a utility for improving its own procedures or  
10 methods of operation. For example, where a State public utility commission observes  
11 that a utility has modified its procedures following an incident, infers from the utility's  
12 actions that the original procedures must have been inadequate, and then disallows  
13 certain costs on the basis of such assumed inadequacies, the utility will have a strong  
14 disincentive voluntarily to enhance or improve its operations and procedures in the  
15 future. Such State public utility commission action can discourage utilities from making  
16 needed improvements in procedures and operations and, thus, can be detrimental to the  
17 long-term safety of operation.

14 (APS Exhibit No. 87 at 45 [Mattson]; APS Exhibit No. 101 at 3 of 4).

15 Changes made by Palo Verde to procedures or training were simply part of Palo Verde's "goal to  
16 continuously improve performance," and are not an indication that the procedures or training  
17 prior to the reactor trip were not reasonable. (APS Exhibit No. 95 at 9 [Levine]).

18 In sum, the August 2005 reactor trip was due to the errors of an operator who violated  
19 express procedures to notify supervision before he took the actions in question. There is no basis  
20 upon which this Commission could conclude that APS management knew or should have known  
21 of this activity prior to its occurrence, and therefore, there is no basis to conclude that the outage  
22 was the result of management imprudence.

23 **3. The Unit 1 March 2005 Outage Due To Failure Of A Diesel Generator**  
24 **Governor Was Not Caused By Management Imprudence.**

25 **a. Background.**

26 On March 17, 2005, Palo Verde Unit 1's Diesel Generator "A" failed to achieve full  
27 speed during a post-maintenance retest. (APS Exhibit No. 94 at 25 [Levine]; Staff Exhibit No.  
28 46 at 22 [GDS Report]). Palo Verde investigated the problem and determined that the diesel

1 generator's governor should be replaced. (APS Exhibit No. 94 at 25 [Levine]). Although Palo  
2 Verde was able to quickly replace the governor, the unit's technical specifications required the  
3 unit to be shut down to conduct certain retests that must be performed following governor  
4 replacement. (*Id.* [Levine]; Staff Exhibit No. 46 at 22 [GDS Report]). Therefore, Palo Verde  
5 Unit 1 was shut down to perform the retests, and was subsequently restarted. (APS Exhibit No.  
6 94 at 25 [Levine]).

7 Palo Verde performed a root cause investigation of the governor failure and determined  
8 that the direct cause was "contamination of the lube oil in the governor actuator." (*Id.* at 26  
9 [Levine]). Nonetheless, no definite cause for the oil contamination was identified. (APS Exhibit  
10 No. 89 at 14 [Denton]; APS Exhibit No. 94 at 26 [Levine]). The three most probable root causes  
11 of the governor contamination, in the order of most probability, are water introduced by the  
12 vendor during a June 2000 governor refurbishment that was not completely drained, storage of  
13 the governor drained of oil at the Palo Verde warehouse, and water introduced during a governor  
14 oil change. (APS Exhibit No. 89 at 14-15 [Denton]; APS Exhibit No. 94 at 26 [Levine]; Staff  
15 Exhibit No. 46 at 23 [GDS Report]).

16 Dr. Jacobs did not recommend any disallowance because this event occurred prior to  
17 April 2005, but he did initially recommend that "[t]he amount of \$1.623 million incurred before  
18 April 1, 2005 should not be eligible for consideration in establishing base fuel costs in the  
19 pending rate case." (Staff Exhibit No. 47 at 4 [Jacobs]; Tr. Vol. XXIX at 5272-73 [Jacobs]).  
20 APS responded that the pre-PSA outages do not have a bearing on the present rate case. (APS  
21 Exhibit No. 94 at 24-25 [Levine]). Staff Witness Antonuk's testimony, which states that Mr.  
22 Ewen's normalization did not use the actual 2005 performance of any unit, supports this  
23 conclusion. (Staff Exhibit No. 28 at 23 [Antonuk]). At the hearing, Dr. Jacobs agreed that if the  
24 2005 outages were not used in APS's normalization, then this outage is "no longer relevant."  
25 (Tr. Vol. XXIX at 5273 [Jacobs]). Similarly, counsel for the ACC Staff acknowledged that there  
26 are no "PSA dollars" associated with this outage. (*Id.* at 5276-77 [Jacobs]). Although no party  
27 claims any economic impact on the present rate case based on the prudence of this outage,  
28 because Commissioner Mayes indicated that she thought the outage may be relevant to the issue

1 of a Nuclear Performance Standard, the arguments of Staff and APS are addressed below. (*Id.* at  
2 5277-78 [Jacobs]).

3 **b. Staff's Position.**

4 Dr. Jacobs argues that this March outage was due to imprudent actions by APS. (Staff  
5 Exhibit No. 46 at 24 [GDS Report]). In his initial report, Dr. Jacobs contends that this outage  
6 "was avoidable by ensuring that the storage conditions and pre-installation inspection of the re-  
7 furbished governor were commensurate with the importance of this equipment." (*Id.* [GDS  
8 Report]). In his Surrebuttal Testimony, Dr. Jacobs offers a new argument that APS should have  
9 performed more frequent routine analysis of lube oil. (Staff Exhibit No. 48 at 20 [Jacobs]).

10 **c. APS's Position.**

11 APS's position is that this outage was not due to management imprudence and no costs  
12 should be disallowed nor should this outage otherwise affect the rate case in any manner. (APS  
13 Exhibit No. 89 at 17-18 [Denton]; APS Exhibit No. 94 at 24-25 [Levine]). Palo Verde properly  
14 stored the governor in accordance with the manufacturer's recommendation. (APS Exhibit No.  
15 89 at 15-16 [Denton]; APS Exhibit No. 94 at 26-28 [Levine]). Palo Verde also properly  
16 inspected the governor prior to installation. (APS Exhibit No. 89 at 16-17 [Denton]; APS  
17 Exhibit No. 94 at 27-28 [Levine]). Furthermore, Palo Verde had no reason to believe, and still  
18 has no reason to believe, that additional oil sampling and testing would have prevented the  
19 March outage. (APS Exhibit No. 90 at 3 [Denton]; APS Exhibit No. 95 at 11 [Levine]).

20 **d. Analysis.**

21 Prudence only requires that APS reasonably treated the diesel generator governor prior to  
22 its failure based on what APS management knew or reasonably should have known at the time of  
23 the governor failure (without hindsight). (Staff Exhibit No. 46 at 19 [GDS Report]). The  
24 evidence demonstrates that APS reasonably stored the governor, inspected the governor, and  
25 sampled the governor oil, and therefore was not imprudent.

26 Dr. Jacobs argues that "[s]torage of the governor drained of oil in a warehouse that was  
27 not climate controlled is not a good practice" and that the outage was avoidable by storing the  
28

1 governor commensurate with its importance. (*Id.* at 23-24 [GDS Report]). However, Dr. Jacobs  
2 provides no support for this assertion, such as industry standards or the practices of other  
3 utilities. APS, on the other hand, established that Palo Verde stored the governor in accordance  
4 with the manufacturer's recommendations. (APS Exhibit No. 89 at 15-16 [Denton]; APS Exhibit  
5 No. 94 at 26 [Levine]). Woodward Governor Company, the manufacturer of the governor,  
6 recommended that the governor be stored in a "clean and dry condition." (APS Exhibit No. 89 at  
7 15, Attachment RED-1RB [Denton]; APS Exhibit No. 94 at 26, Attachment JML-1RB [Levine]).  
8 The governor that failed was stored precisely in this manner. (APS Exhibit No. 89 at 15  
9 [Denton]; APS Exhibit No. 94 at 26 [Levine]). Indeed, Dr. Jacobs admits that the governor was  
10 stored in accordance with the manufacturer's recommendations. (Tr. Vol. XXIX at 5278  
11 [Jacobs]).

12         With respect to inspection of the diesel generator governor prior to its failure, Dr. Jacobs  
13 again simply states that the outage "was avoidable by ensuring that the . . . pre-installation  
14 inspection of the re-furbished governor [was] commensurate with the importance of this  
15 equipment." (Staff Exhibit No. 46 at 24 [GDS Report]). However, Dr. Jacobs provides no  
16 evidence of how Palo Verde's pre-installation inspection was insufficient. His testimony thus  
17 falls into the category of "broad assertions of mismanagement" that this Commission has  
18 previously held are insufficient in a prudence review. (Decision No. 55118 at 20).

19         Palo Verde's inspection of the governor prior to installing it could not have identified any  
20 rust. (APS Exhibit No. 94 at 27 [Levine]). As illustrated by the independent failure analysis for  
21 this governor, any rust could only have been identified by a complete disassembly of the  
22 governor. (APS Exhibit No. 89 at 17 [Denton]; APS Exhibit No. 94 at 27, Attachment JML-2RB  
23 [Levine]; Tr. Vol. XXVII at 5048 [Denton]; Tr. Vol. XXVII at 5137 [Levine]). However, as Dr.  
24 Jacobs admitted at the hearing, to be prudent, Palo Verde was not required to disassemble the  
25 governor prior to installation. (Tr. Vol. XXIX at 5280-81 [Jacobs]). Thus, Dr. Jacobs does not  
26 provide any "hard evidence of specific acts of imprudence" to rebut APS's testimony and his  
27 own admissions regarding pre-installation inspection of the governor. (Decision No. 55118 at  
28 20).

1           Once APS rebutted his conclusions about storage and inspection of the governor, Dr.  
2 Jacobs presented a new argument in his Surrebuttal Testimony that, following installation, “[a]  
3 routine analysis of the governor lube oil would also have identified the problem.” (Staff Exhibit  
4 No. 48 at 20 [Jacobs]). This is simply not the case. For example, APS performed a lube oil  
5 sample on April 19, 2004, one of the periodic samplings that Dr. Jacobs admits was performed  
6 (Tr. Vol. XXIX at 5281 [Jacobs]), which indicated a very low amount of water. (APS Exhibit  
7 No. 90 at 3 [Denton]; APS Exhibit No. 95 at 11 [Levine]).

8           Dr. Jacobs relies on a high level of water in an oil sample taken in the shop after the  
9 governor was replaced to conclude that additional sampling would have prevented the outage.  
10 (Staff Exhibit No. 48 at 20 [Jacobs]). However, following the outage, Palo Verde performed a  
11 thorough review of the process for changing and sampling oil and did not identify any potential  
12 source of water addition. (APS Exhibit No. 90 at 2-3 [Denton]; APS Exhibit No. 95 at 11  
13 [Levine]). Moreover, Mr. Levine explained that the high water level in the post-outage sample  
14 was due to the manner in which the post-outage sample was taken. (Tr. Vol. XXVII at 5138  
15 [Levine]). Oil samples normally are taken from a spigot on the side of the oil reservoir,  
16 approximately one-half inch from the bottom. (*Id.* [Levine]). While taking the sample following  
17 the outage, the governor was tipped on its side such that the sample was taken directly off of the  
18 bottom of the oil in the oil reservoir. (*Id.* at 5138-39 [Levine]). Because any water in the  
19 reservoir separates from the oil and collects at the bottom of the reservoir where the sample was  
20 taken, this different sampling technique led to a higher water level in the oil sample. (*Id.* at 5139  
21 [Levine]). Therefore, Dr. Jacobs’ claim that this higher water level in the post-outage oil sample  
22 shows that additional sampling would have prevented the outage is incorrect, and is definitely  
23 insufficient to show imprudence.

24   **D.   APS Prudently Entered Into Vendor Contracts Which Are Typical Of Contracts**  
25   **Used In The Nuclear Industry, And Has Sought Remedies From Vendors Where**  
26   **Appropriate.**

27           Although he found APS’s actions in connection with outages that were the result of  
28 failure of vendor-supplied equipment to have been prudent, Dr. Jacobs recommended that the

1 Commission address the degree to which APS has sought appropriate remedies. (Staff Exhibit  
2 No. 46 at 52 [GDS Report]; Staff Exhibit No. 47 at 4 [Jacobs]). These outages included the  
3 February 2005 Unit 1 outage due to the wrong material o-ring, the May-June Unit 3 outage due  
4 to the improperly manufactured pressurizer heaters, and the August Unit 2 outage due to an error  
5 in the core protection calculator software. (APS Exhibit No. 94 at 28 [Levine]). APS provided a  
6 description of the steps that have been taken to obtain the appropriate remedies from these  
7 vendors. (*Id.* at 28-30 [Levine]; Tr. Vol. XXVII at 5170-72 [Levine]). Additionally, Mr. Denton  
8 reviewed vendor contracts and concluded that the Limitation of Liability provisions in the  
9 contracts are similar to those that are typically used in the nuclear industry, and that Palo Verde  
10 acted reasonably in entering into such contracts. (APS Exhibit No. 89 at 11-14 [Denton]; Tr.  
11 Vol. XXVII at 5049-50 [Denton]). Neither the ACC Staff nor any other party has challenged  
12 APS's actions with respect to these vendor contracts.

13 **E. A Nuclear Performance Standard ("NPS") Is Unnecessary And Inappropriate, And**  
14 **Even If Some Type Of Performance Standard Is Appropriate, The Staff**  
15 **Recommendation Lacks Key Elements.**

16 **1. Staff's Own Witness Has Recently Recommended Termination Of A NPS To**  
17 **Another State Commission As Unnecessary, And The NRC Has Raised**  
18 **Concerns About The Appropriateness Of Such Standards.**

19 Staff's witness Dr. Jacobs has recommended that the Commission implement a penalty-  
20 only form of a NPS for Palo Verde. (Staff Exhibit No. 46 at 52 [GDS Report]; Staff Exhibit No.  
21 47 at 4 [Jacobs]). However, Dr. Jacobs recently recommended the termination of a NPS in  
22 Georgia. (Tr. Vol. XXIX at 5286 [Jacobs]). He did so based on the utility's response to a data  
23 request stating that the NPS had no impact on how the utility operated the plant. (APS Exhibit  
24 No. 100; Tr. Vol. XXIX at 5286 [Jacobs]). Following Dr. Jacobs' recommendation, the Georgia  
25 Commission terminated the program. (Tr. Vol. XXIX at 5285 [Jacobs]). Similarly, Mr. Levine  
26 testified that the existence of a NPS would not affect how APS operates Palo Verde. (Tr. Vol.  
27 XXVII at 5127 [Levine]). Thus, a NPS is at best unnecessary.

28 Moreover, in contrast to the incentive program that APS itself implements, which  
contains elements rewarding both safety performance and economic performance (Tr. Vol.

1 XXVIII at 5204, 5208-09 [Levine]), the penalty-only, capacity factor-only type of NPS that Dr.  
2 Jacobs proposes has prompted the NRC to express its concern about such programs' effects on  
3 safety. The NRC's Policy Statement "reflects the [NRC]'s concern that certain forms of  
4 economic performance incentive (EPI) regulation may adversely affect the operation of nuclear  
5 plants and the public health and safety." (APS Exhibit No. 87 at 45 [Mattson]; APS Exhibit No.  
6 101 at 1 of 4). Similarly, the NRC stated that "an incentive program could directly or indirectly  
7 encourage the utility to maximize measured performance in the short term at the expense of plant  
8 safety (public health and safety)." (APS Exhibit No. 87 at 45 [Mattson]; APS Exhibit No. 101 at  
9 3 of 4). Dr. Jacobs has presented no evidence to rebut these concerns of the NRC other than to  
10 call the NRC Policy Statement a "red herring." (Staff Exhibit No. 48 at 38 [Jacobs]). APS  
11 would of course do everything possible to avoid unintended consequences of a NPS. (Tr. Vol.  
12 XXVII at 5127 [Levine]). However, if a NPS is not going to cause a utility intentionally to do  
13 anything differently in order to achieve more efficient operation, it is not prudent to run any risk,  
14 no matter how small, that the NRC's concerns about potential negative impacts on safety would  
15 be realized.

16 **2. Dr. Jacobs Has Not Provided Sufficient Information To Implement A**  
17 **Performance Standard.**

18 Dr. Jacobs claims that he has provided sufficient information to implement a NPS (Staff  
19 Exhibit No. 48 at 38-39 [Jacobs]), although he inconsistently also states he is "well aware that  
20 the Commission may add details to [his] proposal in order to tailor it for the purposes of  
21 regulation in Arizona." (*Id.* at 34 [Jacobs]). Not only would the Commission have to "add  
22 details," but as demonstrated in the following section, it would have to drastically alter the  
23 proposed NPS.

