

ORIGINAL



0000065366

RECEIVED

BEFORE THE ARIZONA CORPORATION COMMISSION

0508

1 COMMISSIONERS

JAN 22 P 4: 53

2  
3 JEFF HATCH-MILLER, Chairman  
4 WILLIAM A. MUNDELL  
5 MIKE GLEASON  
6 KRISTIN K. MAYES  
7 GARY PIERCE

AZ CORP COMMISSION  
DOCUMENT CONTROL

8 IN THE MATTER OF THE  
9 APPLICATION OF ARIZONA PUBLIC  
10 SERVICE COMPANY FOR A HEARING  
11 TO DETERMINE THE FAIR VALUE OF  
12 THE UTILITY PROPERTY OF THE  
13 COMPANY FOR RATEMAKING  
14 PURPOSES, TO FIX A JUST AND  
15 REASONABLE RATE OF RETURN  
16 THEREON, TO APPROVE RATE  
17 SCHEDULES DESIGNED TO DEVELOP  
18 SUCH RETURN, AND TO AMEND  
19 DECISION NO. 67744

DOCKET NO. E-01345A-05-0816

CLOSING STATEMENT

OF

SOLAR ADVOCATES

20 IN THE MATTER OF THE INQUIRY  
21 INTO THE FREQUENCY OF  
22 UNPLANNED OUTAGES DURING 2005  
23 AT PALO VERDE NUCLEAR  
24 GENERATING STATION, THE CAUSES  
25 OF THE OUTAGES, THE  
26 PROCUREMENT OF REPLACEMENT  
27 POWER AND THE IMPACT OF THE  
28 OUTAGES ON ARIZONA PUBLIC  
SERVICE COMPANY'S CUSTOMERS

Docket No. E-01345A-05-0826

Arizona Corporation Commission  
DOCKETED

JAN 22 2007

DOCKETED BY [Signature]

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

25 The undersigned counsel, on behalf of the Intervener's in this docket collectively  
26 known as the Solar Advocates, hereby offers its CLOSING STATEMENT in the above  
27 referenced dockets pertaining to the Arizona Public Service Company ("APS").  
28

## Table of Contents

1		
2	SOLAR ADVOCATES CLOSING STATEMENT .....	7
3	I. Introductory Framework.....	7
4	Question 1: What does the public receive in exchange for the double digit rate increases	
5	requested by APS? .....	7
6	Answer 1: The Commission can insist that the Necessary Investment to Be Funded by the Rate	
7	Increase “Future Proofs” Arizona’s Electricity Infrastructure.....	7
8	.Need for Future Proofing the nearly \$1 Billion Annual Investment to Be Made by APS for	
9	“the foreseeable future”. .....	8
10	.. Aggressive Use of Modern Dynamic Rate Structures to Reduce the Need for Peak Driven	
11	Infrastructure Investment .....	8
12	Require Optimal Use of Solar Generation, Distributed Generation, and other forms of	
13	Demand Response.....	9
14	Question 2: Is the Potential Downgrading of a Regulated Utilities Credit Rating Sufficient	
15	Grounds for a Rate Increase? .....	10
16	Answer 2: The Commission Can Require The Company, As An Ongoing Condition Of The	
17	Rate Increase, To Address The Underlying Structural Causes Of Its Current Financial Status.	10
18	Question 3: How Can The Commission’s Granting of the Relief Requested By Solar Advocates	
19	Support the Resolution of this Rate Proceeding? .....	12
20	Answer 3: The Commission Can Grant Such Rate Increase As It Determines To Be In The	
21	Public Interest, While Assuring Its Constituents That Through Granting The Increase, It Has	
22	Achieved The Following: .....	12
23	1.....Required that the Company use the rate increases granted to “Future Proof” Arizona’s	
24	electricity Infrastructure,.....	12
25	2.Increased the use of renewable and energy efficiency, .....	12
26	3.Required that the Company develop in a collaborative, Commission monitored process, and	
27	implement the modern dynamic rate structures, Smart Grid innovation, and other Demand	
28		

1	Response best practices that will reduce the need for future investment driven by peak	
2	demands.....	12
3	<b>II. THE NET METERING TARIFF - RATE SCHEDULE EPR-5.....</b>	<b>12</b>
4	<b>A. Summary of Solar Advocates Proposed Changes To Net Metering Tariff As Filed.....</b>	<b>13</b>
5	1..... Increase the 10kW limitation on the size of individual installations able to utilize the net	
6	metering tariff to the 2 MW rapidly becoming the standard of states committed to clean	
7	energy and national best practice.....	13
8	2.Eliminate or increase the 15 MW aggregate limitation on the total capacity of generation	
9	facilities utilizing the net metering tariff to at least a significant part of the APS distributed	
10	goal under the recent REST Decision. ....	13
11	3.Eliminate the unnecessary “pilot” aspect of the filing.....	14
12	4.Require the Company to carry over to the next year, or pay its “avoided cost” for any	
13	remaining credits at the end of the calendar year, based on an annual “true up.”.....	14
14	5.Require an accurate and fair cost-allocation study specifically designed to determine the	
15	proper allocation of distribution costs that acknowledge the benefits of onsite generation in	
16	allowing customers to choose.....	14
17	6 While denying any current cost recovery in this docket based on alleged “lost revenues”,	
18	provide APS the opportunity to refile, without prejudice, a tariff under the newly adopted	
19	RES rules, or the principles set forth therein. ....	15
20	7.Finally, Solar Advocates suggests that the Commission consider the adoption of the	
21	additional provisions included in the red-lined Tariff added after the label “Additional	
22	Provisions from IREC Model Rule.”.....	15
23	<u>Additional Discussion of Recommendations.....</u>	<u>12</u>
24	<b>B. Increase the 10kW limitation on the size of individual installations able to utilize the net</b>	
25	<b>metering tariff to the 2 MW.....</b>	<b>16</b>
26	<b>C. Eliminate or increase the 15MW aggregate limitation on the total available for net</b>	
27	<b>metering.....</b>	<b>18</b>
28	<b>D. Eliminate the unnecessary “pilot” aspect of the filing.....</b>	<b>19</b>

1 E. Deny Without Prejudice APS Current Cost Recovery Request for hypothetical “lost  
2 revenues” and require that APS refile any future request under the principles of Rule R14-2-  
3 1808. Tariff ..... 23  
4 1. Solar Advocates Objections to Explicit and Implicit Aspects of December 20th, 2006 filing  
5 pertaining to the “Unrecovered Fixed Distribution Costs Attributable to Net Metering” .....  
6 The Myth of "Lost Revenues" In the Second Fastest Growing Utility in America ..... 26  
7 F. Require the Company to carry over to the next year, or pay its “avoided cost” for any  
8 remaining credits at the end of the calendar year, based on an annual “true up.” ..... 27  
9 G. Adopt Additional Provisions From IREC Model Rule..... 28  
10 III. SOLAR ADVOCATES RECOMMENDS DENIAL OF ANY COST  
11 RECOVERY FOR NET METERING COSTS--PENDING A PROPER APS  
12 FILING UNDER THE PRINCIPLES OF DECISION 69127 ..... 32  
13 A. Lost Revenues a Logical Impossibility in a General Rate Case ..... 33  
14 B. No Other States Allow the Recovery of “Lost Revenues” as a result of the application of a  
15 net metering tariff ..... 33  
16 C. APS Has Offered Neither Legal Authority Nor Sufficient Factual Basis for Its Request. 34  
17 D. General Rate Making Principals Do Not Allow the Naked Addition of Increased Costs to  
18 a Revenue Requirement—But Rather Also Require The Consideration of Offsetting Cost  
19 Decreases or Other Benefits. This is true whether or not the decreased costs or other benefits  
20 are related to the increased costs, and, a fortiori, where the benefits are created by the very  
21 circumstance alleged to increase costs..... 34  
22 E. The Methodology for cost Recovery Proposed by APS is Wholly Inadequate to Justify the  
23 Granting of Any Cost Recovery on the Present Record ..... 36  
24 F. There are exactly the same “lost revenues” when a customer chooses to install any  
25 Demand Side Management Equipment or Operating Technique—and Staff does not support  
26 recovery of lost revenues in such circumstances. .... 39  
27 G. “What's sauce for the goose is sauce for the gander” ..... 39  
28