24 Dr. Jacobs did not provide the Commission with a review of other performance  
25 standards, including earlier standards adopted by this Commission. Dr. Jacobs was asked  
26 whether he was aware that there was previously a performance standard in Arizona. (Tr. Vol.  
27 XXIX at 5288 [Jacobs]). Dr. Jacobs responded that he understood that one had been discussed,  
28 but had not been implemented. (*Id.* [Jacobs]). Not only was a performance standard adopted for

1 APS in 1984, but it was substantially different than the NPS now proposed by Dr. Jacobs.  
2 (Decision No. 54247 at 11-16 (Nov. 28, 1984)). Among other attributes, the performance  
3 standard adopted by this Commission included an incentive portion, did not include a penalty  
4 unless capacity factor was below 60 percent, included a dead band between 60-75 percent, and  
5 included coal plants. (*Id.* at 15-16). Dr. Jacobs acknowledged at the hearing that the  
6 Commission should consider its past history with performance standards. (Tr. Vol. XXIX at  
7 5288 [Jacobs]). Dr. Jacobs likewise did not conduct any sort of study or review of other  
8 jurisdictions that include coal plants in their performance standards. (*Id.* at 5300-01 [Jacobs]).  
9 Dr. Jacobs admits that these also are issues the Commission should consider in adopting a  
10 standard. (*Id.* at 5301 [Jacobs]).

11 Dr. Jacobs also acknowledged that further development on the issue of a "cap" on the  
12 penalty would be necessary prior to the implementation of a performance standard. (*Id.* at 5291-  
13 92 [Jacobs]). Dr. Jacobs' proposed standard does not address the fact that there are 18-month  
14 and 24-month refueling cycles at different plants, which would penalize plants with 18-month  
15 cycles such as Palo Verde. (*Id.* at 5295-96 [Jacobs]; APS Exhibit No. 102). Dr. Jacobs admitted  
16 that this deficiency would have to be addressed. (*Id.* at 5296 [Jacobs]). His proposed standard  
17 does not state whether the mean or the median capacity factor should be used for the target value.  
18 (*Id.* at 5297 [Jacobs]). Dr. Jacobs' proposed NPS focuses entirely on a financial penalty, but he  
19 does not explain the details of how any penalties would be calculated. (APS Exhibit No. 2 at 20  
20 [Wheeler]; APS Exhibit No. 91 at 17 [Fitzpatrick]).

21 Additional characteristics of Palo Verde, such as its size, location, and cooling water  
22 supply make the plant unique and add an additional layer of complexity to the development of  
23 any performance standard. (APS Exhibit No. 91 at 5 [Fitzpatrick]; APS Exhibit No. 92 at 5-6  
24 [Fitzpatrick]; Tr. Vol. XXVII at 5064 [Fitzpatrick]). Dr. Jacobs does not consider the inclusion  
25 of additional safety-related attributes (like those contained in APS's employee incentive plan) to  
26 offset any of the potential negative effects of the capacity factor-only aspects of his proposed  
27 standard. (Tr. Vol. XXIX at 5298-99 [Jacobs]). All of these missing or inadequately treated  
28 features would have to be considered in any performance standard. As Mr. Fitzpatrick testified,

1 "there are elements that need to be hammered out and agreed to by the parties" and "there's a lot  
2 more specificity required rather than just a general overview of principles." (Tr. Vol. XXVII at  
3 5091 [Fitzpatrick]). Mr. Fitzpatrick testified that this is a process that requires months and is  
4 then followed by "bench testing [the proposed standard] with some data." (*Id.* at 5091-92  
5 [Fitzpatrick]).

6 All of these attributes not addressed by Dr. Jacobs illustrate that his proposed NPS is  
7 incomplete, and much more discussion would be necessary to implement a performance standard  
8 in Arizona. However, APS would again urge the Commission to carefully consider whether, for  
9 the reasons stated in the preceding section, it is necessary and appropriate to implement a  
10 performance standard.

11 **3. If A Performance Standard Is Adopted, It Should Contain Certain Important**  
12 **Attributes That Are Missing From Dr. Jacobs' Proposal.**

13 As discussed above, Dr. Jacobs believes that the NRC's guidance regarding performance  
14 standards should be ignored by this Commission. (Staff Exhibit No. 48 at 38 [Jacobs]). APS  
15 disagrees and believes that as the regulatory agency for nuclear safety, the NRC's concerns  
16 regarding the impact of performance standards on nuclear plant safety should be carefully  
17 considered, and the NRC's guidance to prevent safety issues should be reflected in any  
18 performance standard adopted. (APS Exhibit No. 87 at 45 [Mattson]; APS Exhibit No. 88 at 26  
19 [Mattson]; APS Exhibit No. 101; Tr. Vol. XXVII at 5127 [Levine]). The NRC's guidance and  
20 additional important attributes for a performance standard are discussed below.

21 **a. A Performance Standard Should Include Incentives.**

22 The NRC stated that a performance standard should include "equal opportunities for  
23 rewards and penalties." (APS Exhibit No. 101 at 4 of 4). Dr. Jacobs' proposed NPS does not do  
24 this; rather, it only penalizes APS and its shareholders. (Staff Exhibit No. 47 at 8 [Jacobs]; Staff  
25 Exhibit No. 48 at 34-35 [Jacobs]). Dr. Jacobs' principal argument for not including an incentive  
26 portion in his proposed NPS is that "the risk of poor performance is borne solely by the  
27 ratepayer." (Staff Exhibit No. 48 at 35 [Jacobs]). This is incorrect. At the hearing, Dr. Jacobs  
28 admitted that it is possible that a utility will not achieve its authorized rate of return, as APS did

1 not in recent years. (Tr. Vol. XXIX at 5282 [Jacobs]). Further, as Mr. Brandt testified, “over a  
2 relatively long period [of] time we’ve never come close to earning our allowed return on equity.”  
3 (Tr. Vol. II at 412 [Brandt]). APS has not earned its authorized ROE since 2003, with a shortfall  
4 for the one year period ending on June 30, 2006 of \$134 million. (*Id.* at 411 [Brandt]).

5 Dr. Jacobs’ arguments contradict this Commission’s earlier conclusions when it  
6 implemented a performance standard in 1984. The Commission addressed whether the standard  
7 should be symmetrical, meaning including both an incentive and a penalty. (Decision No. 54247  
8 at 13). The Commission stated that “[s]ymmetry is primarily a question of ‘fairness’ to the  
9 utility’s shareholders.” (*Id.* at 14). The Commission concluded that the performance standard  
10 should have equal opportunities for rewards and penalties, and held that “[s]uch a system has  
11 both the appearance, and in our opinion, the substance of ‘fairness.’” (*Id.*).

12 Mr. Fitzpatrick described a standard that would be fair for all parties, when he testified:

13 Any performance standard imposed should allow for both disallowances and benefits. In  
14 the interest of symmetry and fairness, if APS and its shareholders are now to be exposed  
15 to additional risk, then there should now also be an opportunity for shareholders to realize  
16 a monetary benefit from better-than-average performance. If a disallowance-only  
17 performance standard is to be imposed, then the Commission should consider granting an  
increase in APS’ Allowed Return on Equity in recognition of the additional risk that APS  
shareholders would be shouldering.

18 (APS Exhibit No. 91 at 17 [Fitzpatrick]).

19 The additional risk here is that the NPS as proposed by Dr. Jacobs essentially makes APS a  
20 guarantor that Palo Verde’s capacity factor will be above average. Presently, the utility is  
21 compensated through the PSA if it incurs above-normal replacement power costs provided that  
22 those costs are prudently incurred. Similarly, the customers benefit when the utility incurs  
23 below-normal replacement power costs due to superior performance of its generating units. If  
24 that system is to change, and APS is to be penalized any time it achieves below normal  
25 performance (even if it acted prudently), it is only fair that it be rewarded if it achieves better  
26 than average performance.

27 Indeed, one of the Staff’s other witnesses, Mr. Antonuk, in testifying with respect to the  
28 PSA, criticized penalty-only programs, and explained why it is important that an incentive

1 program provide a utility at least the opportunity to gain as much as it could lose:

2 Well, I see regulation in the utility industry as doing the best job it can to model how the  
3 economy operates. And the way the economy operates is that it rewards efficiency and  
4 penalizes inefficiency. If all the economy did was penalize inefficiency, I don't think we  
5 would have much of an economy. So I just don't really see a one-sided effort as  
6 promoting positive performance for customers.

7 (Tr. Vol. XXI at 3999 [Antonuk]).

8 If the Commission decides to go forward with a performance standard, it should heed the advice  
9 of Mr. Antonuk and reject the penalty-only approach Dr. Jacobs proposes.

10 **b. A Performance Standard Should Apply To The Entire System,  
11 Including Baseload Coal Plants.**

12 The NRC recommends that a performance standard include "performance measures of  
13 the entire system instead of those of a specific unit." (APS Exhibit No. 101 at 4 of 4). APS  
14 agrees with the NRC that any performance standard should apply to all baseload units, whether  
15 nuclear or coal. (APS Exhibit No. 91 at 16 [Fitzpatrick]; Tr. Vol. XXVII at 5065-66  
16 [Fitzpatrick]). As Mr. Fitzpatrick explained:

17 Dr. Jacobs does not include APS Base Load Coal Units in his performance standard  
18 recommendations. These units should be included if a performance standard is adopted  
19 because they have a significant bearing on the ultimate cost of power to APS customers.  
20 Palo Verde accounts for only 39% of APS baseload capacity and, thus, should not be the  
21 sole focus of a generation performance standard. APS coal units do enjoy a significant  
22 \$/MWH economic advantage over purchased power and contribute significant benefit to  
23 APS customers.

24 (APS Exhibit No. 91 at 16 [Fitzpatrick]).

25 Dr. Jacobs' response to APS's argument was simply that coal plants and nuclear plants  
26 are different, and "[a] company wide performance plan for all baseload plants would be vastly  
27 different and is beyond the scope of my testimony." (Staff Exhibit No. 48 at 36 [Jacobs]). These  
28 are not valid reasons for rejecting the NRC's position. As demonstrated above, this Commission  
has previously adopted a performance standard that included coal baseload generating units.  
(Decision No. 54247 at 16).<sup>108</sup> Finally, the evaluation of nuclear and coal plants together  
conforms to the Commission's earlier holding that "a realistic analysis of operating performance

<sup>108</sup> As Mr. Fitzpatrick explains, because of differences in maintenance and refueling practices, a rolling six-year evaluation cycle would be appropriate for coal units while a shorter period could apply to Palo Verde. (APS Exhibit No. 91 at 17 [Fitzpatrick]).

1 must look at both the 'successes' and the 'failures' if it is to avoid setting unobtainable goals of  
2 absolute perfection." (Decision No. 55118 at 20).

3 **c. Additional Attributes Are Essential To A Performance Standard.**

4 As discussed above, Dr. Jacobs' proposed NPS does not include a cap on penalties. (APS  
5 Exhibit No. 91 at 17 [Fitzpatrick]). APS believes that a cap on any penalty would be very  
6 important to an implemented performance standard. (*Id.* [Fitzpatrick]; APS Exhibit No. 2 at 21  
7 [Wheeler]). Dr. Jacobs later agreed and stated that "I believe that a cap on the amount of penalty  
8 is a reasonable request." (Staff Exhibit No. 48 at 38 [Jacobs]; Tr. Vol. XXIX at 5291 [Jacobs]).  
9 Therefore, the parties agree that a cap on penalties should be used if the Commission adopts a  
10 performance standard, but the details of such a "cap" need to be addressed.

11 Dr. Jacobs' proposed NPS also does not provide a "dead band." APS believes that a dead  
12 band, or as the NRC calls it "a null zone," around the target value, in which no penalty or  
13 incentive would be assessed, would be very important to account for normal variations between  
14 nuclear plants. (APS Exhibit No. 91 at 17 [Fitzpatrick]). The NRC proposed that if a  
15 performance standard is adopted, "a reasonably broad null zone of acceptable performance in  
16 which no rewards or penalties are imposed" should be included. (APS Exhibit No. 101 at 3 of  
17 4). Additionally, the performance standard adopted by this Commission in 1984 included a dead  
18 band. (Decision No. 54247 at 15-16). The initial dead band for Palo Verde Unit 1 was 60-75  
19 percent and the initial dead band for Four Corners was 65-75 percent. (*Id.* at 15). A careful  
20 statistically-derived dead band is especially important given the great variations in nuclear plant  
21 performance. As stated by Mr. Fitzpatrick, the standard deviation for the capacity factor of  
22 nuclear power plants can be as high as plus or minus 9 percent. (APS Exhibit No. 91 at 18  
23 [Fitzpatrick]; Tr. Vol. XXVII at 5083 [Fitzpatrick]). Dr. Jacobs' proposed NPS would invoke a  
24 penalty for APS if the capacity factor was anywhere below the average. (Staff Exhibit No. 47 at  
25 7-8 [Jacobs]). Without a dead band, it would be unfair to require a penalty for anything below  
26 the average capacity factor, given such a large standard deviation.

27 Additionally, Dr. Jacobs' proposed NPS would compare Palo Verde to all pressurized  
28 water reactors in the United States with a capacity greater than 600 MW. (*Id.* at 7 [Jacobs]).

1 APS concludes that the comparison group should be all plants greater than 1000 MW due to  
2 design and operational considerations. (APS Exhibit No. 91 at 17 [Fitzpatrick]). Dr. Jacobs  
3 responded that “either group will work.” (Staff Exhibit No. 48 at 37 [Jacobs]). Therefore, a  
4 comparison group including plants greater than 1000 MW should be used if a performance  
5 standard is implemented.

6 **F. Additional Recommended Adjustments By Mr. Ewen To Dr. Jacobs’ Proposed**  
7 **Disallowances.**

8 As noted in the Introduction and Summary of Matters Remaining in Dispute, APS and  
9 the Staff have agreed on certain issues that result in the Staff’s current proposed disallowance  
10 being \$13.756 million in replacement power costs plus \$2.103 million for alleged margins in lost  
11 opportunity sales, for a total of \$15.859 million plus interest. APS has demonstrated in Section  
12 IX.C.1.e above why an additional \$5.1 million should be deducted from any disallowance that  
13 the Commission might order in connection with the RWT outages based on the fact that other  
14 necessary RCP maintenance work was performed during those outages. In addition, APS  
15 demonstrated in Section IX.B.4 above why a minimum of an additional \$10 million offset is  
16 appropriate for better than expected APS coal plant performance, the benefit of which APS  
17 customers have already received. Alternatively, as also demonstrated in Section IX.B.4 above,  
18 when APS 2005 coal plant performance is measured not against APS’s own very high  
19 expectations but against the performance of those plants’ industry peers, it more than eliminates  
20 the entire disallowance Staff proposes. In this section, APS demonstrates that certain other  
21 adjustments would be required to Dr. Jacobs’ calculations if the Commission were to find that  
22 imprudence had occurred and were not offset by the adjustments discussed above.

23 **1. Off-System Sales Impact.**

24 Dr. Jacobs argues that “[i]t is clear that reduced levels of nuclear generation due to  
25 unplanned outages at Palo Verde would result in lost off-system opportunity sales.” (Staff  
26 Exhibit No. 46 at 46 [GDS Report]). APS agrees that these outages did affect off-system sales,  
27 but Dr. Jacobs’ calculation grossly overestimates the financial impact of the outages on these  
28 sales. (APS Exhibit No. 17 at 20 [Ewen]). Dr. Jacobs calculated the lost sales by “multiplying

1 the average margin amount per MWh for off-system sales from April through December 2005  
2 times the MWh reduction in nuclear generation due to each imprudent Palo Verde outage,”  
3 resulting in an estimated adjustment of \$2,103,169. (Staff Exhibit No. 46 at 47 [GDS Report]).

4 Mr. Ewen demonstrated why Dr. Jacobs’ calculation is erroneous:

5 The impacts on off-system sales estimated by Dr. Jacobs are overstated by \$1.8 million.  
6 Dr. Jacobs erroneously concludes that every megawatt-hour (MWh) of lost power results  
7 in a lost off-system sale, even though the Company was forced to purchase a large share  
8 of its replacement power from the market, and that on average the lost margins on each  
9 sale approximated the Company’s average unit margin for the entire April-December  
10 2005 time period. In contrast to the estimated 187,000 MWh of lost off-system sales  
11 calculated by Dr. Jacobs, it appears that the Company lost at most 9,000 MWh of sales  
12 during the Unit 1 outage from August 26th through August 28th and the Unit 2 and Unit  
13 3 outage in mid-October.

14 (APS Exhibit No. 17 at 20 [Ewen]).