1 H. Finally, the RES Decision specifies clearly the methodology that is to be utilized in  
2 calculating any cost recovery to which an affected utility may be entitled, and the reasoning  
3 behind the limitations therein..... 40  
4 1.R14-2-1808 Tariff..... 41  
5 2...The critical issues thus controlled and determined by the newly adopted Tariff rule R14-2-  
6 1808, whether because the rule itself is in effect or because the Commission has already  
7 decided in a quasi legislative forum the principles that should apply to cost recovery of any  
8 costs of net metering incurred by a jurisdictional utility include the following:..... 42  
9 3.APS proposed Tariff and Cost Recovery Mechanism Must Be Refined under the  
10 Requirements of Rule R14-2-1808 ..... 44  
11 IV. REMAINING ISSUES AND CONCLUSION..... 47  
12 A. OBJECTION TO USE OF NON TIME DIFFERENTIATED MEASUREMENT OF  
13 PEAK DEMAND IN PROPOSED TARIFFS E-56 AND E-57..... 47  
14 B. THE PROBLEM OF "NET BILLING" AS A SUBSTITUTE FOR TRUE NET  
15 METERING- The Two Fatal Flaws ..... 47  
16 1.*First, note that is the company claiming that net billing should be adequate—not its*  
17 *customers. And there is a reason for that—the treatment is not as satisfactory for customers*  
18 *as true net metering. .... 48*  
19 2.*The other fundamental problem with "net billing" is that it depends on a "fictional sale"*  
20 *that has been rejected at the federal level in both the relatively small circumstances of*  
21 *renewable generation, and also at the much larger circumstance involving what is called*  
22 *"station power." ..... 48*  
23 3.....*Solar Advocates thus urge the Commission to discount any weight that might be given to*  
24 *the APS arguments based on the availability of the so-called "net billing" tariffs. .... 49*  
25 C. ACKNOWLEDGEMENT OF SIGNFICANT REDUCTION IN THE TARIFFED RATE  
26 FOR THE TOTAL SOLAR RATE TARIFF..... 50  
27 D. OFFER TO WORK COLLABORATIVELY WITH ALL PARTIES TO DEVELOP  
28 CONSENSUS BASED RULES AND TARIFFS IN THE EVENT THE COMMISSION

1 REQUESTS THE PARTIES TO ATTEMPT A SETTLEMENT OF THE SOLAR RELATED  
2 ISSUES, PRIMARILY THE NET METERING TARIFF, WITH WHATEVER GUIDANCE  
3 MAY BE OFFERED ..... 50  
4 EXHIBITS ..... 51

5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

# SOLAR ADVOCATES CLOSING STATEMENT

## I. Introductory Framework

The issues that have been addressed by the Solar Advocates in this docket may appear to be the tail of the much larger dog involving the hundreds of millions of dollars in rate increases requested, and the **nearly \$1Billion per year that APS has testified they will be required to invest annually in new infrastructure to keep up with demand for the foreseeable future!**

However, as brought out during the hearing in testimony and cross-examination, the issues raised by Solar Advocates are extremely important to the essential questions facing the Commission as it fashions a decision that is in the public interest, using the tools of traditional cost of service, rate of return regulation. These essential questions include the following:

***Question 1: What does the public receive in exchange for the double digit rate increases requested by APS?*** While a significant portion of the increases are attributed to increased fuel costs, just what is "attrition," why should the Commissioners increase consumers' rates because of it, and what do the Company's customer receive in exchange?

***Answer 1: The Commission can insist that the Necessary Investment to Be Funded by the Rate Increase "Future Proofs"***

1 **Arizona's Electricity Infrastructure.** By including the following  
2 conditions in granting the appropriate rate increase , the Commission can  
3 assure its constituents that the allowed increase is an investment in  
4 Arizona's future—not a response to a hard to understand “hold-up” by  
5 Wall Street credit analysts. As brought out in various cross-examinations,  
6 Solar Advocates believes that the Commission should and can craft the  
7 granting of the any appropriate rate increase to include the following in  
8 exchange:  
9

10  
11 **❖ Need for Future Proofing the nearly \$1 Billion Annual**  
12 **Investment to Be Made by APS for “the foreseeable future”.**

13 Solar Advocates urge the adoption of a Commission monitored  
14 commitment by APS that the \$1Billion per year to be invested in  
15 infrastructure will be spent on technologies that will prepare Arizona  
16 for the present and future energy challenges ahead—not such  
17 things as obsolete metering equipment that prevents the adoption  
18 of modern dynamic rates structures, and substation equipment and  
19 other often ignored aspects of utility investment that lacks the  
20 automation capability that is already being installed by more  
21 innovative utilities. (See Solar Exhibit 11, San Diego Smart Grid  
22 Study)

23  
24 **❖ Aggressive Use of Modern Dynamic Rate Structures to**  
25 **Reduce the Need for Peak Driven Infrastructure Investment.**

26  
27 The testimony and cross-examination of the Company's witnesses  
28

1 sponsoring the rate proposals, and the proffered knowledge of the  
2 senior executives of the potential for the existence and use of  
3 modern dynamic tariffs, suggest either that APS knowledge and  
4 practice of modern dynamic rates is woefully behind the industry  
5 best practices, or that such issues exist behind the protective  
6 purview of "management discretion." Whichever is the case, Solar  
7 Advocates recommends that the Commission condition its granting  
8 of any rate increases upon satisfactory and timely adoption of "best  
9 practice" dynamic rate structures and other Demand Response<sup>1</sup>  
10 measures that will reduce the future need for a portion of the  
11 expected peak driven demand growth investment.  
12

13  
14 **❖ Require Optimal Use of Solar Generation, Distributed**  
15 **Generation, and other forms of Demand Response** As  
16 summarized in the FERC STAFF REPORT, "ASSESSMENT OF  
17 DEMAND RESPONSE & ADVANCED METERING," and further  
18 discussed in the Commission's Decision NO. 69127 IN DOCKET  
19 NO. RE-00000C-05-0030, FILED NOVEMBER 14, 2006,  
20 "RENEWABLE ENERGY STANDARD AND TARIFF RULES"  
21 (hereinafter REST DECISION.) sound resource planning principles  
22 require the increasing use of sustainable energy technologies, in  
23 conjunction with the dynamic rate regulatory and other best practice  
24  
25  
26

---

27 <sup>1</sup> See Federal Energy Regulatory Commission Staff Report, "Assessment of Demand  
28 Response & Advanced Metering, August 2006

1 Demand Response innovations to best position Arizona's economy  
2 for the 21<sup>st</sup> century. Virtually no evidence was presented in this  
3 general rate case regarding APS plans, objectives, or Commission  
4 requirements, even as limited to what would affect the very  
5 significant growth in peak demand at the very root of the APS rate  
6 request.  
7

8 ***Question 2: Is the Potential Downgrading of a Regulated Utilities***

9 ***Credit Rating Sufficient Grounds for a Rate Increase?*** Solar Advocates

10 is satisfied that the record justifies a Commission conclusion that failure to grant  
11 a rate increase may well result in a downgrading of APS credit rating, and that  
12 such a downgrading would in turn raise the ultimate cost of the huge investment  
13 that will be required to keep pace with expected growth. However, APS's  
14 essentially complete lack of Demand Response or other alternatives or  
15 supplements to the requested rate increase provides no assurance that the  
16 fundamental problems that appear to come with an extremely rapid growth rate  
17 under traditional regulation<sup>2</sup> will be addressed by the Company in utilizing the  
18 funds in its investment program in the coming decade  
19  
20  
21

22  
23 ***Answer 2: The Commission Can Require The Company, As An***

24 ***Ongoing Condition Of The Rate Increase, To Address The Underlying***  
25

26 <sup>2</sup> Note that testimony suggested that while the second fastest growing utility in the country is APS, the first is  
27 Nevada Power Company, (see NPC web site: "Because of the strong success of the gaming industry and Clark  
28 County in general, Nevada Power faces the challenge of a phenomenal 6% growth rate, the highest of any electric  
utility the country.") which has also had problems with its credit ratings. See Sierra Pacific Resources Press  
Release dated May 14, 2002, "Sierra Pacific Resources Reports Quarterly Loss" available on Nevada Power  
Web Site

1           ***Structural Causes Of Its Current Financial Status.*** While the Company  
2 offered testimony about “attrition” and negative “regulatory environment” to  
3 explain its apparently precarious credit standing, it offered no solutions to the  
4 Commission other than full payment for fuel and purchased power, coupled with  
5 an additional “attrition” kicker sufficient to raise its financial ratio’s to avoid a “junk  
6 bond” credit rating. Solar Advocates concludes that whatever the normal  
7 constraints on Commission action provided by the traditional “management  
8 prerogative,” or “management discretion” doctrines, such limitations must be  
9 relaxed where management has managed to get itself on credit watch lists while  
10 enjoying the second fastest growing territory in the country.  
11

12  
13           Clearly the Company is entitled to a reasonable return on, and of, its  
14 investment, and the Commission has given no indication that it will not fully  
15 support such requirement. What is required is a commitment by the Company to  
16 fully disclose its resource plans to the Commission and its staff, while at the  
17 same time opening the process to the improvements and innovation that comes  
18 with public disclosure and selected use of the market processes such as all  
19 source bidding, and non-discriminatory rules and tariffs for customer owned, and  
20 third-party owned alternative generation and demand side resources. This  
21 specially includes the net metering related provisions under review, as in  
22 essence net metering programs encourage customers to provide a portion of the  
23 investment necessary to meet demand—not rate based or pass through  
24 investments by the monopoly utility.  
25  
26  
27  
28

1 ***Question 3: How Can The Commission's Granting of the Relief***  
2 ***Requested By Solar Advocates Support the Resolution of this Rate***  
3 ***Proceeding?***

4  
5 ***Answer 3: The Commission Can Grant Such Rate Increase As It***  
6 ***Determines To Be In The Public Interest, While Assuring Its***  
7 ***Constituents That Through Granting The Increase, It Has Achieved***  
8 ***The Following:***

- 9
- 10 1. Required that the Company use the rate increases granted
  - 11 to "Future Proof" Arizona's electricity Infrastructure,
  - 12
  - 13 2. Increased the use of renewable and energy efficiency, and
  - 14
  - 15 3. Required that the Company develop in a collaborative,
  - 16 Commission monitored process, and implement the modern
  - 17 dynamic rate structures, Smart Grid innovation, and other
  - 18 Demand Response best practices that will reduce the need for
  - 19 future investment driven by peak demands.

20 **II. THE NET METERING TARIFF - RATE SCHEDULE EPR-5**

21 Based on the nationwide experience of several of our members, and the current  
22 experience in Arizona of the small businessmen and women who make up the  
23 Arizona Solar Energy Industries Association, we are concerned that the net metering  
24 tariff as proposed is inadequate to the goal of developing renewable, distributed  
25 generation in our state. However, with only a very few changes, shown in red-lined  
26 format and in final form at Exhibits A-1 and A-2, the revised tariff could result in the  
27  
28

1 satisfactory change of APS's proposed net metering tariff to one of which Arizonan's  
2 could be proud, and which would be consistent with the Commission's RES  
3 Decision, the stated policy of the Arizona state government<sup>3</sup>, and the net-metering  
4 provisions of EPACT 2005. These changes would accomplish the following:  
5

6 ***A. Summary of Solar Advocates Proposed Changes To Net***  
7 ***Metering Tariff As Filed.***

8 The changes suggested by Solar Advocates would result in an APS tariff  
9 consistent with the Commission's REST Decision, the stated policy of the Arizona  
10 state government, the net-metering provisions of EPACT 2005 and even the recently  
11 issued "Arizona Solar Electric Roadmap Study"<sup>4</sup>. These changes would accomplish  
12 the following:

- 13 **1. Increase the 10kW limitation on the size of individual**  
14 **installations able to utilize the net metering tariff to the 2 MW**  
15 **rapidly becoming the standard of states committed to clean**  
16 **energy and national best practice.**
- 17 **2. *Eliminate or increase the 15 MW aggregate limitation on***  
18 ***the total capacity of generation facilities utilizing the net***  
19 ***metering tariff to at least a significant part of the APS***  
20

21  
22 <sup>3</sup> For the most recent endorsement of the importance of the solar industry to the future of Arizona's economy see  
23 "Arizona Solar Electric Roadmap Study", Full Report, January 2007, issued by the Arizona Department of  
24 Commerce—Our Job is Jobs!, and prepared by Navigant Consulting, Inc., see also "Report: Ariz. ripe for solar  
25 energy" *State one of top spots in nation, study says*, Mark Shaffer, The Arizona Republic, Jan. 9, 2007 12:00 AM,  
26 which also noted, "The state's solar-energy producers could generate 1,000 megawatts of power and create 3,000  
27 jobs by 2020, according to the first solar-electric study prepared for the Arizona Department of Commerce." And  
28 "Arizona and California have the best sun in the country, and Arizona, especially, has the most developable land  
for this endeavor."

<sup>4</sup> "Arizona Solar Electric Roadmap Study", Full Report, January 2007, issued by the Arizona Department of  
Commerce—Our Job is Jobs! and prepared by Navigant Consulting, Inc.