15 Dr. Jacobs agreed that his calculation is inaccurate, and that not all 187,000 MWh used in his  
16 calculation would have been sold. (Tr. Vol. XXIX at 5304 [Jacobs]). He stated that he used this  
17 estimation because APS had not yet provided him with the detailed information. (*Id.* at 5303-  
18 04). However, APS subsequently provided him with its own detailed calculations and responded  
19 to his concerns about those calculations. (APS Exhibit No. 17 at 20-21 [Ewen]; APS Exhibit No.  
20 97 at 3-5 [Ewen]). Although Dr. Jacobs still questions some of the results, he does not provide  
21 an alternate analysis. (Tr. Vol. XXIX at 5307-14 [Jacobs]). In fact, he stated that APS’s  
22 “approach is probably the more accurate way to do it.” (*Id.* at 5314). At the hearing, Dr. Jacobs  
23 stated that: “So I guess my recommendation would be to ask the company to go back and take  
24 another look and see if they can come up with an answer that doesn’t have some clear  
25 discrepancies in it.” (*Id.*). However, Mr. Ewen did this in his Rejoinder Testimony explaining  
26 that there are in fact no “discrepancies” in APS’s calculations.

27 APS compared the actual results that the Company experienced on the days for the  
28 alleged imprudent outages against a simulation of the power system on these same days using  
actual load and market conditions and using the well-recognized RTSim production cost model.  
(APS Exhibit No. 17 at 20-21 [Ewen]). These calculations are presented in APS Exhibit No.  
103. If the Commission agrees with APS that none of the outages were imprudent, then there

1 would be no disallowance for lost off-system sales. If the Commission finds some imprudence,  
2 the appropriate figure for margins on lost off-system sales will vary depending on which outages  
3 are concluded to be the result of imprudence. Thus, if the Commission agrees with Dr. Jacobs  
4 that both the August reactor trip and October RWT outage costs should be disallowed, then the  
5 margin on lost off-system sales would be \$322,000 (reducing the \$2,103,000 figure by  
6 \$1,781,000). (APS Exhibit No. 17 at 21 [Ewen]; APS Exhibit No. 103; Staff Exhibit No. 46 at  
7 47 [GDS Report]). However, if the Commission concludes that the RCP maintenance prevented  
8 a separate outage, then the margin on lost off-system sales would further be reduced by \$53,000  
9 to \$269,000 (reducing the \$2,103,000 figure by \$1,834,000). (APS Exhibit No. 103).

10 Under a second scenario in which the Commission concludes that only the October RWT  
11 outage was imprudent, then the margin on lost off-system sales would be \$255,000 (reducing the  
12 \$2,103,000 figure by \$1,848,000). Again, if the RCP work prevented a separate outage, then the  
13 margin on lost off-system sales is \$202,000 (reducing the \$2,103,000 figure by \$1,901,000).  
14 (*Id.*). Under a third scenario in which the Commission concludes that only the August reactor  
15 trip was imprudent, then the margin on lost off-system sales would be \$67,000 (reducing the  
16 \$2,103,000 figure by \$2,036,000). (*Id.*).

17 Dr. Jacobs responded to APS's calculations and methodology, which were provided in a  
18 data request response, by stating that "[t]he information provided by APS in their data responses  
19 only raises new questions and casts further doubt on their proposed adjustment." (Staff Exhibit  
20 No. 48 at 43 [Jacobs]). Dr. Jacobs was concerned that in some instances the simulation  
21 calculated lower off-system sales volumes when Palo Verde was running and lower margins  
22 when off-system sales increased. (*Id.* at 42). Mr. Ewen responded to these concerns by  
23 explaining that these results were caused by better than expected coal performance and the use of  
24 certain generating units at low incremental heat rates. (APS Exhibit No. 97 at 4 [Ewen]). For  
25 example, when a "2x1" combined cycle unit is started due to an unplanned Palo Verde outage,  
26 once it is ramped up to minimum load, the incremental heat rates can be low enough to make off-  
27 system sales that would not have been made if Palo Verde was available and the unit had not  
28 been started in the first instance. (*Id.*). Similarly, the fact that margins were lower on certain

1 days even though sales increased is by no means surprising and certainly not a “discrepancy”  
2 given the wide disparity in sale prices depending upon the time of day a sale is made. In fact,  
3 Dr. Jacobs conceded that megawatt hour sales could increase, but the margins could be lower.  
4 (Tr. Vol. XXIX at 5310 [Jacobs]). Finally, even if the Commission were to give credence to Dr.  
5 Jacobs’ claimed discrepancies, this would only increase the lost off-system sales margins from  
6 \$322,000 to \$522,000 – still a far cry from the \$2,100,000 disallowance that Dr. Jacobs initially  
7 proposed.

8 **2. Offset For Costs Already Expensed.**

9 APS’s position is that Dr. Jacobs did not accurately apply the 90/10 sharing when he  
10 calculated his recommended disallowances, because his methodology discounts the normal  
11 amount of outages in the base rates, resulting in APS expensing \$515,000 twice. (APS Exhibit  
12 No. 17 at 24 [Ewen]). Dr. Jacobs disagrees with APS and simply states that “[t]he problem with  
13 Mr. Ewen’s proposed adjustment is that the amount of replacement power costs recovered in  
14 base rates assumes that the outage was not imprudent.” (Staff Exhibit No. 48 at 44 [Jacobs]).  
15 Dr. Jacobs’ testimony is simply not responsive to the error in his calculations that Mr. Ewen  
16 addressed.

17 Mr. Ewen explained the discrepancy in Dr. Jacobs’ methodology as follows:

18 In applying the 90/10 sharing requirement, Dr. Jacobs took the full net  
19 replacement power cost for any particular outage and reduced that amount by  
20 10%. In actuality, the 90/10 sharing occurs only with respect to fuel costs in  
21 excess of the Company’s fuel costs included in base rates. This means that the  
22 Company expenses 100% of the replacement power costs up to the level included  
23 in the Company’s base rate and 10% of the amounts thereafter. For the outages  
24 cited by Dr. Jacobs as imprudent, the level of outage costs already expensed was  
\$570,000 in base rates and \$910,000 through the 90/10 sharing mechanism for a  
total of \$1.480 million. Using my corrected values from above, Dr. Jacobs’s  
method gives credit for only \$965,000 of outage costs already expensed. The  
difference is \$515,000, or 90% of the \$570,000 included in base rates.

25 (APS Exhibit No. 17 at 24 [Ewen]).

26 Accordingly, an additional \$515,000 must be deducted from Dr. Jacobs’ proposed disallowances.  
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X.  
CONCLUSION

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3 APS recognizes that its requested rate increase (which includes the emergency rate relief  
4 granted by the Commission last May) reverses a trend of steady or even declining electric rates  
5 for its customers extending back to the early 1990s. But APS respectfully submits that the  
6 requested increase is fully warranted and amply justified by increased fuel costs, increased  
7 operating costs, and the lack of opportunity for the Company to earn a fair and reasonable return  
8 on its invested equity in recent years. Moreover, the consequences to APS customers of  
9 inadequate rate relief in this case will be far more damaging than any perceived short-term  
10 benefit derived from continuing down the path of poor earnings, inadequate cash flow, and  
11 declining credit-worthiness.

12 In this proceeding, APS has demonstrated that its financial metrics have declined in  
13 recent years and are now at the threshold of non-investment "junk bond" status. APS has also  
14 shown that, due to the lag associated with recovery of huge capital expenditures averaging  
15 approximately \$900 million per year, it has consistently failed to earn its allowed ROE in the  
16 past several years and that APS is not likely to have an opportunity to earn its allowed ROE in  
17 coming years unless the Commission addresses the issue in some manner. The cause of these  
18 financial woes and consistent under-earnings of the Company is readily apparent – existing rates  
19 are inadequate to cover the Company's increasing costs of service and related financial  
20 obligations for expansion of its growing customer base.

21 Establishing an adequate Base Fuel Cost and adjusting the PSA in the manner proposed  
22 by the Company or adopting the prospective PSA mechanism embraced by Staff would be  
23 significant steps in the right direction. By themselves, however, they are not sufficient to address  
24 the cost recovery and under-earnings issues raised by the Company. Indeed, the proposals by  
25 Staff and RUCO to essentially cut rates with respect to the Company's non-fuel costs would be a  
26 significant step in the **wrong** direction, would significantly undermine the Company's efforts to  
27 improve its financial metrics (and thereby avoid a slide to "junk bond" credit status), and would  
28 send an extremely negative message to the investment community and the credit rating agencies.

1           Consistent with the inquiries made by Chairman Hatch-Miller about ways to improve the  
2 Company's financial metrics and ensure that the Company can continue to meet the needs of the  
3 country's fastest growing service area, the Company respectfully submits that now is the time for  
4 the Commission to address the issues of cost recovery and under-earnings raised by the  
5 Company, not step back for fear that the needed rate increase will be perceived by some to be too  
6 large. In this regard, the Company urges the Commission to consider the proposals of CWIP in  
7 rate base, accelerated depreciation, earnings attrition allowance and other techniques discussed  
8 herein as sound and sensible ways to address these cost recovery and under-earnings issues.

9           With respect to costs associated with outages at Palo Verde in 2005, the Company  
10 respectfully submits that it has demonstrated that it acted prudently with respect to each of those  
11 outages, and therefore no disallowances are appropriate. Moreover, as shown in the table below,  
12 there are a number of corrections and offsets that reduce, and ultimately eliminate, the  
13 disallowances proposed by Staff's consultant. Therefore, the full amount of the requested Step 2  
14 PSA Surcharge should be granted coincident with the new rates established in this proceeding.

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	Staff Original Recommended Disallowance	Staff Corrections	Staff Current Recommended Disallowance	APS Additional Corrections and Offsets	Potential Disallowance if Imprudence Found
October Unit 2 RWT Outage	\$6.905 million		\$6.905 million	-\$5.1 million <sup>109</sup>	\$1.805 million
October Unit 3 RWT Outage	\$6.905 million	-\$1.1 million	\$5.805 million		\$5.805 million
August Reactor Trip	\$1.134 million	-\$0.088 million	\$1.046 million		\$1.046 million
Off-System Sales Impact	\$2.103 million		\$2.103 million	-\$1.781 million <sup>110</sup> to -\$2.036 million	\$0.067 million to \$0.322 million
Offset for Costs Already Expensed				-\$0.515 million	-\$0.515 million
		<b>TOTAL =</b>	<b>\$15.859 million + interest</b>	<b>-\$7.651 million to -\$7.396 million</b>	<b>\$8.208 million to \$8.463 million + interest</b>
Offset for Coal Plant Performance Against Budget				-\$10.0 million	
		<b>TOTAL =</b>			<b>No Disallowance</b>
Offset for Coal Plant Performance Against Peer Group				-\$27.492 million	
		<b>TOTAL =</b>			<b>No Disallowance</b>

<sup>109</sup> This additional offset is for the maintenance performed on Unit 2 RCPs during the October outage that prevented a later outage for RCP oil seal leakage.

<sup>110</sup> The minimum correction of \$1,781,000 is based on Staff's admittedly incorrect assumption that all 187,000 MWh could be sold, but accepting Staff's contentions regarding the imprudence of the reactor trip and RWT outages. This correction would be larger if the Commission determines that any of the outages were not caused by imprudent actions by APS or if the RCP work during the October Unit 2 RWT outage would have resulted in a separate outage, thereby precluding off-system sales. The required deduction from the Staff's \$2,103,000 figure would be: \$1,834,000 (rather than the minimum \$1,781,000) if the reactor trip and RWT outage are found imprudent, but the RCP maintenance is determined to have prevented a later outage; \$1,848,000 if only the RWT outages are found imprudent, but \$1,901,000 if the RCP maintenance performed during the RWT outage is found to have prevented a later outage; and \$2,036,000 if only the reactor trip is found imprudent.



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**Table of Authorities  
for  
Initial Post-Hearing Brief  
of  
Arizona Public Service Company**

**Docket No. E-01345A-05-0816**

**Docket No. E-01345A-05-0826**

**Docket No. E-01345A-05-0827**

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**A. STATUTES**

1. ARIZ. REV. STAT. § 42-14156.
2. ARIZ. REV. STAT. § 41-1276(I).
3. IND. CODE § 8-1-8.8-1.
4. IND. CODE § 8-1-27 *et seq.*
5. Energy Policy Act of 2005 (“EPAct 2005”), Pub. L. No. 109-58 § 1252(a), 119 Stat. 963 (codified as amended at 16 U.S.C. § 2621(d)(2005)).
6. FLA. STAT. § 366.8255.
7. KY. REV. STAT. § 278.183.
8. W. VA. CODE § 24-2-1g.

**B. ADMINISTRATIVE CODES AND RULES**

1. ARIZ. ADMIN. CODE R14-2-103(A)(3)(I).
2. ARIZ. ADMIN. CODE R14-2-212(G)(2).
3. ARIZ. ADMIN. CODE R14-2-1615.
4. ARIZ. ADMIN. CODE R14-2-1618.
5. WATER DIVISION, CALIFORNIA PUBLIC UTILITIES COMMISSION, STANDARD PRACTICE U-16-W, DETERMINATION OF WORKING CASH ALLOWANCE (May 16, 2002).

C. **ADMINISTRATIVE DECISIONS**

**Arizona:**

1. Decision No. 54204 (Oct. 11, 1984).
2. Decision No. 54247 (Nov. 28, 1984).
3. Decision No. 55118 (July 24, 1986).
4. Decision No. 55120 (July 24, 1986).
5. Decision No. 55228, 77 P.U.R. 4th 542 (Oct. 9, 1986).
6. Decision No. 58497, 149 P.U.R. 4th 251 (Jan. 12, 1994).
7. Decision No. 58644 (June 1, 1994).
8. Decision No. 59601 (Apr. 24, 1996).
9. Decision No. 67744 (Apr. 7, 2005) (with Settlement Agreement).
10. Decision No. 68437 (Feb. 2, 2006).
11. Decision No. 68566 (Mar. 14, 2006).
12. Decision No. 68685 (May 5, 2006).

**Other Jurisdictions:**

13. *DPUC Review of the United Illuminating Company's Rate Filing and Rate Plan Proposal*, State of Connecticut Department of Public Utility Control, Docket No. 01-10-10 (Sept. 26, 2002).
14. *In re Application of South Carolina Electric & Gas Company for Adjustments in the Company's Electric Rate Schedule and Tariffs*, Public Service Commission of South Carolina, Docket No. 88-681-E, Order No. 89-588 (July 3, 1989).
15. *In re Commonwealth Edison Co.*, 1982 Ill. PUC Lexis 33 (May 6 1982).
16. *In re Public Service Co. of Indiana*, 72 P.U.R. 4th 660 (Mar. 7 1986).
17. *ISO New England Inc.*, 117 F.E.R.C. P61,070 (Oct. 19, 2006).
18. *New Eng. Power Co.*, 31 F.E.R.C. P61,047 (1985).

19. *Providence Gas Company v. Edward Burman et. al.*, 22 P.U.R. 4th 103, 119 R.I. 78, 376 A.2d 687 (1977).
20. *In re Florida Power Corporation*, 138 P.U.R. 4th 472 (Oct. 22, 1992).
21. *In re GA. Power Co.*, 120 P.U.R. 4th 621 (Sept. 28, 1989).
22. *In re Hoosier Energy Rural Elec. Coop., Inc.*, 62 P.U.R. 4th 134 (June 29, 1984).
23. *In re Ind.-Am. Water Co., Inc.*, 169 P.U.R. 4th 252 (May 30, 1996).
24. *In re Intermountain Gas Co.*, 30 P.U.R. 4th 231 (Aug. 17, 1979).
25. *In re Kan. City Power and Light Co.*, 55 P.U.R. 4th 468 (July 8, 1983).
26. *In re Sierra Pac. Power Co.*, 129 P.U.R. 4th 470 (Jan. 31, 1992).
27. *Wisconsin Power Co.*, 73 F.E.R.C. P63,019 (1995).
28. *Wisconsin Power Co.*, 98 F.E.R.C. P61,233 (2002).
29. *In re The Investigation and Suspension of Tariff Sheets Filed by Public Service Company of Colorado for Advice Letter No. 1454- Electric and Advice Letter No. 671-Gas*, Colorado Public Utilities Commission, Docket No. C06S-234EG, Decision No. C06-1379 (Nov. 20, 2006).
30. *In re Proposed Regulatory Plan of Kansas City Power & Light Co.*, Missouri Public Service Commission, Case No. EO-2005-0329 (July 28, 2005).

**D. CASE LAW**

**Arizona:**

1. *Residential Utility Consumer Office v. Arizona Corp. Comm'n*, 199 Ariz. 588, 20 P.3d 1169 (App. 2001).
2. *Scates v. Arizona Corp. Comm'n*, 118 Ariz. 531, 578 P.2d 612 (Ariz. App. 1978).

**United States Supreme Court:**

3. *Bluefield Water Works & Improvement Co. v. Public Serv. Comm'n of West Virginia*, 262 U.S. 679 (1923).
4. *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1942).