1 ***distributed goal under the recent REST Decision***<sup>5</sup>. The  
2 proposed 15 MW capacity limitation is setting the program up for  
3 failure, which should not be tolerated by the Commission. At a  
4 minimum the aggregate limit should be raised to the 5% suggested in  
5 the IREC Model Net Metering Rule<sup>6</sup>, introduced as an Exhibit to Solar  
6 Advocate Witness Smeloff's direct testimony

7 **3. Eliminate the unnecessary "pilot" aspect of the filing.**

8  
9 **4. Require the Company to carry over to the next year, or pay**  
10 **its "avoided cost" for any remaining credits at the end of the**  
11 **calendar year, based on an annual "true up."**

12  
13 **5. Require an accurate and fair cost-allocation study**  
14 **specifically designed to determine the proper allocation of**  
15 **distribution costs that acknowledge the benefits of onsite**  
16 **generation in allowing customers to choose—in response to cost**  
17 **based price signals—when and how much to add to peak loads—**  
18 **which in turn drive the much discussed "fixed costs" of the**  
19 **company. Additionally, while the company acknowledges that on**  
20 **site generation brings benefits to the system, they offer no value**  
21 **for such benefits in their proposed methodology for calculation of**  
22 **"unrecovered fixed costs" in Attachment GAD-5RB (attachment to**

23  
24 <sup>5</sup> Note that on page 57 of Appendix B of Decision No. 69127 the Commission lists the following information  
provided by APS as its distributed targets under the proposed RES:

25 2007 22 GWh  
26 2008 52 GWh  
2009 91 GWh  
2010 157 GWh

27 The third column is simply APS distributed RES target, divided by the 1500kwh figure used by APS as an estimate  
of the number of kWh produced annually by a 1kW PV system, in order to reach an estimate of the total capacity of  
PV required to meet the target set by APS.

28 <sup>6</sup> The IREC Model Rule at Section 2.112 provides a limit of "five percent of the electricity provider's most recently  
measured annual peak load" The IREC Model Rule is Attached hereto as Exhibit B.

1 **Gregory A DeLizio's Rebuttal Testimony) See further discussion**  
2 **of the lack of any rational basis for the proposed cost recovery**  
3 **methodology in III below.**

4 **6. While denying any current cost recovery in this docket**  
5 **based on alleged "lost revenues", provide APS the opportunity to**  
6 **refile, without prejudice, a tariff under the newly adopted RES**  
7 **rules, or the principles set forth therein, which limit the recovery**  
8 **of costs incurred (including net metering) to amounts in excess of**  
9 **the Market Cost of Comparable Conventional Generation.**

10  
11 **7. Finally, Solar Advocates suggests that the Commission**  
12 **consider the adoption of the additional provisions included in the**  
13 **red-lined Tariff added after the label "Additional Provisions from**  
14 **IREC Model Rule." These provisions have been developed based**  
15 **on IREC's experience in almost two decades of net metering work**  
16 **around the country. Some of these issues have been raised in this**  
17 **docket, and those remaining will be raised in the future. Properly**  
18 **introduced in these proceeding by Mr. Smeloff, Solar Advocates**  
19 **urges the Commission to consider their adoption in both this APS**  
20 **specific docket and as the RES decision and/or the principles**  
21 **developed therein are implemented. Adoption now will save**  
22 **considerable Commission, Commission staff, and customer time**  
23 **and resources in comparison to case by case or other future**  
24 **resolution proceedings.**

25 **Additional arguments and evidence supporting these suggestions are set**  
26 **forth below:**

1           ***B. Increase the 10kW limitation on the size of individual***  
2           ***installations able to utilize the net metering tariff to the 2 MW***

3           The prefiled rebuttal testimony of Mr. DeLizio<sup>7</sup> suggested in response to  
4           Mr. Smeloff's suggestion to increase the maximum size limit to 2 MW that the  
5           proposal to increase the limit to 2 MW would result in Arizona's net metering limit  
6           being an "outlier"—somehow out of step with the development of net metering on  
7           a national basis. To the contrary, as a review of Solar Exhibit 13 (an Updated  
8           Table from the Dsireusa.org database dated October 2006 indicated upon cross  
9           examination, states who limit net metering to 10kw are fast losing ground to  
10          states with much higher limits, with the most recent actions trending significantly  
11          upwards including Colorado's adoption of a 2MW limit, New Jersey's adoption of  
12          a 2 MW limit, and Pennsylvania's 2MW limit depending on the nature of the use.  
13          Even closer to home, we understand New Mexico has just recently (on January  
14          1, 2007) adopted an 80 MW limit!

15          While Solar Advocates does not espouse simply following the crowd, it is  
16          important to note that the early very low limits were not set based on any rigorous  
17          engineering or even economic analysis. Rather, by setting the early limits at  
18          10kw, both Commissions and state legislature could be confident that whatever  
19          problems might be lurking as a result of net metering and interconnection,  
20          systems of such small sizes were extremely unlikely to cause any problems  
21          whatsoever.

22          It is very important the Commission note that the many fears about which  
23          utilities commonly warned Commissions and other policy makers throughout the  
24          country as state and federal regulatory bodies addressed net metering and  
25          interconnection issues have not been borne out. Let us be very clear:

26  
27  
28          

---

<sup>7</sup> See DeLizio's Rebuttal Testimony at p>

**There have been no safety, reliability, or economic traumas reported to date as a result of the regulatory insistence on access to interconnection and fair net metering provisions.**

It should be noted as evidence of this claim that in this case, even with the vast resources of APS's litigation team—APS has brought forward no evidence supporting any limit! Rather, upon cross-examination, the justification for the low limit has been that the proposed tariff is "just a pilot<sup>8</sup>," or that larger customers could use the Company's net billing tariffs which have been disingenuously characterized as just as good<sup>9,10</sup> for larger customers<sup>11</sup>. This has the additional detrimental effect that the larger PV systems, which typically involve decreasing per kWh costs as the size increase, will not be allowed to participate in one of the most important incentive program to encourage PV investment—net metering.

Thus, in the absence of any evidence that justifies any limit at all on the size of renewable energy systems qualifying for net metering, Solar Advocates suggests at the present time that Arizona adopt the provision contained in the model IREC rule of 2 MW, thereby placing Arizona on the leading edge of states who are serious about encouraging private investment in renewable energy systems.

<sup>8</sup> See Testimony, DeLizio Direct and Rebuttal.

<sup>9</sup> See Testimony, DeLizio Direct and Rebuttal.

<sup>10</sup> See discussion in Part IV for an explanation of why Net Billing is assuredly not "just as good"

<sup>11</sup> It should also be noted that by limiting the use of net metering to extremely small systems, APS precludes the State's energy economy from the reduced unit costs available to solar generation owners as the total size increases. See Arizona 2006 Data showing Solar System Cost per kWh for different sized systems prepared by the Arizona Department of Commerce, available at [http://www.azcommerce.com/doclib/energy/solar\\_module\\_prices\\_arizona.pdf](http://www.azcommerce.com/doclib/energy/solar_module_prices_arizona.pdf) While APS staff have argued in National forums that "utility sized" (i.e. multi megawatt installations) are to be preferred as a result of this decreased unit cost, apparently that economy of scale only applies when the utility is operating the large systems?

1           **C.     Eliminate or increase the 15MW aggregate limitation on the**  
2           **total available for net metering**

3           While there is at least an understandable historical reason for the  
4           limitation of the maximum size of systems qualifying for net metering to 10kw—  
5           as discussed above, early adopters at Commissions wanted to make certain that  
6           the systems were too small to cause any of the traumatic events then being  
7           touted by distributed generation opponents—no such justification exists for the  
8           aggregate limitation. The aggregate limits exist solely as a kind of “safety  
9           blanket” for traditional utilities worried from a strategic point of view that perhaps  
10          the distributed generation phenomenon is a “disruptive technology<sup>12</sup>” Any  
11          necessary safety and reliability limitations are addressed in the interconnection  
12          rules based on the IEEE 1547 Series of Standards and Guidelines. Again, in the  
13          absence of any evidence from APS<sup>13</sup> justifying the proposed 15MW limit to the  
14          “pilot” program, Solar Advocates suggests the use of the IREC model rule  
15          provision limiting the aggregate capacity of net metered systems to 5% as  
16          follows:

17                    2.112 Each electricity provider shall make net metering available to  
18                    eligible customer-generators in a timely manner and on a first-come, first-

21                    <sup>12</sup> See The Innovator's Dilemma, When New Technologies Cause Great Firms to Fail, Clayton M. Christensen,  
                      Harvard Business School Press (C) 1997

22                    <sup>13</sup> The “justification” for the 15 MW Aggregate Cap is apparently contained in the following:

23           **Q: WHAT ABOUT THE OVERALL PROGRAM CAP OF 15 MW FOR THE NET**  
24           **METERING PILOT PROGRAM?**

25           **A:** The Company believes that the proposed 15 MW cap on total aggregate participation in the  
26           EPR-5 net metering pilot program is appropriate, even in light of a potential expanded renewable  
27           energy program. The EPR-5 rate is proposed as a pilot program, and is therefore designed to be  
28           a limited offering to provide an incentive for small customers to participate in the Company's  
                      Solar Partners Incentive Program (credit purchase program). In addition, as summarized  
                      above, the Company already offers other net metering/net billing type rates that do not have  
                      any aggregate cap on participation.

                      --From DeLizio Direct Testimony at Page 14-15, beginning on line 22.

1            *served basis up to five percent of the electricity provider's most recently*  
2            *measured annual peak load.*

3            Again, inclusion of such a more realistic limit would position Arizona to take its  
4            rightful place among the top solar resource states in the country, without the  
5            necessity of raising the limit based on little other than the limit is being  
6            approached and no reasons not to increase it can be found. (See California's  
7            recent need to raise their limit legislatively as PG&E was approaching its  
8            previously set limit.)

9            ***D.    Eliminate the unnecessary "pilot" aspect of the filing.***

10           It is hard to understand the purpose of APS's insistence upon  
11           characterizing the proposed net metering tariff as a pilot, unless again there is a  
12           conscious or unconscious intent to cause the net metering and renewable energy  
13           standard to fail. Pilots are appropriate when there are genuine concerns about  
14           reliability, safety, or the details of how best to offer a new product or service to  
15           customers. That situation does not exist for APS. APS, is one of, if not the last  
16           remaining technologically sophisticated and environmentally oriented utility  
17           companies that do not have a clear and true net metering tariff.  
18  
19  
20

21           This is especially ironic in this case because one of APS strength's on  
22           Wall Street is the progress it has otherwise made in the area of environmental  
23           stewardship—thereby reducing the risk to which other less progressive utilities  
24           may find themselves should more significant environmental regulations, market  
25           conditions, or policies occur in the coming years. A leading proponent of this  
26           perspective in evaluating utility companies is Innovest Strategic Value Advisors,  
27           advises institutional investors has ranked APS parent company Pinnacle West at  
28           the top of US utilities for at least 7 years. In a report reported by the social

1 responsibility web site [www.socialfunds.com](http://www.socialfunds.com) "**Social and Environmental Best**  
2 **Practice Linked to Financial Outperformance in Electric Sector**", by William  
3 Baue, the report noted,

4 *Once again, Innovest Strategic Value Advisors, a global socially responsible investment*  
5 *(SRI) research firm, has produced a report demonstrating the financial value of*  
6 *environmental, social, and corporate governance best practice. The most recent report,*  
7 *released earlier this week, assesses 26 electric power producers in the US. The electric*  
8 *power sector is particularly exposed to the risks of regulation and litigation, as it emits*  
9 *approximately one third of the air pollution in the country.*

10 *As with almost every other Innovest sector report, the half of this group of companies with*  
11 *better environmental, social, and governance ratings generate better financial returns on*  
12 *average than the remaining half of these companies that lag in these areas. Innovest*  
13 *applies both the EcoValue21 (EV21) rating, which examines 60 aspects of environmental*  
14 *risk and opportunity, and the Intangible Value Assessment (IVA), which analyzes 80*  
15 *aspects of social and governance performance. Innovest's ratings mimic bond ratings,*  
16 *ranging from AAA (best) to CCC (worst).*

17 *Both the EV21 and the IVA ratings find proactive companies outperforming laggards by*  
18 *over 900 basis points (or 9 percentage points) in average total shareholder return (stock*  
19 *price appreciation plus dividends) over the 3-year period ending December 2003.*

20 *FPL Group (ticker: FPL) and Pinnacle West Capital (PNW) both earned AAAs in the*  
21 *EV21 and IVA ratings.*

22 As suggested in the Solar Advocates' cross-examination of several of the senior  
23 executives of APS, APS, the Commission, and Commission staff have every right  
24 to be proud of the Company's environmental record, as recognized  
25 Internationally by INNOVEST, and there is little doubt that the environmental  
26 leadership it has shown as an electric utility has resulted in lower rates for APS  
27 customers as a result of the favorable influence on Wall Street Analysts. Similar  
28 benefits can presumably be expected from Wall Street when the Company more

1 fully commits to the goals of the recently adopted Renewable Energy Standard,  
2 and adopts a non-pilot, non-experimental, true net metering tariff.

3  
4 However, the present irony is a result of the fact that **even the INNOVEST**  
5 **analysts who have recognized APS's otherwise laudatory environmental**  
6 **performance have themselves chided APS/PNW for not having a net**  
7 **metering tariff!**

8  
9 **The Innovest report introduced as Solar Exhibit 1—The Innovest**  
10 **Strategic Value Advisors Intangible Value Assessment of Pinnacle West**  
11 **Corp** (dated Feb-04) provides on page 6 of the analysis, in the section entitled  
12 Intellectual Capital/Product Development, the following:  
13

14 PWC out performs most of its competitors in this area. The company has  
15 engaged in testing renewable power applications, mainly solar power. Its  
16 long-term generation strategy away from fossil fuels and mandatory  
17 renewable power standards are the main drivers. In 2002, the company's  
18 main subsidiary, APS, began operation the first phase of its Prescott  
19 Airport Solar Power Plant with a projected 5 MW of capacity on the APS  
20 grid, making it the largest solar photovoltaic power plant in the world.  
21 While APS continues to increase the distributed power capacity on its  
22 system (2,469 KWh of solar power in 2003) **it does not provide yet net**  
23 **metering services...** (Emphasis Added)  
24  
25  
26  
27  
28

1 And yet now, even in the context of a rate case where APS itself has largely  
2 focused on its evaluation by Wall Street analysts and its critical importance to the  
3 financial health of the Company and thus to the citizens and consumers of  
4 Arizona—APS apparently believes it enough of an effort to through back in the  
5 face of Wall Street that they are introducing a “pilot” program!