**Other Jurisdictions:**

5. *Kentucky Industrial Utility Customers, Inc. v. Kentucky Pub. Serv. Comm'n*, 983 S.W.2d 493, 1998 Ky. LEXIS 165 (Dec. 1998).
6. *Public Serv. Co. of Colo. v. Pub. Utilities Commission of Colo.*, 653 P.2d 1117 (Colo. Sup. Ct. 1982).
7. *Violet v. F.E.R.C.*, 800 F.2d 280 (1st Cir. 1986).

**E. TREATISES**

1. ROBERT L. HAHNE & GREGORY E. ALIFF, ACCOUNTING FOR PUBLIC UTILITIES § 5.02 (1990).

**ARIZONA PUBLIC SERVICE COMPANY - REJOINDER POSITION**  
**Computation of Increase in Gross Revenue Requirements**  
**ACC Jurisdictional**  
**Adjusted Test Year Ended 09/30/2005**  
**(Dollars in Thousands)**

Electric - APS Rejoinder					
Line No.	Description	Original Cost	RCND	Fair Value	Line No.
1	Adjusted Rate Base <sup>1/</sup>	4,456,937	7,765,052	6,110,995	1
2	Adjusted Operating Income <sup>2/</sup>	129,539	129,539	129,539	2
3	<u>Current Rate of Return</u>	<u>2.91%</u>	<u>1.67%</u>	<u>2.12%</u>	3
4	Required Operating Income	389,091	389,091	389,091	4
5	Required Rate of Return <sup>3/</sup>	8.73%	5.01%	6.37%	5
6	Operating Income Deficiency	259,552	259,552	259,552	6
7	<u>Gross Revenue Conversion Factor<sup>4/</sup></u>	<u>1.6407</u>	<u>1.6407</u>	<u>1.6407</u>	7
8	Adjusted Increase in Base Revenue Requirements	425,847	425,847	425,847	8
9	Environmental Improvement Charge <sup>5/</sup>	4,542	4,542	4,542	9
10	<u>Environmental Portfolio Standard<sup>6/</sup></u>	<u>4,250</u>	<u>4,250</u>	<u>4,250</u>	10
11	<b>Total Increase in Revenue Requirement<sup>7/</sup></b>	<b>434,639</b>	<b>434,639</b>	<b>434,639</b>	11
12	Total Sales to Ultimate Retail Customers	2,127,322	2,127,322	2,127,322	12
13	Percentage Rate Increase	20.43%	20.43%	20.43%	13

1/ Rebuttal Testimony of APS Witness Rockenberger, Attachment LLR-3-1RB, page 1.

2/ APS Exhibit 53, page 2 of 3 (Schedule C-1, as adjusted in Rebuttal Testimony of APS Witness Froggatt, Attachment CNF-1RB, page 2, with rejoinder adjustments).

3/ SFR Schedule D-1 page 1 of 2, filed 1/31/06.

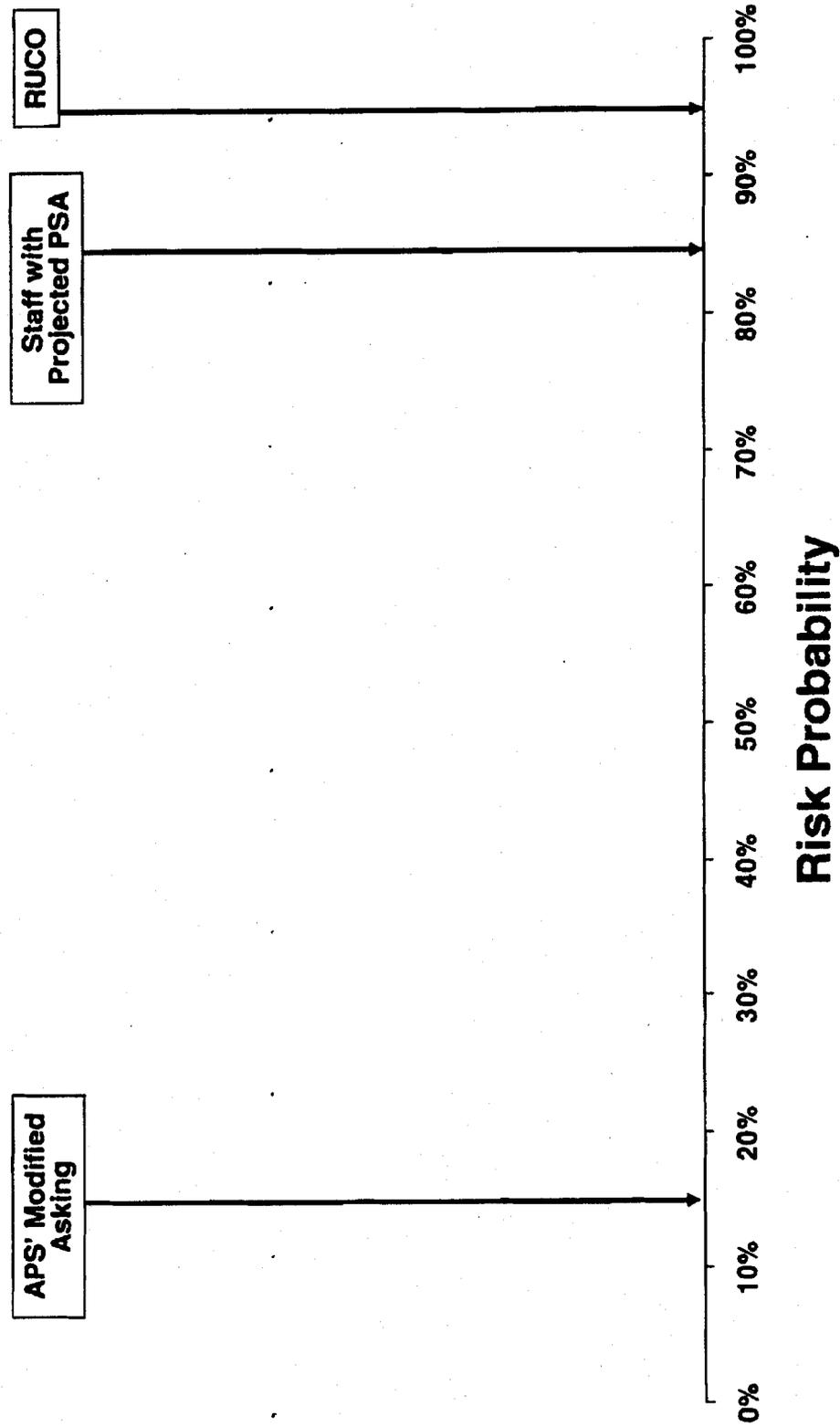
4/ SFR Schedule C-3, filed 1/31/06.

5/ Rebuttal Workpapers of APS Witness DeLizio, GAD\_WP4RB, page 1.

6/ Rebuttal Testimony of APS Witness DeLizio, page 6.

7/ As discussed in Rejoinder Testimony of APS Witness Wheeler, page 2. This is a reduction in revenue requirement of \$16.6 million from the rebuttal revenue requirement shown in the Rebuttal Testimony of APS Witness Wheeler, Attachment SMW-1RB.

# Arizona Public Service Company Risk of Credit Rating Downgrade to Junk





# Great Plains Energy (GXP)

## COMPANY UPDATE

### All that I Want for Christmas

Rating	<b>UNDERPERFORM*</b>
Price (21 Dec 06)	31.55 (US\$)
Target price (12M) (from 29.00)	30.00 (US\$)
52 week high - low	32.80 - 27.33
Market cap. (US\$ m)	2,526.6
Enterprise value (US\$ m)	3,690.1

\* Stock ratings are relative to the coverage universe in each analyst's or each team's respective sector.

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Last night the MO PSC issued a constructive order in KCP&L's rate case adopting an 11.25% ROE / 53.7% equity ratio vs. ask of 11.5% / 53.8% and staff testimony at 9.32-9.42% / 50.9%. The commission did not specify the rate change, which is expected in a few days. Further, the 11.25% ROE includes a 25 bps adder to reflect construction risk and allows KCP&L to keep off system sales for '07.

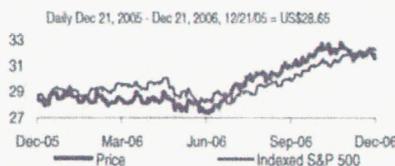
We are somewhat amazed the company got virtually all that it asked for. To GXP's credit, the company has done a better job managing the regulatory process than we originally anticipated.

We are raising our '07 EPS estimate to \$2.25 from \$2.15 to reflect the better than expected outcome in MO. Our updated estimates through '12 reflect a 25% increase in capex costs over '05 10-K disclosed amounts and a normalization of ROEs to 10.5% (industry average) going forward.

As a result of estimate increases, we are raising our target price by \$1 to \$30. If KCP&L were to maintain better than average regulatory relations in MO and KS with 11% ROEs over the medium term instead of our normalized 10.5% assumption, earnings could increase by \$0.10-0.15 providing for \$2-2.50 of support above our updated \$30 target.

While we continue to like GXP's investment program, we remain concerned that the lift is already priced into the stock. Maintain Underperform.

### Share price performance



On 12/21/06 the S&P 500 index closed at 1,418.30

Quarterly EPS	Q1	Q2	Q3	Q4
2005A	0.27	0.34	1.04	0.58
2006E	0.33	0.54	0.71	0.43
2007E				

### Financial and valuation metrics

Year	12/05A	12/06E	12/07E
EPS (CS adj., US\$)	2.23	2.01	2.25
Prev. EPS (US\$)			2.15
P/E (x)	14.2	15.7	14.0
P/E rel. (%)	78.2	99.9	102.2
Revenue (US\$ m)	2,604.9	—	—
EBITDA (US\$ m)	441.2	450.2	493.1
OCFPS (US\$)	5.59	4.99	4.27
P/OCF (x)	5.0	6.3	7.4
EV/EBITDA (current)	7.9	8.0	7.7
Net debt (12/05A, US\$ m)	1,077.4	1,155.7	1,392.0
ROIC	—	—	—
Number of shares (m)	80	IC (current, US\$ m)	—
BV/share (current, US\$)	16.62	EV/IC (x)	—
Net debt (current, US\$ m)	1,163.6	Dividend (current, US\$)	1.66
Net debt/Total cap. (current)	46.6%	Dividend yield	5.3%

Source: Company data, Credit Suisse estimates

**IMPORTANT DISCLOSURES, ANALYST CERTIFICATIONS AND INFORMATION ON TRADE ALERTS AND ANALYST MODEL PORTFOLIOS ARE IN THE DISCLOSURE APPENDIX.** U.S. Disclosure: Credit Suisse does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Customers of Credit Suisse in the United States can receive independent, third party research on the company or companies covered in this report, at no cost to them, where such research is available. Customers can access this independent research at [www.credit-suisse.com/ir](http://www.credit-suisse.com/ir) or call 1 877 291 2683 or email [equity.research@credit-suisse.com](mailto:equity.research@credit-suisse.com) to request a copy of this research.

Exhibit 1: GXP Income Statement

	2005A	Q106A	Q206A	Q306A	Q406E	2006E	2007E	2008E	2009E	2010E	2011E
<b>Gross Margin</b>	972	216	250	283	227	976	1,026	1,001	1,035	1,071	1,188
Other Operating Expenses	528	126	132	140	129	527	594	541	547	556	567
Loss on Property	4	0	(1)	0	(0)	(1)	(1)	(1)	(1)	(1)	(1)
<b>EBITDA</b>	441	90	118	143	99	450	493	461	489	516	622
D&A	153	39	39	40	41	160	170	172	176	178	194
<b>Operating Income</b>	288	51	79	103	58	290	323	289	313	338	428
Other Income / (Expense)	2	0	2	1	1	4	(1)	(1)	(1)	(1)	(1)
AFUDC - Other	1	0	1	1	7	9	26	36	40	45	9
Interest Charges	74	18	18	19	19	74	84	104	112	122	130
Interest Rate	6.9%	6.5%	6.5%	11.2%	6.6%	6.6%	6.6%	7.0%	6.8%	6.8%	6.8%
AFUDC - Borrowed	1	0	1	1	3	5	16	25	29	33	6
<b>Pre Tax Income</b>	218	34	64	86	50	234	281	245	269	293	312
Income Tax	42	9	21	29	15	74	87	75	83	92	100
Tax Rate	19%	26%	34%	33%	30%	32%	31%	31%	31%	32%	32%
Minority Interest	8	0	0	0	0	0	0	0	0	0	0
Equity Investments, net of tax	(0)	(0)	(0)	(0)	(0)	(1)	(1)	(1)	(1)	(1)	(1)
Preferred Dividends	2	0	0	0	0	2	2	2	2	2	2
<b>Recurring Net Income</b>	166	24	42	57	34	157	191	168	183	198	210
MTM Gains / (Losses)	(3)	(21)	(1)	(16)	0	(38)	0	0	0	0	0
Other Non Recurring Items	(3)	(6)	(3)	14	0	5	0	0	0	0	0
<b>Reported Net Income</b>	161	(3)	37	55	34	124	191	168	183	198	210
<b>Recurring EPS</b>	2.23	0.33	0.54	0.71	0.43	2.01	2.25	1.89	1.94	2.08	2.18
Growth	-8.1%	22.8%	61.2%	-32.2%	-26.5%	-9.6%	11.7%	-16.1%	2.8%	7.0%	5.1%
Diluted Shares Outstanding	75	75	77	80	80	78	85	89	94	95	96
Share Price	28.44	28.44	28.25	29.91	31.92	29.63	32.73	34.06	35.44	36.88	36.88
<b>Dividends Per Share</b>	1.66	0.42	0.42	0.42	0.42	1.66	1.66	1.66	1.66	1.66	1.66
Payout Ratio	74%	127%	77%	59%	97%	82%	74%	88%	85%	80%	76%
<b>EPS Breakdown</b>											
KCP&L	1.92	0.24	0.44	0.70	0.41	1.81	2.27	1.93	1.95	2.08	2.20
Strategic	0.42	0.14	0.07	0.07	0.05	0.31	0.15	0.18	0.18	0.19	0.19
Other	(0.09)	(0.04)	0.04	(0.05)	(0.03)	(0.09)	(0.16)	(0.18)	(0.17)	(0.17)	(0.19)
Total	2.23	0.33	0.54	0.71	0.43	2.01	2.25	1.89	1.94	2.08	2.18

Source: Company data, Credit Suisse estimates

Exhibit 2: GXP Balance Sheet

Balance Sheet	2005A	Q106A	Q206A	Q306A	Q406E	2006E	2007E	2008E	2009E	2010E	2011E
Cash and Equivalents	103	88	96	59	59	59	59	59	59	59	59
Total Accounts Receivable	128	154	130	207	116	116	121	124	130	134	148
Unbilled Revenues	131	88	180	148	119	119	124	128	133	138	152
Inventories	74	79	88	85	72	72	72	78	81	76	90
Other	55	49	65	66	66	66	66	66	66	66	66
<b>Total Current Assets</b>	<b>481</b>	<b>457</b>	<b>539</b>	<b>565</b>	<b>432</b>	<b>432</b>	<b>443</b>	<b>453</b>	<b>466</b>	<b>478</b>	<b>516</b>
PP&E	4,960	4,999	5,050	5,224	5,336	5,336	5,954	6,604	6,915	7,342	7,539
Construction Work in Progress	101	124	220	180	170	170	213	275	344	423	438
Net Nuclear Fuel	28	35	41	38	38	38	38	38	38	38	38
Accumulated Depreciation	2,323	2,355	2,392	2,424	2,465	2,465	2,635	2,806	2,982	3,160	3,354
<b>Net PP&amp;E</b>	<b>2,766</b>	<b>2,803</b>	<b>2,919</b>	<b>2,998</b>	<b>3,080</b>	<b>3,080</b>	<b>3,571</b>	<b>4,109</b>	<b>4,314</b>	<b>4,642</b>	<b>4,661</b>
Investment in Partnerships	28	25	25	24	24	24	24	24	24	24	24
Nuclear Decommissioning Trust	92	95	95	99	99	99	99	99	99	99	99
Other Investments	17	17	16	15	15	15	15	15	15	15	15
Intangible Assets	109	88	88	88	88	88	88	88	88	88	88
Other	331	332	339	325	325	325	325	325	325	325	325
<b>Total Assets</b>	<b>3,834</b>	<b>3,819</b>	<b>4,021</b>	<b>4,115</b>	<b>4,063</b>	<b>4,063</b>	<b>4,564</b>	<b>5,113</b>	<b>5,332</b>	<b>5,671</b>	<b>5,727</b>
ST and Current LT Debt	40	464	472	471	471	471	471	471	471	471	471
Accrued Interest Payable	13	13	14	14	12	12	12	13	13	14	15
Income Taxes Payable	38	42	61	97	41	41	40	42	43	45	50
Other Accts Payable & Accrued Exp.	276	249	260	309	309	309	309	309	309	309	309
Energy Risk Mgmt Liabilities	0	0	0	0	0	0	0	0	0	0	0
Other	35	56	75	106	106	106	106	106	106	106	106
<b>Total Current Liabilities</b>	<b>403</b>	<b>824</b>	<b>882</b>	<b>995</b>	<b>938</b>	<b>938</b>	<b>937</b>	<b>940</b>	<b>942</b>	<b>944</b>	<b>950</b>
Postretirement Benefits	87	88	90	90	90	90	90	90	90	90	90
Deferred Income Tax Liability	621	610	608	583	583	583	583	583	583	583	583
Deferred Tax Credit	30	29	28	27	37	37	77	117	157	187	237
LT Debt	1,141	752	751	752	744	744	981	1,163	1,310	1,464	1,521
Other	289	302	318	335	333	333	336	340	343	346	350
<b>Total Liabilities</b>	<b>2,571</b>	<b>2,605</b>	<b>2,678</b>	<b>2,783</b>	<b>2,726</b>	<b>2,726</b>	<b>3,005</b>	<b>3,233</b>	<b>3,425</b>	<b>3,625</b>	<b>3,731</b>
Total Preferred Equity	39	39	39	39	39	39	39	39	39	39	39
Common Equity	1,223	1,175	1,304	1,292	1,298	1,298	1,521	1,841	1,867	2,007	1,957
<b>Total Equity</b>	<b>1,262</b>	<b>1,214</b>	<b>1,343</b>	<b>1,331</b>	<b>1,337</b>	<b>1,337</b>	<b>1,560</b>	<b>1,880</b>	<b>1,906</b>	<b>2,046</b>	<b>1,996</b>
Balance	0	0	0	0	0	0	0	0	0	0	0
Total Debt	1,180	1,216	1,223	1,223	1,215	1,215	1,451	1,634	1,781	1,935	1,991
Net Debt	1,077	1,128	1,127	1,164	1,156	1,156	1,392	1,575	1,721	1,875	1,932
Total Debt / Cap	48%	50%	48%	48%	48%	48%	48%	48%	48%	48%	50%
Net Debt / Cap	46%	48%	46%	47%	46%	46%	47%	46%	47%	48%	49%
Total Cap	2,443	2,430	2,567	2,554	2,552	2,552	3,011	3,514	3,637	3,980	3,987
FFO	421	65	87	131	75	357	374	334	346	353	445
FFO / Debt	34%	35%	65%	38%	29%	29%	28%	20%	20%	18%	22%
FFO Interest Coverage	5.7	5.7	5.9	6.1	4.8	4.8	4.4	3.2	3.1	2.9	3.4