6  
7 There is something wrong with this picture!

8  
9 Even assuming that the wholly inadequate calculation of net lost revenues  
10 set forth in GAD-RJ was correct, the approximately \$600,000 offered up as such  
11 a serious cost to the company amounts to less than .003% of the \$1Billion that  
12 APS intends to invest annually on infrastructure to keep up with demand. Surely  
13 it can't really be worried about the as yet un-quantified impact of net metering on  
14 its future. What is known for certain is that every system installed by its  
15 customers has the potential for reducing the need for the full \$1 Billion of demand  
16 driven infrastructure investment. Solar Advocates urges the Commission to allow  
17 the customers of APS and the Commission's constituents to have a fair chance  
18 to participate in addressing this future need.

19  
20 There is one final problem that is raised by the “pilot” designation that also  
21 hurts customers and increases the risk of failure of the Commissions RES  
22 order—the “pilot” moniker significantly increases the financial risk to the potential  
23 RES investor who intends to achieve “payback” as a result of the offset of his  
24 production using the net metering tariff against the retail rates that he or she  
25 would be required to pay APS. Imagine what happens to the analysis of financial  
26 viability when the gist of APS testimony found at page 12 of Mr. DeLizio's direct  
27 testimony becomes known:

1 "At the end of the three year term of this pilot project, the Company will  
2 determine whether the terms of the schedule will need to be modified or  
3 even withdrawn.<sup>14</sup>"

4 Any investment requiring a payback period of greater than three years would  
5 thus be at substantial financial jeopardy base on the company's stated plans  
6 regarding the "pilot" project.

7  
8 ***E. Deny Without Prejudice APS Current Cost Recovery Request for***  
9 ***hypothetical "lost revenues" and require that APS refile any future***  
10 ***request under the principles of Rule R14-2-1808. Tariff***

11 See the Discussion Below at III for a detailed discussion of the failure of APS to  
12 provide an adequate basis for any recovery of so-called "lost revenues "on the present  
13 record, and the overarching need of the Commission to conform any recovery allowed  
14 with the principles and mechanisms set forth in the Tariff Rule adopted by the  
15 Commission in DECISION AND ORDER NO. 69127 IN DOCKET NO. RE-0000OC-  
16 05-0030. However, as a result of the inability to inquire in open hearing or otherwise  
17 object to the claims made by Counsel for APS in the Response to Data Requests late  
18 filed on December 20<sup>th</sup>, 2006 Solar Advocates quotes the introductory language from  
19 page 3 of 6 of such filing in its entirety:  
20

21 **IV. UNRECOVERED FIXED DISTRIBUTION COSTS**  
22 **ATTRIBUTABLE TO NET METERING**

23 Appendix C is a recalculation of APS Exhibit 73 using Staff witness Keane's  
24 modified recommendation that only when a net metered customer is producing a surplus  
25 of energy (i.e., more energy than the customer uses) will there be unrecovered fixed  
26 distribution costs recovered through the Renewable Energy Standard ("RES"). Tr. Vol.  
27 XXIII, p.4412. Please note that the aggregate level of unrecovered fixed distribution costs  
28 remains unchanged from APS Exhibit 73. **These unrecovered costs are an undeniable**

---

<sup>14</sup> From DIRECT TESTIMONY OF GREGORY A. DeLizio, page 12, beginning on line 7

1 aspect of net metering and if not recovered through the RES, will impact base rates  
2 charged to non-participating customers.

(Emphasis added)

3 Unfortunately, as did much of the company's testimony regarding the proposed  
4 net metering tariff and cost recovery there under, this summary, along with the  
5 referenced Appendix C, contains more misinformation than credible information/  
6 evidence upon which the Commission might base a cost recovery mechanism that  
7 would withstand any serious review. While misinformation is admittedly a fairly strong  
8 term, Solar Advocates offers the following list of objections to the December 20<sup>th</sup> filing in  
9 response to the Commissioner's questions, as the timing of the filing, prevented any  
10 review, objection, or cross examination in open hearing.

11 **1. Solar Advocates Objections to Explicit and Implicit Aspects**  
12 **of December 20th, 2006 filing pertaining to the "Unrecovered**  
13 **Fixed Distribution Costs Attributable to Net Metering"**

14  
15  
16 a) **The Title Assumes or Implies that the Commission**  
17 **asked for a calculation of "Unrecovered Fixed Distribution**  
18 **Costs Attributable to Net Metering."** That would imply that  
19 **the Commission had determined that such cost exist, which**  
20 **in fact is the first failure of APS to prove.**

21  
22 b) **Contrary to Mr. Mumaw's implication in his assertion**  
23 **that "These unrecovered costs are an undeniable aspect of**  
24 **net metering and if not recovered through the RES will**  
25 **impact base rates charged to non-participating customers,"**  
26 **Solar Advocates in fact DOES DENY THAT THE MERE FACT**  
27 **THAT REVENUES THAT MIGHT OTHERWISE BE PAID TO APS**  
28

1 ARE REDUCED THEREBY ENTITLES APS TO RAISE ITS RATES BY  
2 THAT AMOUNT<sup>15</sup>

3 c) Such an assertion is patently false on its face, as MANY  
4 OTHER FACTS MUST ALSO BE DETERMINED BEFORE ANY  
5 RECOVERY CAN BE CONSIDERED, INCLUDING:  
6

7 (1) *Have other costs, whether or not related to the*  
8 *cause of the alleged revenue increases, gone up, or*  
9 *down, and in what magnitude.*

10 (2) *While the asserted revenue stream may have*  
11 *declined in an unexpected manner, have other revenues,*  
12 *perhaps equally unexpected, been realized?*

13 (3) *What other system benefits or costs have resulted*  
14 *from the installation of the net metered facilities?*

15 (4) *Do the facilities provide energy during off peak or on*  
16 *peak periods, and do they raise or lower the capacity of the*  
17 *particular distribution system to serve other loads?*  
18

19  
20 *The answer to these questions is quite clear on the record*  
21 *presented—APS doesn't know<sup>16</sup>.*  
22

23  
24 <sup>15</sup> Or such amount reduced by some "avoided cost"

25 <sup>16</sup> One aspect of the unsubstantiated claims of future problems is the mythical "net metering abuser" Solar  
26 Advocates suggests that such cases are nonexistent, and the Company has no evidence that they exist. See DeLizio  
27 Cross examination at page 2586 of the transcript:

28 Q. "...are you aware or do you think you could produce and show this Commission any situation anywhere in the  
country where PV owners, or for that matter people trying to sell PV, although that might be easier, that there's any  
credible practice of over sizing their installation and their installation and as a result taking advantage of net  
metering provisions?

*A. I have not attempted to find that out, so I can't answer that question."*

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

*The Myth of "Lost Revenue"*

*In the Second Fastest Growing Utility in America*

The objections above are worth an illustrative example that likely a common occurrence in a fast growing territory such as that enjoyed by APS.