Source: Company data, Credit Suisse estimates

Exhibit 3: GXP Cash Flow Statement

Cash Flow Statement	2005A	Q106A	Q206A	Q306A	Q406E	2006E	2007E	2008E	2009E	2010E	2011E
Net Income	162	(2)	36	55	127	150	362	327	334	344	413
D&A	177	45	46	47	41	34	191	172	176	178	194
Def. Taxes and Inv. Tax Credits	(27)	(18)	(1)	(17)	(1)	(25)	40	40	40	40	40
Changes in Working Capital	(4)	(8)	(32)	(4)	76	32	(11)	(7)	(12)	(9)	(32)
AFUDC				(10)		(10)	(43)	(61)	(69)	(79)	(15)
Other	109	40	4	46	-	90	16	16	16	16	16
<b>Operating Cash Flow</b>	<b>417</b>	<b>57</b>	<b>55</b>	<b>127</b>	<b>150</b>	<b>389</b>	<b>362</b>	<b>327</b>	<b>334</b>	<b>344</b>	<b>413</b>
Capex	(327)	(74)	(156)	(141)	(112)	(483)	(618)	(649)	(311)	(427)	(198)
Asset Purchases	(22)	(2)	(1)	(1)		(4)	0	0	0	0	0
Asset Sales	17	0	0	0		0	0	0	0	0	0
Other	4	(3)	(3)	13		8	0	0	0	0	0
<b>Investing Cash Flow</b>	<b>(328)</b>	<b>(78)</b>	<b>(160)</b>	<b>(128)</b>	<b>(112)</b>	<b>(479)</b>	<b>(618)</b>	<b>(649)</b>	<b>(311)</b>	<b>(427)</b>	<b>(198)</b>
Net Change in ST Debt	18	36	9	(2)		43	0	0	0	0	0
Net Change in LT Debt	(5)	0	(1)	0	(8)	(9)	236	182	147	154	57
Net Preferred Issues	0	0	0	0		0	0	0	0	0	0
Net Common Issues	9	3	147	2	5	157	173	300	0	100	(100)
Dividends Paid to Shareholders	(125)	(32)	(34)	(34)	(33)	(132)	(141)	(148)	(157)	(158)	(160)
Other	(10)	(1)	(7)	(2)	(2)	(13)	(13)	(13)	(13)	(13)	(13)
<b>Financing Cash Flow</b>	<b>(114)</b>	<b>5</b>	<b>114</b>	<b>(35)</b>	<b>(38)</b>	<b>46</b>	<b>255</b>	<b>322</b>	<b>(22)</b>	<b>83</b>	<b>(215)</b>
Other Cash Flow	0	0	0	0	0	0	0	0	0	0	0
<b>Net Change in Cash</b>	<b>(25)</b>	<b>(16)</b>	<b>9</b>	<b>(37)</b>	<b>0</b>	<b>(44)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Beginning Cash	127	103	88	96	59	103	59	59	59	59	59
<b>Ending Cash</b>	<b>102</b>	<b>88</b>	<b>96</b>	<b>59</b>							

Source: Company data, Credit Suisse estimates



**Companies Mentioned** (Price as of 21 Dec 06)  
Great Plains Energy (GXP, \$31.55, UNDERPERFORM, TP \$30.00, UNDERWEIGHT)

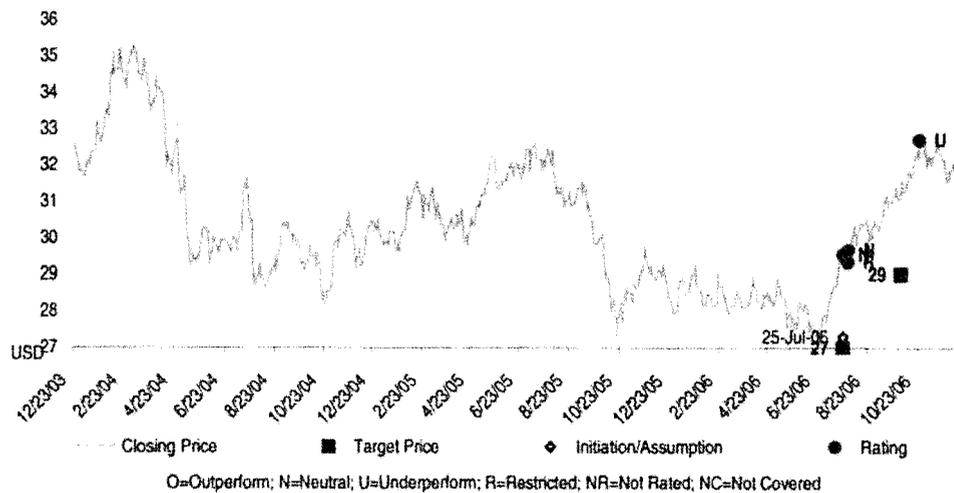
## Disclosure Appendix

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See the *Companies Mentioned* section for full company names.

### 3-Year Price, Target Price and Rating Change History Chart for GXP



GXP Date	Closing Price Price (US\$)	Target Price Price (US\$)	Rating	Initiation/ Assumption
7/25/06	29.54	27	NEUTRAL	X
7/31/06	29.33		RESTRICTED	
8/1/06	29.66		NEUTRAL	
10/3/06	31.36	29		
10/25/06	32.7		UNDERPERFORM	

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**Price Target:** (12 months) for (GXP)

**Method:** We reach our \$30 target price on Great Plains Energy primarily via a discounted cash flow model for each business unit and assumes 1% terminal growth. We use a 6.9% discount rate, in line with the broader Utility group rate. Additionally, we back up our valuation work using a dividend discount model to take into account GXP's healthy dividend, and traditional multiples.

**Risks:** Risks to our \$30 target price on Great Plains Energy include: (1) regulatory overhang. While KCP&L has already received prudence approval for its capital program, regulatory overhang will remain a primary risk since absolute dollars spent will most likely require annual rate case filings to receive timely recovery of capex spent. (2) volume growth at Strategic Energy. To reach GXP's overall earnings growth targets, Strategic will need to show modest levels of earnings growth. (3) interest rate exposure. As more of a pure play regulated utility with a robust dividend, GXP will be exposed to movements in interest rates with its yield support at risk.

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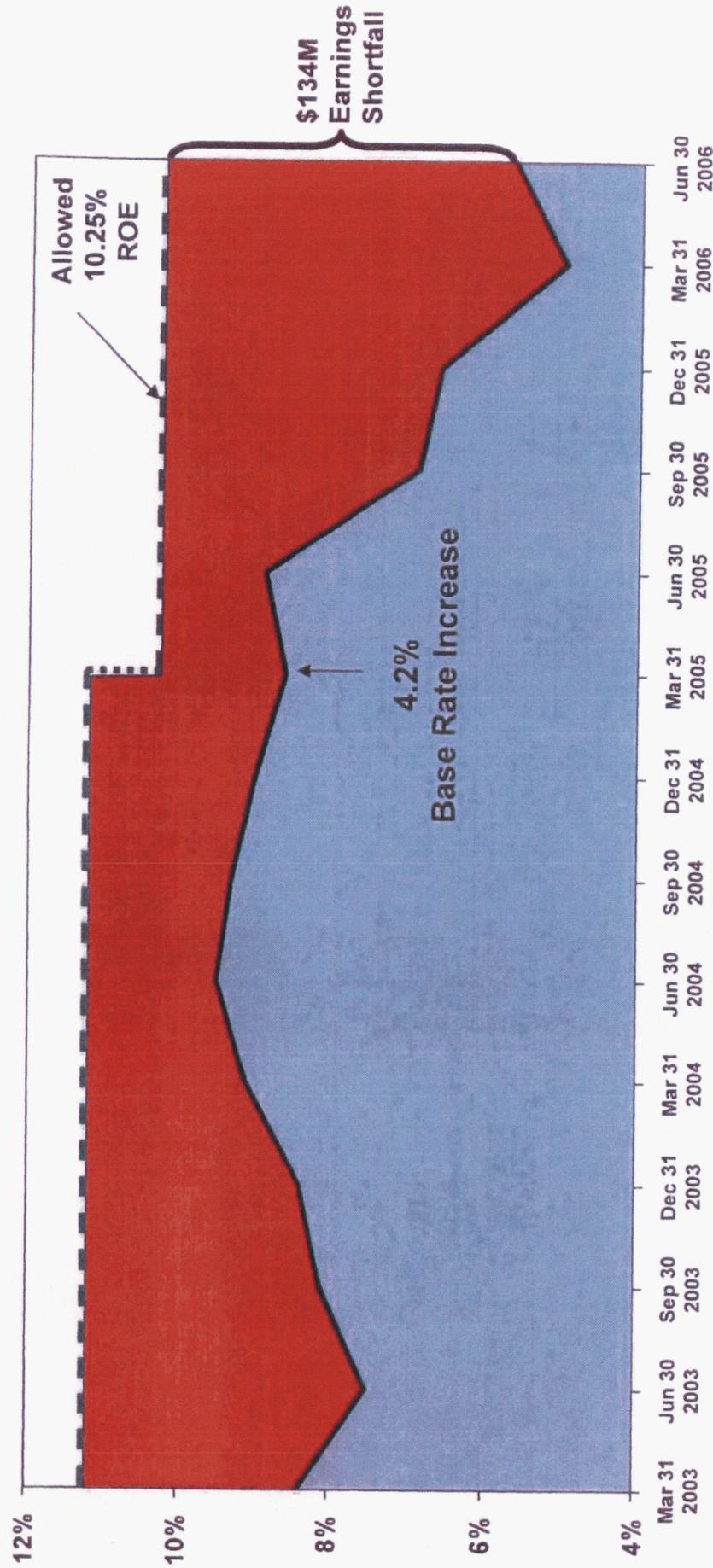
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# Arizona Public Service Company Return on Equity Twelve-Month Periods Ended March 31, 2003 to June 30, 2006



**ARIZONA PUBLIC SERVICE COMPANY**  
Summary of Original Cost and RCND Rate Base Elements  
Total Company and ACC Jurisdictional  
Test Year Ended 9/30/2005  
(Dollars in Thousands)

Line No.	Description	Original Cost						Line No.
		Total Company		ACC		ACC		
		Unadjusted Test Year [a] (A)	Pro Forma [b] (B)	Adjusted Test Year (C)	Unadjusted Test Year [c] (D)	Pro Forma [d] (E)	Adjusted Test Year (F)	
1.	Gross Utility Plant in Service	\$ 10,818,902	\$ 38,296	\$ 10,857,198	\$ 9,222,352	\$ 37,695	\$ 9,260,047	1.
2.	Less: Accumulated Depreciation & Amort.	4,170,525	(38,669)	4,131,856	3,548,546	(38,247)	3,510,299	2.
3.	Net Utility Plant in Service	6,648,377	76,965	6,725,342	5,673,806	75,942	5,749,748	3.
<b>Deductions:</b>								
4.	Deferred Taxes	1,203,998	1,766	1,205,764	1,062,993	1,903	1,064,896	4.
5.	Investment Tax Credits	-	-	-	-	-	-	5.
6.	Customer Advances for Construction	59,807	-	59,807	59,807	-	59,807	6.
7.	Customer Deposits	54,860	-	54,860	54,860	-	54,860	7.
8.	Pension Liability	72,920	-	72,920	68,699	-	68,699	8.
9.	Liability for Asset Retirement	263,457	-	263,457	260,419	-	260,419	9.
10.	Other Deferred Credits	111,791	6,376	118,167	109,485	6,007	115,492	10.
11.	Unamortized Gain-sale of Utility Plant	46,901	-	46,901	46,360	-	46,360	11.
12.	Regulatory Liabilities	168,048	-	168,048	160,744	-	160,744	12.
13.	Total Deductions	1,981,782	8,142	1,989,924	1,823,367	7,910	1,831,277	13.
<b>Additions:</b>								
14.	Regulatory Assets	88,046	(3,515)	84,531	67,380	(3,360)	64,020	14.
15.	Miscellaneous Deferred Debits	42,522	1,038	43,560	39,464	1,038	40,502	15.
16.	Depreciation Fund - Decommissioning	290,537	-	290,537	285,855	-	285,855	16.
17.	Allowance for Working Capital	168,146	(5,019)	163,127	152,433	(4,344)	148,089	17.
18.	Total Additions	589,251	(7,496)	581,755	545,132	(6,666)	538,466	18.
19.	Total Rate Base	\$ 5,255,846	\$ 61,327	\$ 5,317,173	\$ 4,395,571	\$ 61,366	\$ 4,456,937	19.

NOTES: [a] For Column (A) amounts, see Column (A) of Standard Filing Requirement Schedule B-1, page 1 of 2, filed January 31, 2006.  
 [b] For Column (B) amounts, see APS Closing Brief Exhibit 5, Schedule B-2, Column 8(O).  
 [c] For Column (D) amounts, see Column (D) of Standard Filing Requirement Schedule B-1, page 1 of 2, filed January 31, 2006.  
 [d] For Column (E) amounts, see APS Closing Brief Exhibit 5, Schedule B-2, Column 8(P).

Amounts in columns (B) and (E) are the sum of all rate base adjustments proposed by APS in its direct, rebuttal, and rejoinder testimony and reflect APS' final position on each issue.

FINAL APS POSITION  
CONSOLIDATED STANDARD FILING REQUIREMENTS  
SCHEDULE B-1  
Page 2 of 2

ARIZONA PUBLIC SERVICE COMPANY  
Summary of Original Cost and RCND Rate Base Elements  
Total Company and ACC Jurisdictional  
Test Year Ended 9/30/2005  
(Dollars in Thousands)

Line No.	Description	Total Company			RCND			Line No.
		Unadjusted Test Year [a] (A)	Pro Forma [b] (B)	Adjusted Test Year (C)	Unadjusted Test Year [c] (D)	Pro Forma [d] (E)	Adjusted Test Year (F)	
1.	Gross Utility Plant in Service	\$ 17,767,330	\$ 11,877	\$ 17,779,207	\$ 15,145,398	\$ 11,581	\$ 15,156,979	1.
2.	Less: Accumulated Depreciation & Amort.	7,243,608	(64,911)	7,178,697	6,163,319	(64,186)	6,099,133	2.
3.	Net Utility Plant in Service	10,523,722	76,788	10,600,510	8,982,079	75,767	9,057,846	3.
Deductions:								
4.	Deferred Taxes	1,203,998	1,749	1,205,747	1,062,993	1,886	1,064,879	4.
5.	Investment Tax Credits	-	-	-	-	-	-	5.
6.	Customer Advances for Construction (c)	59,807	-	59,807	59,807	-	59,807	6.
7.	Customer Deposits	54,860	-	54,860	54,860	-	54,860	7.
8.	Pension Liability	72,920	-	72,920	68,699	-	68,699	8.
9.	Liability for Asset Retirement	263,457	-	263,457	260,419	-	260,419	9.
10.	Other Deferred Credits	111,791	6,376	118,167	109,485	6,007	115,492	10.
11.	Unamortized Gain-sale of Utility Plant	46,901	-	46,901	46,360	-	46,360	11.
12.	Regulatory Liabilities	168,048	-	168,048	160,744	-	160,744	12.
13.	Total Deductions	1,981,782	8,125	1,989,907	1,823,367	7,893	1,831,260	13.
Additions:								
14.	Regulatory Assets	88,046	(3,515)	84,531	67,380	(3,360)	64,020	14.
15.	Miscellaneous Deferred Debits	42,522	1,038	43,560	39,464	1,038	40,502	15.
16.	Depreciation Fund - Decommissioning	290,537	-	290,537	285,855	-	285,855	16.
17.	Allowance for Working Capital (d)	168,146	(5,019)	163,127	152,433	(4,344)	148,089	17.
18.	Total Additions	589,251	(7,496)	581,755	545,132	(6,666)	538,466	18.
19.	Total Rate Base	\$ 9,131,191	\$ 61,167	\$ 9,192,358	\$ 7,703,844	\$ 61,208	\$ 7,765,052	19.

NOTES: [a] For Column (A) amounts, see Column (A) of Standard Filing Requirement Schedule B-1, page 2 of 2, filed January 31, 2006  
 [b] For Column (B) amounts, see APS Closing Brief Exhibit 5, Schedule B-3, Column 8(O).  
 [c] For Column (D) amounts, see Column (D) of Standard Filing Requirement Schedule B-1, page 2 of 2, filed January 31, 2006  
 [d] For Column (E) amounts, see APS Closing Brief Exhibit 5, Schedule B-3, Column 8(P).

Amounts in Columns (B) and (E) are the sum of all rate base adjustments proposed by APS in its direct, rebuttal, and rejoinder testimony and reflect APS' final position on each issue.

ARIZONA PUBLIC SERVICE COMPANY  
Original Cost Rate Base  
Pro Forma Adjustments  
(Dollars in Thousands)

FINAL APS POSITION  
CONSOLIDATED STANDARD FILING REQUIREMENTS  
SCHEDULE B-2  
Page 1 of 3

Line No.	Description	(1)		(2)		(3)	
		Total Co. (A)	ACC (B)	Total Co. (C)	ACC (D)	Total Co. (E)	ACC (F)
		Actual at End of Test Year 9/30/2005					
1.	Gross Utility Plant in Service (a)	\$ 10,818,902	\$ 9,222,352	\$ (13,833)	\$ (13,833)	\$ -	\$ -
2.	Less: Accumulated Depreciation & Amort. (a)	4,170,525	3,548,546	(2,032)	(2,032)	-	-
3.	Net Utility Plant in Service (a)	6,648,377	5,673,806	(11,801)	(11,801)	-	-
4.	Less: Total Deductions	1,981,782	1,823,367	(646)	(646)	(3,761)	(3,700)
5.	Total Additions	589,251	545,132	-	-	(9,630)	(9,475)
6.	Total Rate Base	\$ 5,255,846	\$ 4,395,571	\$ (11,155)	\$ (11,155)	\$ (5,869)	\$ (5,775)

(1) For Column (A) amounts, see Column (A) of Standard Filing Requirement Schedule B-2, page 1 of 3, filed January 31, 2006.  
For Column (B) amounts, see Column (B) of Standard Filing Requirement Schedule B-2, page 1 of 3, filed January 31, 2006.

(2) Adjustment to reduce Test Year rate base for the regulatory disallowance for West Phoenix Unit 4 as required in Decision No. 67744.  
For Column (C) amounts, see APS Exhibit 56 at Attachment LLR-1-2 [Rockenberger Direct].

(3) Adjustment to Test Year rate base to include System Benefit related Interim Spent Fuel Storage costs consistent with Decision No. 67744.  
For Column (E) amounts, see APS Exhibit 56 at Attachment LLR-1-3 [Rockenberger Direct].

ARIZONA PUBLIC SERVICE COMPANY  
Original Cost Rate Base  
Pro Forma Adjustments  
(Dollars in Thousands)

FINAL APS POSITION  
CONSOLIDATED STANDARD FILING REQUIREMENTS  
SCHEDULE B-2  
Page 2 of 3

Line No.	Description	(4)		(5)		(6)	
		Palo Verde Unit 1 Steam Generators Total Co. (G)	ACC (H)	Bark Beetle Regulatory Asset Total Co. (I)	ACC (J)	Long Term Disability (SFAS 112) Total Co. (K)	ACC (L)
1.	Gross Utility Plant in Service (a)	\$ 52,129	\$ 51,528	\$ -	\$ -	\$ -	\$ -
2.	Less: Accumulated Depreciation & Amort. (a)	(36,637)	(36,215)	-	-	-	-
3.	Net Utility Plant in Service (a)	88,766	87,743	-	-	-	-
4.	Less: Total Deductions	5,870	5,802	2,793	2,793	3,886	3,661
5.	Total Additions	-	-	7,153	7,153	-	-
6.	Total Rate Base	\$ 82,896	\$ 81,941	\$ 4,360	\$ 4,360	\$ (3,886)	\$ (3,661)

- (4) Adjustment to Test Year rate base to include the replacement of the Palo Verde Unit 1 Steam Generators in 2005 and the retirement of Palo Verde Unit 1 Steam Generator and Low Pressure Turbine Rotors.  
For Column (G) amounts, add together the amounts found on APS Exhibit 56 at Attachment LLR-1-4 [Rockenberger Direct] and APS Exhibit 57 at Attachment LLR-2-1RB [Rockenberger Rebuttal].
- (5) Adjust regulatory asset balance for deferred taxes; updated projected costs through December 2006; and correction to original calculation.  
For Column (I) amounts, add together the amounts found on APS Exhibit 56 at Attachment LLR-1-5 [Rockenberger Direct] and APS Exhibit 57 at Attachment LLR-2-2RB [Rockenberger Rebuttal].
- (6) Additional rate base pro forma to include deferred credits related to expenses for employees on long term disability.  
For Column (K) amounts, see APS Exhibit 49 at Attachment CNF 5-RB [Froggatt Rebuttal].

ARIZONA PUBLIC SERVICE COMPANY  
Original Cost Rate Base  
Pro Forma Adjustments  
(Dollars in Thousands)

FINAL APS POSITION  
CONSOLIDATED STANDARD FILING REQUIREMENTS  
SCHEDULE B-2  
Page 3 of 3

Line No.	Description	(7)		(8)		(9)			
		Allowance for Working Capital Total Co. (M)	ACC (N)	Total Original Cost Rate Base Pro Forma Adjustments Total Co. (O)	ACC (P)	Total Co. (Q)	Adjusted at End of Test Year 9/30/2005 ACC (R)		
1.	Gross Utility Plant in Service (a)	\$ -	-	\$ 38,296	\$ -	\$ 38,296	\$ 37,695	\$ 10,857,198	\$ 9,260,047
2.	Less: Accumulated Depreciation & Amort. (a)	-	-	(38,669)	\$ -	(38,669)	(38,247)	4,131,856	3,510,299
3.	Net Utility Plant in Service (a)	-	-	76,965	-	76,965	75,942	6,725,342	5,749,748
4.	Less: Total Deductions	-	-	8,142	-	8,142	7,910	1,989,924	1,831,277
5.	Total Additions	(5,019)	(4,344)	(7,496)	(4,344)	(7,496)	(6,666)	581,755	538,466
6.	Total Rate Base	\$ (5,019)	\$ (4,344)	\$ 61,327	\$ (4,344)	\$ 61,366	\$ 61,366	\$ 5,317,173	\$ 4,456,937

(7) Net reduction to Cash Working Capital for Palo Verde Lease, Revenue Lag and Purchased Power.  
For Column (M) amounts, see APS Exhibit 57 at Attachment LLR-2-3RB [Rockenberger Rebuttal].

ARIZONA PUBLIC SERVICE COMPANY  
RCND Rate Base  
Pro Forma Adjustments  
(Dollars in Thousands)

FINAL APS POSITION  
CONSOLIDATED STANDARD FILING REQUIREMENTS  
SCHEDULE B-3  
Page 1 of 3

Line No.	Description	(1)		(2)		(3)	
		Total Co. (A)	ACC (B)	Total Co. (C)	ACC (D)	Total Co. (E)	ACC (F)
			Actual at End of Test Year 9/30/2005		Regulatory Disallowance for West Phoenix Unit 4		Spent Fuel Storage
1.	Gross Utility Plant in Service (a)	\$ 17,767,330	\$ 15,145,398	\$ (13,833)	\$ (13,833)	\$ -	\$ -
2.	Less: Accumulated Depreciation & Amort. (a)	7,243,608	6,163,319	(2,032)	(2,032)	-	-
3.	Net Utility Plant in Service (a)	10,523,722	8,982,079	(11,801)	(11,801)	-	-
4.	Less: Total Deductions	1,981,782	1,823,367	(646)	(646)	(3,761)	(3,700)
5.	Total Additions	589,251	545,132	-	-	(9,630)	(9,475)
6.	Total Rate Base	\$ 9,131,191	\$ 7,703,844	\$ (11,155)	\$ (11,155)	\$ (5,869)	\$ (5,775)

(1) For Column (A) amounts, see Column (A) of Standard Filing Requirement Schedule B-3, page 1 of 3, filed January 31, 2006.  
For Column (B) amounts, see Column (B) of Standard Filing Requirement Schedule B-3, page 1 of 3, filed January 31, 2006.

(2) Adjustment to reduce Test Year rate base for the regulatory disallowance for West Phoenix Unit 4 as required in Decision No. 67744.  
For Column (C) amounts, see Column (C) of Standard Filing Requirements Schedule B-3, page 1 of 3, filed January 31, 2006.

(3) Adjustment to Test Year rate base to include System Benefit related Interim Spent Fuel Storage costs consistent with Decision No. 67744.  
For Column (E) amounts, see Column (E) of Standard Filing Requirements Schedule B-3, page 1 of 3, filed January 31, 2006.

ARIZONA PUBLIC SERVICE COMPANY  
RCND Rate Base  
Pro Forma Adjustments  
(Dollars in Thousands)

FINAL APS POSITION  
CONSOLIDATED STANDARD FILING REQUIREMENTS  
SCHEDULE B-3  
Page 2 of 3

Line No.	Description	(4)		(5)		(6)	
		Palo Verde Unit 1 Steam Generators Total Co. (G)	ACC (H)	Bark Beetle Regulatory Asset Total Co. (I)	ACC (J)	Long Term Disability (SFAS 112) Total Co. (K)	ACC (L)
1.	Gross Utility Plant in Service (a)	\$ 25,710	\$ 25,414	\$ -	\$ -	\$ -	\$ -
2.	Less: Accumulated Depreciation & Amort. (a)	(62,879)	(62,154)	-	-	-	-
3.	Net Utility Plant in Service (a)	88,589	87,568	-	-	-	-
4.	Less: Total Deductions	5,853	5,785	2,793	2,793	3,886	3,661
5.	Total Additions	-	-	7,153	7,153	-	-
6.	Total Rate Base	\$ 82,736	\$ 81,783	\$ 4,360	\$ 4,360	\$ (3,886)	\$ (3,661)

(4) Adjustment to Test Year rate base to include the replacement of the Palo Verde Unit 1 Steam Generators in 2005 and the retirement of Palo Verde Unit 1 Steam Generator and Low Pressure Turbine Rotors.  
For Column (G) amounts, add together the amounts found in Column (G) of Standard Filing Requirements Schedule B-3, page 2 of 3, filed January 31, 2006 and APS Exhibit 57 at Attachment LLR-3-2RB, Column (E) [Rockenberger Rebuttal].

(5) Adjust regulatory asset balance for deferred taxes; updated projected costs through December 2006; and correction to original calculation.  
For Column (I) amounts, add together the amounts found in Column (I) of Standard Filing Requirements Schedule B-3, page 2 of 3, filed January 31, 2006 and APS Exhibit 57 at Attachment LLR-3-2RB, Column (E) [Rockenberger Rebuttal].

(6) Additional rate base pro forma to include deferred credits related to expenses for employees on long term disability.  
For Column (K) amounts, see APS Exhibit 57 at Attachment LLR-3-2RB, Column (C) [Rockenberger Rebuttal].

ARIZONA PUBLIC SERVICE COMPANY  
RCND Rate Base  
Pro Forma Adjustments  
(Dollars in Thousands)

FINAL APS POSITION  
CONSOLIDATED STANDARD FILING REQUIREMENTS  
SCHEDULE B-3  
Page 3 of 3

Line No.	Description	(7)		(8)		(9)	
		Allowance for Working Capital Total Co. (M)	ACC (N)	Total Original Cost Rate Base Pro Forma Adjustments Total Co. (O)	ACC (P)	Total Co. (Q)	Adjusted at End of Test Year 9/30/2005 ACC (R)
1.	Gross Utility Plant in Service (a)	\$ -	\$ -	\$ 11,877	\$ 11,581	\$ 17,779,207	\$ 15,156,979
2.	Less: Accumulated Depreciation & Amort. (a)	-	-	(64,911)	(64,186)	7,178,697	6,099,133
3.	Net Utility Plant in Service (a)	-	-	76,788	75,767	10,600,510	9,057,846
4.	Less: Total Deductions	-	-	8,125	7,893	1,989,907	1,831,260
5.	Total Additions	(5,019)	(4,344)	(7,496)	(6,666)	581,755	538,466
6.	Total Rate Base	\$ (5,019)	\$ (4,344)	\$ 61,167	\$ 61,208	\$ 9,192,358	\$ 7,765,052

(7) Net reduction to Cash Working Capital for Palo Verde Lease, Revenue Lag and Purchased Power.  
For Column (M) amounts, see APS Exhibit 57 at Attachment LLR-3-2RB, Column (G) [Rockenberger Rebuttal].

**FINAL APS POSITION**  
**CONSOLIDATED STANDARD FILING REQUIREMENTS**  
**SCHEDULE C-1**  
 Page 1 of 2

ARIZONA PUBLIC SERVICE COMPANY  
 Total Company  
 Adjusted Test Year Statement of Income  
 Test Year 12 Months Ended 9/30/2005  
 (Dollars in Thousands)

Line No.	Description	Total Company			Line No.
		Actual For The Test Year Ended 9/30/05 [a] (A)	Proforma Adjustments [b] (B)	Test Year Results After Proforma Adjustments (C)	
1.	Electric operating revenues	\$ 3,371,546	\$ (772,059)	\$ 2,599,487	1.
	Operating expenses:				
2.	Purchased power and fuel	1,822,565	(549,126)	1,273,439	2.
3.	Operations and maintenance	573,962	89,682	663,644	3.
4.	Depreciation and amortization	318,961	25,467	344,428	4.
5.	Income taxes	153,962	(144,839)	9,123	5.
6.	Other taxes	124,972	15,159	140,131	6.
7.	Total	<u>2,994,422</u>	<u>(563,657)</u>	<u>2,430,765</u>	7.
8.	Operating income	377,124	(208,402)	168,722	8.
	Other income (deductions):				
9.	Income taxes	56,698	-	56,698	9.
10.	Allowance for equity funds used during construction	10,433	-	10,433	10.
11.	Regulatory disallowance	(143,217)	-	(143,217)	11.
12.	Other income	26,019	-	26,019	12.
13.	Other expense	(15,176)	-	(15,176)	13.
14.	Total	<u>(65,243)</u>	<u>-</u>	<u>(65,243)</u>	14.
15.	Income before interest deductions	<u>311,881</u>	<u>(208,402)</u>	<u>103,479</u>	15.
	Interest deductions:				
16.	Interest on long-term debt	141,301	-	141,301	16.
17.	Interest on short-term borrowings	6,285	-	6,285	17.
18.	Debt discount, premium and expense	4,344	-	4,344	18.
19.	Capitalized interest	(7,257)	-	(7,257)	19.
20.	Total	<u>144,673</u>	<u>-</u>	<u>144,673</u>	20.
21.	Net income	<u>\$ 167,208</u>	<u>\$ (208,402)</u>	<u>\$ (41,194)</u>	21.