- 1) Assume that a particular substation feeder is operating at or near its capacity limit, as a result of the demand reaching the figure expected when the distribution engineers planned the facility.
- 2) Assume further that as feared by the Company, large customers, or several smaller customers; invest their own resources in solar generation qualifying for the proposed net metering tariff. We may even assume that the solar generation reduces the electricity otherwise purchased from APS by the total amount of say, 2 MWhrs per month, for an annual total of 24 MWhs.
- 3) At this point, it would appear that as Mr. Mumaw might say, it is undeniable that APS's revenues have been reduced by the amount otherwise paid for the 24 MWhs assumed not purchased.
- 4) However, without more facts, how do we know that other customers did not increase their demand to make up the amount not purchased by the net metered customers? If that occurs, even APS's witnesses did admit on cross examination that there would be no "lost revenues." How do we know this isn't the norm on the present record?
- 5) In fact, given the whole purpose of the rate case as argued by APS, is it not more likely than not that increased demand in APS territory will more than exceed any lost revenues that might occur as a result of distribution generation and demand side management? Remember APS's testimony is that they will have to spend nearly \$1 Billion annually for the foreseeable future just to keep up with demand!
- 6) But there is yet more that APS proposed recovery methodology simply ignores. What if the investment in solar DG is significant enough, and includes sufficient demand management capacity that the investment postpones or eliminates the need for an otherwise expensive upgrade to the feeder and the substation? We know that such results are possible from experience in jurisdictions such as Detroit Edison. No cost recovery is appropriate here unless the Commission can be convinced that the overall reduction in revenues AND INCREASE IN COSTS outweighs the simultaneous INCREASE IN REVENUES AND DECREASES IN COSTS. Without all such information, which is present in a rate case, no alleged "lost revenue" recovery is appropriate.

1                   **F.     Require the Company to carry over to the next year, or pay its**  
2                   **“avoided cost” for any remaining credits at the end of the calendar**  
3                   **year, based on an annual “true up.”**  
4

5                   This issue is not so much an issue of significant economic consequence at this  
6 time, because at the present time it would be economic folly to intentionally size a solar  
7 generation facility utilizing net metering to produce in significant excess of the  
8 customer’s total load for the annual period. Rather, the issue is more one of apparent  
9 fairness of the bargain between APS and its customers, and thus Solar Advocates  
10 simply argues for a good faith effort in either carrying over the credit to the next annual  
11 period or paying the Company’s computed “avoided cost,” stated to be \$0.059 in the  
12 Company’s late-filed Exhibit No. 86, Schedule Solar-J, APS’ revised Total Solar Rate.  
13 This could be accomplished with language such as the following, adapted from the  
14 IREC model rule:

15                   **2.103 At the end of each calendar year, the electricity provider shall either**  
16                   **carry forward any excess kWh credits for use against consumption in**  
17                   **future months, or shall compensate the customer-generator for any excess**  
18                   **kWh credits at the electricity provider’s average hourly incremental cost of**  
19                   **electricity supply over the same calendar-year period.**  
20

21                   The more significant issue that in this area will be to be addressed as the state moves  
22 to more modern rates structures that provide more accurate, dynamic rate and cost  
23 information to its consumers closer to real time data. As solar energy is always  
24 produced during the day, which is the period when APS always reaches its annual  
25 peak, as a result of air conditioning loads driven to a significant extent by solar heat  
26 gain, the use of an avoided cost that included the non daylight hours is inherently unfair  
27 and discriminatory. It is understood that when net metering prices paid are aligned  
28 more accurately with costs and location, as required in the RES rules, more accurate  
and thus more efficient market signals will be provided. The suggested language is

1 thus offered at the present time more for its administrative simplicity than the technical  
2 accuracy of the solution. Nevertheless, Solar Advocates asserts that the mythical solar  
3 tariff abusers who somehow invests in a quantity of solar equipment that results in more  
4 than nominal amounts of credits at the end of the year simply does not exist.

5 ***G. Adopt Additional Provisions From IREC Model Rule.***

6 Solar Advocates suggests that the following sections taken from the IREC  
7 Model Rule, first proposed in this Docket as an Exhibit attached to Solar Witness  
8 Smeloff's testimony, could be very usefully included in the proposed Net  
9 Metering Tariff in order to answer the issues dealt with by such provisions before  
10 they begin to take up valuable time of the Commission, the Company, and the  
11 electricity customers of Arizona.

12  
13 2.104 If a customer-generator terminates its service with the electricity  
14 provider [[or switches electric providers]], the electricity provider shall  
15 compensate the customer-generator for any excess kWh credits at the  
16 electricity provider's average hourly incremental cost of electricity supply  
17 over the calendar-year period immediately prior to termination of service.

18  
19 2.105 A customer-generator facility used for net metering shall be  
20 equipped with metering equipment that can measure the flow of electricity  
21 in both directions at the same rate. For customer-generator facilities less  
22 than 10 kilowatts (kW) in rated capacity, this shall be accomplished  
23 through the use of a single, bi-directional electric revenue meter that has  
24 only a single register for billing purposes.

25  
26 2.106 A customer-generator may choose to use an existing electric  
27 revenue meter if the following criteria are met:  
28

1 (a) The meter is capable of measuring the flow of electricity both  
2 into and out of the customer generator's facility at the same rate  
3 and ratio; and

4 (b) The meter is accurate to within plus or minus five percent when  
5 measuring electricity flowing from the customer-generator facility to  
6 the electric distribution system.

7  
8 2.107 If the customer-generator's existing electric revenue meter does not  
9 meet the requirements at 2.106 above, the electricity provider shall install  
10 and maintain a new revenue meter for the customer generator, at the  
11 electricity provider's expense. Any subsequent revenue meter change  
12 necessitated by the customer-generator, whether because of a decision to  
13 stop net metering or for any other reason, shall be paid for by the  
14 customer-generator.

15  
16 2.108 The electricity provider shall not require more than one meter per  
17 customer-generator. However, an additional meter may be installed under  
18 either of the following circumstances:

19 (a) The electricity provider may install an additional meter at its own  
20 expense if the customer generator consents; or

21 (b) The customer-generator may request that the electricity provider  
22 install a meter, in addition to the revenue meter addressed in 2.106  
23 above, at the customer-generator's expense. In such a case, the  
24 electricity provider shall charge the customer-generator no more  
25 than the actual cost of the meter and its installation.

26  
27 2.109 A customer-generator owns the renewable energy credits (RECs)  
28 of the electricity it generates, and may apply to the state regulatory

1 commission or its authorized designee for issuance of renewable-energy  
2 credits (RECs) or solar renewable-energy credits (S-RECs) as appropriate  
3 and based on actual on-site electric generation, or the calculated estimate  
4 for customer-generators less than 10 kW in rated capacity and as further  
5 defined in Section [[reference any state renewable portfolio standard  
6 (RPS) requirements here]].

7 2.110 An electricity provider shall provide to net-metered customer-  
8 generators electric service at nondiscriminatory rates that are identical,  
9 with respect to rate structure, retail rate components and any monthly  
10 charges, to the rates that a customer-generator would be charged if not a  
11 customer generator.

12  
13 2.111 An electricity provider shall not charge a customer-generator any  
14 fee or charge; or require additional equipment, insurance or any other  
15 requirement not specifically authorized under this sub-section or the  
16 interconnection rules in Section [[reference state interconnection rules  
17 here]], unless the fee, charge or other requirement would apply to other  
18 similarly situated customers who are not customer-generators.