NOTES: [a] For Column (A) amounts, see Column (A) of Standard Filing Requirement Schedule C-1, page 1 of 2, filed January 31, 2006.  
 [b] For Column (B) amounts, see APS Closing Brief Exhibit 5, Schedule C-2, Column (WWW).

Amounts in column (B) are the sum of all operating income adjustments proposed by APS in its direct, rebuttal, and rejoinder testimony and reflect APS' final position on each issue.

**FINAL APS POSITION**  
**CONSOLIDATED STANDARD FILING REQUIREMENTS**  
**SCHEDULE C-1**  
 Page 2 of 2

ARIZONA PUBLIC SERVICE COMPANY  
 ACC Jurisdiction  
 Adjusted Test Year Statement of Income  
 Test Year 12 Months Ended 9/30/2005  
 (Dollars in Thousands)

Line No.	Description	ACC Jurisdiction			Line No.
		Actual For The Test Year Ended 9/30/05 [a]	Proforma Adjustments [b]	Test Year Results After Proforma Adjustments	
		(A)	(B)	(C)	
1.	Electric Operating Revenues	\$ 3,303,455	\$ (758,435)	\$ 2,545,020	1.
	Other Operating Expenses:				
2.	Purchased power and fuel	1,779,046	(535,727)	1,243,319	2.
3.	Operations and maintenance	661,264	84,739	746,003	3.
4.	Depreciation and amortization	283,555	23,174	306,729	4.
5.	Income taxes	140,791	(141,023)	(232)	5.
6.	Other taxes	104,631	15,031	119,662	6.
7.	Total	2,969,287	(553,806)	2,415,481	7.
8.	Operating income	\$ 334,168	\$ (204,629)	\$ 129,539	8.
	Other income (deductions):				
9.	Income taxes	-	-	-	9.
10.	Allowance for equity funds used during construction	-	-	-	10.
11.	Regulatory disallowance	-	-	-	11.
12.	Other income	-	-	-	12.
13.	Other expense	-	-	-	13.
14.	Total	-	-	-	14.
15.	Income before interest deductions	334,168	(204,629)	129,539	15.
	Interest deductions:				
16.	Interest on long-term debt	-	-	-	16.
17.	Interest on short-term borrowings	-	-	-	17.
18.	Debt discount, premium and expense	-	-	-	18.
19.	Capitalized interest	-	-	-	19.
20.	Total	-	-	-	20.
21.	Net income	\$ 334,168	\$ (204,629)	\$ 129,539	21.

NOTES: [a] For Column (A) amounts, see Column (A) of Standard Filing Requirement Schedule C-1, page 2 of 2, filed January 31, 2006.  
 [b] For Column (B) amounts, see APS Closing Brief Exhibit 5, Schedule C-2, Column (XXX).

Amounts in column (B) are the sum of all operating income adjustments proposed by APS in its direct, rebuttal, and rejoinder testimony and reflect APS' final position on each issue.

ARIZONA PUBLIC SERVICE COMPANY  
 Income Statement Pro Forma Adjustments  
 Test Year Twelve Months Ended 9/30/2005  
 (Thousands of Dollars)

FINAL APS POSITION  
 CONSOLIDATED STANDARD FILING REQUIREMENTS  
 SCHEDULE C-2  
 Page 1 of 13

(1) (2) (3)

Line No.	Description	Regulatory Assessment and Franchise Fees		Base Rate Component for EPS		Demand Side Management (DSM)	
		Total Co. (A)	ACC (B)	Total Co. (C)	ACC (D)	Total Co. (E)	ACC (F)
1.	Electric Operating Revenues	\$ (15,947)	\$ (15,723)	\$ 6,779	\$ 6,779	\$ (4,907)	\$ (4,907)
2.	Purchased Power and Fuel Costs	(15,947)	(15,723)	6,779	6,779	(4,907)	(4,907)
3.	Oper Rev Less Purch Pwr & Fuel Costs						
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	(15,947)	(15,723)	6,000	6,000	2,989	2,989
6.	Maintenance	(15,947)	(15,723)	6,000	6,000	2,989	2,989
	Subtotal						
7.	Depreciation and Amortization	-	-	-	-	-	-
8.	Amortization of Gain	-	-	-	-	-	-
9.	Administrative and General	-	-	-	-	-	-
10.	Other Taxes	-	-	-	-	-	-
11.	Total	(15,947)	(15,723)	6,000	6,000	2,989	2,989
12.	Operating Income Before Income Tax	-	-	779	779	(7,896)	(7,896)
13.	Interest Expense	-	-	-	-	-	-
14.	Taxable Income	-	-	779	779	(7,896)	(7,896)
15.	Current Income Tax Rate -			304	304	(3,083)	(3,083)
16.	Operating Income (line 12 - line 15)	\$ -	\$ -	\$ 475	\$ 475	\$ (4,813)	\$ (4,813)

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WITNESS:

(1) Adjustment to Test Year operations to exclude regulatory assessments and franchise fees from both operating revenue and operating expense.  
 For amounts in Column (A), see APS Exhibit 48 at Attachment CNF 1-1 [Froggatt Direct].

(2) Adjustment to Test Year operations related to the base rate component of the Company's System Benefits Charge which is used to fund the Environmental Portfolio Standard. Revenue is adjusted to reverse Test Year entries for contributions in aid of construction and to include the expenses allowed by the Commission.  
 For amounts in Column (C), see APS Exhibit 48 at Attachment CNF 1-2 [Froggatt Direct].

(3) Adjustment to Test Year operations to reflect the operating income impact of Demand Side Management programs required by Decision No. 67744.  
 For amounts in Column (E), see APS Exhibit 48 of Attachment CNF 1-3 [Froggatt Direct].

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Line No.	Description	(4)		(5)		(6)	
		Total Co. (G)	ACC (H)	Total Co. (I)	ACC (J)	Total Co. (K)	ACC (L)
1.	Electric Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.	Purchased Power and Fuel Costs	-	-	-	-	-	-
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	-	-	-	-
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	2,400	2,400	-	-	-	-
6.	Maintenance	-	-	-	-	-	-
	Subtotal	2,400	2,400	-	-	-	-
7.	Depreciation and Amortization	-	-	381	381	(3,330)	(3,292)
8.	Amortization of Gain	-	-	-	-	-	-
9.	Administrative and General	-	-	-	-	-	-
10.	Other Taxes	-	-	-	-	-	-
11.	Total	2,400	2,400	381	381	(3,330)	(3,292)
12.	Operating Income Before Income Tax	(2,400)	(2,400)	(381)	(381)	3,330	3,292
13.	Interest Expense	-	-	-	-	-	-
14.	Taxable Income	(2,400)	(2,400)	(381)	(381)	3,330	3,292
15.	Current Income Tax Rate -	(937)	(937)	(149)	(149)	1,300	1,286
16.	Operating Income (line 12 - line 15)	\$ (1,463)	\$ (1,463)	\$ (232)	\$ (232)	\$ 2,030	\$ 2,006

WITNESS: FROGGATT

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(4) Adjustment to Test Year operations to reflect the operating income impact of interest on customer deposits. For Column (G) amounts, add together the amounts found on APS Exhibit 48 at Attachment CNF 1-4 [Froggatt Direct] and APS Exhibit 49 at Attachment CNF 6-RB [Froggatt Rebuttal].

(5) Adjustment to Test Year operations to include on-going amortization of regulatory assets. For Column (I) amounts, see APS Exhibit 48 at Attachment CNF 1-5 [Froggatt Direct].

(6) Adjustment to Test Year operations to reflect a 264 basis point differential and amortization of loan proceeds as required in Decision Nos. 65796 and 67744. For Column (K) amounts, see APS Exhibit at Attachment CNF 1-6 [Froggatt Direct].

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Line No.	Description	(7)		(8)		(9)	
		Total Co. (M)	ACC (N)	Total Co. (O)	ACC (P)	Total Co. (Q)	ACC (R)
1.	Electric Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.	Purchased Power and Fuel Costs	-	-	-	-	-	-
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	-	-	-	-
4.	Other Operating Expenses:	-	-	-	-	-	-
5.	Operations Excluding Fuel Expense	-	-	-	-	-	-
6.	Maintenance	-	-	-	-	-	-
6.	Subtotal	-	-	-	-	-	-
7.	Depreciation and Amortization	-	-	-	-	-	-
8.	Amortization of Gain	-	-	-	-	-	-
9.	Administrative and General	-	-	-	-	-	-
10.	Other Taxes	-	-	-	-	-	-
11.	Total	-	-	-	-	-	-
12.	Operating Income Before Income Tax	-	-	-	-	-	-
13.	Interest Expense	-	-	-	-	(7,705)	(6,461)
14.	Taxable Income	-	-	-	-	7,705	6,461
15.	Current Income Tax Rate -	(1,287)	(243)	(3,089)	(3,054)	3,009	2,523
16.	Operating Income (line 12 - line 15)	\$ 1,287	\$ 243	\$ 3,089	\$ 3,054	\$ (3,009)	\$ (2,523)

FROGGATT

FROGGATT

FROGGATT

WITNESS:

- (7) Adjustment to Test Year operations for out-of-period income tax true-ups. For Column (M) amounts, see APS Exhibit 48 at Attachment CNF 1-7 [Froggatt Direct].
- (8) Adjustment to Test Year operations to reflect the tax benefit associated with the American Jobs Creation Act. For Column (O) amounts, add together the amounts on APS Exhibit 48 at Attachment CNF 1-8 [Froggatt Direct] and APS Exhibit 49 at Attachment CNF 7-RB [Froggatt Rebuttal].
- (9) Adjustment to Test Year operations to reflect the synchronization of interest expense using the adjusted September 30, 2005 capital structure and cost of long-term debt, as well as the use of the statutory income tax rate. For Column (Q) amounts, add together the amounts on APS Exhibit 48 at Attachment CNF 1-9 [Froggatt Direct] and APS Exhibit 49 at Attachment CNF 8-RB [Froggatt Rebuttal].

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(10) (11) (12)

Regulatory Disallowance  
for West Phoenix Unit 4

Line No.	Description	PWEC Units		Sundance Units			
		Total Co. (S)	ACC (T)	Total Co. (U)	ACC (V)	Total Co. (W)	ACC (X)
1.	Electric Operating Revenues	\$ -	\$ -	\$ (1,791)	\$ (1,762)	\$ -	\$ -
2.	Purchased Power and Fuel Costs	-	-	(666)	(655)	-	-
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	(1,125)	(1,107)	-	-
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	-	-	22,363	22,105	2,110	2,086
6.	Maintenance	-	-	9,741	9,629	2,750	2,718
7.	Subtotal	-	-	32,104	31,734	4,860	4,804
8.	Depreciation and Amortization	(230)	(227)	-	-	-	-
9.	Amortization of Gain	-	-	-	-	-	-
10.	Administrative and General	-	-	20,415	20,180	-	-
11.	Other Taxes	(230)	(227)	52,519	51,914	4,860	4,804
12.	Total	230	227	(53,644)	(53,021)	(4,860)	(4,804)
13.	Operating Income Before Income Tax	(275)	(275)	(53,644)	(53,021)	(4,860)	(4,804)
14.	Interest Expense	505	502	-	-	-	-
15.	Taxable Income	197	196	(20,948)	(20,705)	(1,898)	(1,876)
16.	Current Income Tax Rate - 39.05%	33	31	(32,696)	(32,316)	(2,962)	(2,928)
	Operating Income (line 12 - line 15)	\$ 33	\$ 31	\$ (32,696)	\$ (32,316)	\$ (2,962)	\$ (2,928)

WITNESS:

ROCKENBERGER

ROCKENBERGER

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(10) Adjustment to Test Year operations to reflect amortization of regulatory disallowance of West Phoenix Unit 4 over the remaining life of the plant.  
For Column (S) amounts, see APS Exhibit 56 at Attachment LLR-2-1 [Rockenberger Direct].

(11) Adjustment to Test Year operations to annualize operating costs for the PWEC Units, which transferred to APS at 7/29/05, as authorized by Decision No. 67744. The PWEC Units include West Phoenix Combined Cycles No. 4 and No. 5, Redhawk Combined Cycles No. 1 and No. 2, and Saguaro Combustion Turbine No. 3. Includes revenue adjustment related to plant auxiliary power.  
For Column (U) amounts, see APS Exhibit 56 at Attachment LLR-2-5 [Rockenberger Direct].

(12) Adjustment to Test Year operations to include a projected year of O&M for the Sundance Units as authorized by Decision No. 67504.  
For Column (W) amounts, see APS Exhibit 56 at Attachment LLR-2-6 [Rockenberger Direct].

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Line No.	Description	Nuclear Decommissioning		Spent Fuel Storage		Palo Verde Unit 1 Steam Generators Depreciation	
		Total Co. (Y)	ACC (Z)	Total Co. (AA)	ACC (BB)	Total Co. (CC)	ACC (DD)
1.	Electric Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.	Purchased Power and Fuel Costs	-	-	10,828	10,653	-	-
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	(10,828)	(10,653)	-	-
4.	Other Operating Expenses:	-	-	-	-	-	-
5.	Operations Excluding Fuel Expense	-	-	-	-	-	-
6.	Maintenance	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-
7.	Depreciation and Amortization	3,883	3,820	-	-	1,785	1,764
8.	Amortization of Gain	-	-	-	-	-	-
9.	Administrative and General	-	-	-	-	-	-
10.	Other Taxes	3,883	3,820	-	-	1,785	1,764
11.	Total	(3,883)	(3,820)	(10,828)	(10,653)	(1,785)	(1,764)
12.	Operating Income Before Income Tax	-	-	(144)	(142)	2,041	2,017
13.	Interest Expense	(3,883)	(3,820)	(10,694)	(10,511)	(3,826)	(3,781)
14.	Taxable Income	(1,516)	(1,492)	(4,172)	(4,104)	(1,494)	(1,477)
15.	Current Income Tax Rate -		39.05%				
16.	Operating Income (line 12 - line 15)	\$ (2,367)	\$ (2,328)	\$ (6,656)	\$ (6,549)	\$ (291)	\$ (287)

WITNESS:

ROCKENBERGER

ROCKENBERGER

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(13) Adjustment to Test Year operations to increase contributions to the nuclear decommissioning trust funds to the amount authorized by Decision No. 67744.  
 For Column (Y) amounts, see APS Exhibit 56 at Attachment LLR-2-7 [Rockenberger Direct].

(14) Adjustment to Test Year operations to amortize deferred Interim Spent Fuel Storage expenses consistent with Decision No. 67744.  
 For Column (AA) amounts, add together the amounts in APS Exhibit 57 at Attachment LLR-2-2 [Rockenberger Direct] and APS Exhibit 57 at Attachment LLR-4-3RB [Rockenberger Rebuttal].

(15) Adjustment to Test Year depreciation related to the replacement of the Palo Verde Unit 1 steam generators.  
 For Column (CC) amounts, add together the amounts in APS Exhibit 56 at Attachment LLR-2-3 [Rockenberger Direct] and APS Exhibit 57 at Attachment LLR-4-1RB [Rockenberger Rebuttal].

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Line No.	Description	(16)		(17)		(18)	
		Total Co. (EE)	ACC (FF)	Total Co. (GG)	ACC (HH)	Total Co. (II)	ACC (JJ)
1.	Electric Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ 480	\$ 452
2.	Purchased Power and Fuel Costs	-	-	1,305	1,284	-	-
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	(1,305)	(1,284)	480	452
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	1,548	1,548	-	-	-	-
6.	Maintenance	-	-	-	-	-	-
	Subtotal	1,548	1,548	-	-	-	-
7.	Depreciation and Amortization	-	-	-	-	23,055	20,799
8.	Amortization of Gain	-	-	-	-	(77)	(71)
9.	Administrative and General	-	-	-	-	-	-
10.	Other Taxes	-	-	-	-	-	-
11.	Total	1,548	1,548	-	-	22,978	20,728
12.	Operating Income Before Income Tax	(1,548)	(1,548)	(1,305)	(1,284)	(22,498)	(20,276)
13.	Interest Expense	151	151	-	-	-	-
14.	Taxable Income	(1,699)	(1,699)	(1,305)	(1,284)	(22,498)	(20,276)
15.	Current Income Tax Rate -	(664)	(664)	(510)	(501)	(8,785)	(7,918)
16.	Operating Income (line 12 - line 15)	(884)	(884)	(795)	(783)	(13,713)	(12,358)

WITNESS: ROCKENBERGER ROCKENBERGER ROCKENBERGER

(16) Adjustment to Test Year operations to exclude expenses related to bark beetle remediation over and above normal 2002 operational expense as required by Decision No. 67744 and to amortize 2005 - 2006 estimated costs over a three year period. For Column (EE) amounts, add together amounts in APS Exhibit 56 at Attachment LLR-2-4 [Rockenberger Direct] and APS Exhibit 57 at Attachment LLR-4-2RB [Rockenberger Rebuttal].

(17) Adjustment to Test Year operations to reflect the annual final coal reclamation expense for the Four Corners Power Plant. For Column (GG) amounts, see APS Exhibit 56 at Attachment LLR-2-8 [Rockenberger Direct].

(18) Adjustment to Test Year operations to include depreciation and amortization expense based on the technical update to the depreciation rates authorized in Decision No. 67744; operating revenue related to depreciation and amortization billed to APSES; and amortization of gain authorized in Decision No. 64306. For Column (II) amounts, see APS Exhibit 56 at Attachment LLR-2-9 [Rockenberger Direct].

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(20)

(21)

Line No.	Description	Annualize Property Taxes		Annualize Payroll		Underfunded Pension Liability	
		Total Co. (KK)	ACC (LL)	Total Co. (MM)	ACC (NN)	Total Co. (OO)	ACC (PP)
1.	Electric Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.	Purchased Power and Fuel Costs	-	-	-	-	-	-
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	-	-	-	-
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	-	-	5,326	5,025	43,695	41,166
6.	Maintenance	-	-	3,913	3,692	-	-
	Subtotal	-	-	9,239	8,717	43,695	41,166
7.	Depreciation and Amortization	-	-	-	-	-	-
8.	Amortization of Gain	-	-	-	-	-	-
9.	Administrative and General	-	-	-	-	-	-
10.	Other Taxes	15,159	15,031	-	-	-	-
11.	Total	15,159	15,031	9,239	8,717	43,695	41,166
12.	Operating Income Before Income Tax	(15,159)	(15,031)	(9,239)	(8,717)	(43,695)	(41,166)
13.	Interest Expense	-	-	-	-	-	-
14.	Taxable Income	(15,159)	(15,031)	(9,239)	(8,717)	(43,695)	(41,166)
15.	Current Income Tax Rate -	(5,920)	(5,870)	(3,608)	(3,404)	(17,063)	(16,075)
16.	Operating Income (line 12 - line 15)	\$ (9,239)	\$ (9,161)	\$ (5,631)	\$ (5,313)	\$ (26,632)	\$ (25,091)

WITNESS:

ROCKENBERGER

ROCKENBERGER

ROCKENBERGER

(19) Adjustment to Test Year operations to annualize property taxes calculated using December 31, 2004 plant balances plus adjustment to Test Year operations to remove the 2007 phase-in cost increase for new generation plant. For Column (KK) amounts, add together the amounts in APS Exhibit 56 at Attachment LLR-2-12 [Rockenberger Direct] and APS Exhibit 57 at Attachment 4-4RB [Rockenberger Rebuttal].

(20) Adjustment to Test Year operations to reflect the annualization of payroll, payroll tax, and benefit expenses to December 2005 employee levels, December 2005 wage levels for performance review employees, and April 2006 wage levels for union employees. Includes adjustment to remove officer incentive expense. For Column (MM) amounts, see APS Exhibit 56 at Attachment LLR-2-14 [Rockenberger Direct].

(21) Adjustment to Test Year operations to increase pension expense to accelerate the recovery of the Company's underfunded pension liability. For Column (OO) amounts, see APS Exhibit 56 at Attachment LLR-2-15 [Rockenberger Direct].

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Line No.	Description	(22)		(23)		(24)	
		Total Co. (QQ)	ACC (RR)	Total Co. (SS)	ACC (TT)	Total Co. (UU)	ACC (VV)
1.	Electric Operating Revenues	\$ -	\$ -	\$ 2,217	\$ 2,217	\$ 17,494	\$ 17,212
2.	Purchased Power and Fuel Costs	-	-	-	-	276,911	276,724
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	2,217	2,217	(259,417)	(259,512)
Other Operating Expenses:							
4.	Operations Excluding Fuel Expense	(6,311)	(5,952)	(892)	(841)	-	-
5.	Maintenance	(6,311)	(5,952)	(892)	(841)	-	-
6.	Subtotal	-	-	-	-	-	-
7.	Depreciation and Amortization	-	-	-	-	-	-
8.	Amortization of Gain	-	-	-	-	-	-
9.	Administrative and General	(337)	(312)	6,985	4,778	-	-
10.	Other Taxes	(6,648)	(6,264)	6,093	3,937	-	-
11.	Total	-	-	-	-	-	-
12.	Operating Income Before Income Tax	6,648	6,264	(3,876)	(1,720)	(259,417)	(259,512)
13.	Interest Expense	6,648	6,264	(3,876)	(1,720)	-	-
14.	Taxable Income	-	-	-	-	(259,417)	(259,512)
15.	Current Income Tax Rate -	2,596	2,446	(1,514)	(672)	(101,302)	(101,339)
16.	Operating Income (line 12 - line 15)	\$ 4,052	\$ 3,818	\$ (2,362)	\$ (1,048)	\$ (158,115)	\$ (158,173)

WITNESS: ROCKENBERGER ROCKENBERGER EWEN

(22) Adjustment to Test Year operations to exclude advertising expenses related to Company branding.  
For Column (QQ) amounts, add together the amounts in APS Exhibit 56 at Attachment LLR-2-16 [Rockenberger Direct] and APS Exhibit 57 at Attachment LLR-4-7RB [Rockenberger Rebuttal].

(23) Adjustment to Test Year operations to eliminate non-recurring and out-of-period expenses.  
For Column (SS) amounts, see APS Exhibit 56 at Attachment LLR-2-17 [Rockenberger Direct].

(24) Adjustment to the Company's original pro forma to include 2007 base fuel and purchased power expense and off-system revenues in cents/kWh at adjusted test year usage levels.  
For Column (VV) amounts, add together the amounts in Column (VV) of SFR Schedule C-2 filed January 31, 2006, the amounts in APS Exhibit 49 at Attachment CNF-2RB, Column (FF) [Froggatt Rebuttal] and the amounts in APS Exhibit 53, page 2 of 2, Column (e).

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Line No.	Description	(25)		(26)		(27)	
		Total Co. (WW)	ACC (XX)	Total Co. (YY)	ACC (ZZ)	Total Co. (AAA)	ACC (BBB)
1.	Electric Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ 44,663	\$ 44,663
2.	Purchased Power and Fuel Costs	-	-	-	-	13,890	13,890
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	-	-	30,773	30,773
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	1,456	1,435	(729)	(718)	2,455	2,455
6.	Maintenance	1,456	1,435	(729)	(718)	2,455	2,455
7.	Subtotal	-	-	-	-	-	-
8.	Depreciation and Amortization	-	-	-	-	-	-
9.	Amortization of Gain	-	-	-	-	-	-
10.	Administrative and General	-	-	-	-	-	-
11.	Other Taxes	-	-	-	-	-	-
11.	Total	1,456	1,435	(729)	(718)	2,455	2,455
12.	Operating Income Before Income Tax	(1,456)	(1,435)	729	718	28,318	28,318
13.	Interest Expense	-	-	-	-	-	-
14.	Taxable Income	(1,456)	(1,435)	729	718	28,318	28,318
15.	Current Income Tax Rate -	569	(560)	285	280	11,058	11,058
16.	Operating Income (line 12 - line 15)	(887)	(875)	444	438	17,260	17,260

WITNESS: EWEN EWEN EWEN

(25) Adjustment to Test Year operations to reflect the normalization of fossil production maintenance expense and to include O&M costs of generators acquired for compliance with the Environmental Portfolio Standard. For Column (WW) amounts, see APS Exhibit 16 at Attachment PME-15, page 1 of 2 [Ewen Direct].

(26) Adjustment to Test Year operations to reflect the normalization of nuclear production maintenance expense. For Column (YY) amounts, see APS Exhibit 16 at Attachment PME-15, page 2 of 2 [Ewen Direct].

(27) Adjustment to Test Year operations to reflect the annualization of customer counts at December 31, 2004. For Column (AAA) amounts, see APS Exhibit 16 at Attachment PME-19 [Ewen Direct].

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Line No.	Description	Normalize Weather Conditions		Annualize 4/1/05 ACC Rate Levels		E-3/E-4 Promotional Expense	
		Total Co. (CCC)	ACC (DDD)	Total Co. (EEE)	ACC (FFF)	Total Co. (GGG)	ACC (HHH)
1.	Electric Operating Revenues	\$ 10,938	\$ 10,938	\$ 17,136	\$ 17,136	\$ -	\$ -
2.	Purchased Power and Fuel Costs	4,224	4,224	-	-	-	-
3.	Oper Rev Less Purch Pwr & Fuel Costs	6,714	6,714	17,136	17,136	-	-
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	747	747	-	-	62	62
6.	Maintenance	-	-	-	-	-	-
	Subtotal	747	747	-	-	62	62
7.	Depreciation and Amortization	-	-	-	-	-	-
8.	Amortization of Gain	-	-	-	-	-	-
9.	Administrative and General	-	-	-	-	-	-
10.	Other Taxes	-	-	-	-	-	-
11.	Total	747	747	-	-	62	62
12.	Operating Income Before Income Tax	5,967	5,967	17,136	17,136	(62)	(62)
13.	Interest Expense	-	-	-	-	-	-
14.	Taxable Income	5,967	5,967	17,136	17,136	(62)	(62)
15.	Current Income Tax Rate -	2,330	2,330	6,692	6,692	(24)	(24)
16.	Operating Income (line 12 - line 15)	3,637	3,637	10,444	10,444	(38)	(38)

WITNESS: EWEN RUMOLO

(28) Adjustment to Test Year operations to reflect normal weather conditions for the ten years ended December 31, 2004. For Column (CCC) amounts, see APS Exhibit 16 at Attachment PME-18 [Ewen Direct].

(29) Adjustment to Test Year operations to reflect the annualization of ACC rate levels for the 4/1/05 rate increase authorized in Decision No. 67744. For Column (EEE) amounts, see APS Exhibit 69 at Attachment DJR-5 [Rumolo Direct].

(30) Adjustment to Test Year operations to reflect increased promotional expense for low-income rate options as required by Decision No. 67744. For Column (GGG) amounts, see APS Exhibit 69 at Attachment DJR-6 [Rumolo Direct].

ARIZONA PUBLIC SERVICE COMPANY  
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FINAL APS POSITION  
CONSOLIDATED STANDARD FILING REQUIREMENTS  
SCHEDULE C-2  
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Line No.	Description	(31)		(32)		(33)	
		Total Co. (II)	ACC (JJJ)	Total Co. (KKK)	ACC (LLL)	Total Co. (MMM)	ACC (NNN)
1.	Electric Operating Revenues	\$ 127	\$ 127	\$ -	\$ -	\$ (849,248)	\$ (835,567)
2.	Purchased Power and Fuel Costs	-	-	-	-	(855,618)	(841,847)
3.	Oper Rev Less Purch Pwr & Fuel Costs	127	127	-	-	6,370	6,280
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	(38)	(38)	(2,778)	(2,746)	(6,618)	(6,511)
6.	Maintenance	(38)	(38)	(2,778)	(2,746)	(6,618)	(6,511)
7.	Subtotal	-	-	-	-	-	-
8.	Depreciation and Amortization	-	-	-	-	-	-
9.	Amortization of Gain	-	-	-	-	(2,161)	(2,126)
10.	Administrative and General	-	-	-	-	-	-
11.	Other Taxes	(38)	(38)	(2,778)	(2,746)	(8,779)	(8,637)
11.	Total	(38)	(38)	(2,778)	(2,746)	(8,779)	(8,637)
12.	Operating Income Before Income Tax	165	165	2,778	2,746	15,149	14,917
13.	Interest Expense	-	-	-	-	-	-
14.	Taxable Income	165	165	2,778	2,746	15,149	14,917
15.	Current Income Tax Rate -	64	64	1,085	1,072	5,916	5,825
16.	Operating Income (line 12 - line 15)	\$ 101	\$ 101	\$ 1,693	\$ 1,674	\$ 9,233	\$ 9,092

Unregulated APS Marketing and Trading Activity

Tax Consulting Fees

Schedule 1 Changes

WITNESS:

RUMOLO

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(31) Adjustment to Test Year operations to reflect revenue related changes to Schedule 1 as authorized in Decision No. 67744. For Column (III) amounts, add together amounts in APS Exhibit 69 at Attachment DJR-7 [Rumolo Direct] and APS Exhibit 49 at Attachment CNF-2RB, Page 6 of 7, Column (GG) [Froggatt Rebuttal].

(32) Additional adjustment to operating expense to remove out-of-period and non-recurring tax consultant fees. For Column (KKK) amounts, see APS Exhibit 49 at Attachment CNF-9RB [Froggatt Rebuttal].

(33) Additional operating income pro forma to remove APS unregulated marketing and trading activities from operating expense. For Column (MMM) amounts, see APS Exhibit 49 at Attachment CNF-3RB [Froggatt Rebuttal].

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Line No.	Description	(34)		(35)		(36)	
		Total Co. (000)	ACC (PPP)	Total Co. (QQQ)	ACC (RRR)	Total Co. (SSS)	ACC (TTT)
1.	Electric Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2.	Purchased Power and Fuel Costs	-	-	-	-	-	-
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	-	-	-	-
4.	Other Operating Expenses:						
5.	Operations Excluding Fuel Expense	-	-	-	-	2,249	2,119
6.	Maintenance	-	-	-	-	-	-
	Subtotal	-	-	-	-	2,249	2,119
7.	Depreciation and Amortization	-	-	-	-	-	-
8.	Amortization of Gain	-	-	-	-	-	-
9.	Administrative and General	-	-	(8,520)	(8,422)	-	-
10.	Other Taxes	-	-	(8,520)	(8,422)	2,249	2,119
11.	Total	-	-	(8,520)	(8,422)	(2,249)	(2,119)
12.	Operating Income Before Income Tax	-	-	8,520	8,422	-	-
13.	Interest Expense	-	-	8,520	8,422	(2,249)	(2,119)
14.	Taxable Income	-	-	-	-	-	-
15.	Current Income Tax Rate -	(4,838)	(4,588)	3,327	3,289	(878)	(827)
16.	Operating Income (line 12 - line 15)	\$ 4,838	\$ 4,588	\$ 5,193	\$ 5,133	\$ (1,371)	\$ (1,292)

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WITNESS:

(34) Additional adjustment to the Company's original cost-of-service income tax expense to reflect a top-down tax calculation including permanent tax items.  
For Column (000) amounts, see APS Exhibit 49 at Attachment CNF-4RB [Froggatt Rebuttal].

(35) Remove out-of-period and other legal costs from administrative and general expense.  
For Column (QQQ) amounts, see APS Exhibit 57 at Attachment LLR-4-8RB [Rockenberger Rebuttal].

(36) Adjustment to Test Year operations to reflect actual 2006 pension expense.  
For Column (SSS) amounts, see APS Exhibit 57 at Attachment LLR-4-5RB [Rockenberger Rebuttal].

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Line No.	Description	Post Retirement Medical Benefits		Income Statement Adjustments		Total
		Total Co. (UUU)	ACC (VVV)	Total Co. (WWW)	ACC (XXX)	
1.	Electric Operating Revenues	\$ -	\$ -	(772,059)	(758,435)	(37)
2.	Purchased Power and Fuel Costs	-	-	(549,126)	(535,727)	(38)
3.	Oper Rev Less Purch Pwr & Fuel Costs	-	-	(222,933)	(222,708)	
4.	Other Operating Expenses:					
5.	Operations Excluding Fuel Expense	(3,191)	(3,006)	56,169	53,885	
6.	Maintenance	-	-	17,131	16,756	
	Subtotal	(3,191)	(3,006)	73,300	70,641	
7.	Depreciation and Amortization	-	-	25,544	23,245	
8.	Amortization of Gain	-	-	(77)	(71)	
9.	Administrative and General	-	-	16,382	14,098	
10.	Other Taxes	-	-	15,159	15,031	
11.	Total	(3,191)	(3,006)	130,308	122,944	
12.	Operating Income Before Income Tax	3,191	3,006	(353,241)	(345,652)	
13.	Interest Expense	-	-	(5,932)	(4,710)	
14.	Taxable Income	3,191	3,006	(347,309)	(340,942)	
15.	Current Income Tax Rate -	1,246	1,174	(144,839)	(141,023)	
16.	Operating Income (line 12 - line 15)	\$ 1,945	\$ 1,832	\$ (208,402)	\$ (204,629)	

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WITNESS:

(37) Adjustment to Test Year operations to reflect actual 2006 post retirement medical expenses. For Column (UUU) amounts, see APS Exhibit 57 at Attachment LLR-4-6RB [Rockenberger Rebuttal].

(38) Income Tax Line 15 for the Total Income Statement Adjustments columns is not 39.05% of Total Taxable Income due to the required calculations for the Out-of-Period Income Tax Adjustment, Federal and State Income Tax, and Generation Production Deduction pro forma adjustments.