19  
20 2.112 Each electricity provider shall make net metering available to  
21 eligible customer-generators in a timely manner and on a first-come, first-  
22 served basis up to five percent of the electricity  
23 provider's most recently measured annual peak load.

24  
25 2.113 [[optional]] Each electricity provider shall submit an annual net-  
26 metering report to the state regulatory commission. The report shall be  
27 submitted by [[insert date]] of each year, and shall include the following  
28 information for the previous compliance year:

- 1 (a) The total number of customer-generator facilities;  
2 (b) The total estimated rated generating capacity of its net-metered  
3 customer-generators;  
4 (c) The total estimated net kilowatt-hours received from customer-  
5 generators; and  
6 (d) The total estimated amount of energy produced by customer-  
7 generators.

8 **3.000 General Provisions**

9 **3.001** If a customer-generator has been approved under the  
10 interconnection rules in Section [[reference state interconnection rules  
11 here]], the electricity provider shall not require a customer-generator to  
12 test or perform maintenance on the customer-generator's facility except in  
13 the case of any testing or maintenance recommended by the system  
14 manufacturer.

15  
16 **3.002** An electricity provider shall have the right to inspect a customer-  
17 generator's facility during reasonable hours and with reasonable prior  
18 notice to the customer-generator. If the electricity provider finds that the  
19 customer-generator's facility is not in compliance with the requirements of  
20 the interconnection rules in Section [[reference state interconnection rules  
21 here]] and the requirements of IEEE Standard 1547, and non-compliance  
22 adversely affects the safety or reliability of the electricity provider's  
23 facilities or of other customers' facilities, the electricity provider may  
24 require the customer-generator to disconnect the facility until compliance  
25 is achieved.  
26  
27  
28

1 **III. SOLAR ADVOCATES RECOMMENDS DENIAL OF ANY COST**  
2 **RECOVERY FOR NET METERING COSTS--PENDING A PROPER APS**  
3 **FILING UNDER THE PRINCIPLES OF DECISION 69127.**

4  
5 Solar Advocates believe that on the present record, there is no credible evidence  
6 upon which the Commission could base the granting of any cost recovery for any  
7 additional costs incurred by APS as a result of the offering of "net-metering." This is the  
8 necessary result under either the APS language contained in their proposed Rate  
9 Schedule EPR-5, or with the revisions to Rate Schedule EPR-5, suggested by the Solar  
10 Advocates. This conclusion is necessitated by the following:  
11

12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

1           **A.     *Lost Revenues a Logical Impossibility in a General Rate Case***

2                           ***Even under general rate-making principals, any request for***  
3                           ***additional costs such as those requested by APS regarding net-metering***  
4                           ***as a result of "lost revenues" are wholly inappropriate in the context of a***  
5                           ***general rate case. In setting the general rates, the basic procedure***  
6                           ***requires that the revenue requirement to which the Company is determined***  
7                           ***to be entitled by the Commission be allocated amongst the various***  
8                           ***customer classes and tariffs. "Lost Revenues" is simply a concept that***  
9                           ***makes sense, if ever, at some period after a general rate case where the***  
10                           ***company is not recovering the revenues expected when the Revenue***  
11                           ***Requirement was Allocated by the Commission amongst the customer***  
12                           ***classes and tariffs based on expected demand. It cannot logically exist in***  
13                           ***the middle of a rate case, or either the revenue requirement or the expected***  
14                           ***customer demand as assigned to the various customer classes and tariffs***  
15                           ***should be adjusted.***

16  
17           **B.     *No Other States Allow the Recovery of "Lost Revenues" as a***  
18           ***result of the application of a net metering tariff***

19           In response to questioning from Commissioner Mayes, neither the Companies  
20           tariff witness DeLizio<sup>17</sup> and Rumolo<sup>18</sup>, nor the Staff Witness Keane<sup>19</sup> were able to  
21           identify any states who allow the recovery of "lost revenues" as a result of the  
22           offering of a net metering tariff, either using the methodology proposed by the  
23           Company, or that proposed by staff.  
24

25  
26  
27           <sup>17</sup> See DeLizio's testimony at page

28           <sup>18</sup> See Rumolo's testimony at page

<sup>19</sup> See Keane testimony at page

1           **C.    *APS Has Offered Neither Legal Authority Nor Sufficient Factual***  
2           ***Basis for Its Request.***

3           APS has offered no credible legal authority for its proposed cost recovery of “lost  
4 revenues.” This is not surprising because of the extremely stretched nature of the very  
5 raising of “lost revenues” in the context of a general rate case.

6           Further, while requesting reimbursement for the full retail price for any production  
7 by an onsite solar generator, APS offers no offset for benefits reducing its generation,  
8 transmission or distribution costs beyond the simple “avoided cost” first and presumably  
9 still determined in reference to the PURPA requirements enacted in 1978. The citizens  
10 of Arizona deserve the far more accurate information and rate costing that has been  
11 enabled in the last nearly three decades, in order to provide the best possible price  
12 signals to the state’s energy markets.

13           **D.    *General Rate Making Principals Do Not Allow the Naked***  
14           ***Addition of Increased Costs to a Revenue Requirement—But Rather***  
15           ***Also Require The Consideration of Offsetting Cost Decreases or Other***  
16           ***Benefits***<sup>20</sup>**. This is true whether or not the decreased costs or other**  
17           ***benefits are related to the increased costs, and, a fortiori, where the***  
18           ***benefits are created by the very circumstance alleged to increase***  
19           ***costs.***

20           Perhaps the reason APS would like to travel the path of  
21 “lost revenues” is that as noted above, such a concept makes  
22 sense-if at all-in a period after a rate case, where expected  
23

---

24           <sup>20</sup> Note that newly adopted Rule R14-2-1808 also requires a similar  
25 consideration, requiring from an Affected Utility seeking cost recovery “Data  
26 to demonstrate that the Affected Utility's proposed Tariff is designed to  
27 recover only the costs in excess of the Market Cost of Comparable  
28 Conventional Generation”

1 revenues are not being realized and thus in appropriate  
2 circumstance, Commissions sometime offer relief. However, such  
3 "single issue rate making" is looked upon with disfavor  
4 everywhere, unless incorporated into the overall scheme adopted  
5 in a general rate case<sup>21</sup>. One of the reasons such an approach is  
6 disfavored is the problem of knowing with any certainty whether  
7 or not while a particular cost has increase, perhaps other costs  
8 have decreased<sup>22</sup>—thus eliminating the size or even the need for  
9 any rate increase whatsoever. And note the clarity with which  
10 it is recognized that even costs and benefits unrelated to the  
11 facts and circumstances of the requested rate increase must be  
12 taken into account.  
13  
14

15 In the present case, while APS clearly recognizes that  
16 there are system benefits provided by many instances of onsite  
17 generation which will be utilizing the net metering tariff, and  
18 staff and the Commission also clearly so concludes<sup>23</sup>, the  
19 methodology offered by APS utilizes only the offsetting cost of  
20 power not required to be purchased as a benefit—ignoring the  
21 reliability, diversity, and other benefits found in the  
22 Commission's Decision in the REST Decision and elsewhere in the  
23 testimony in this case.  
24  
25  
26  
27

28 <sup>21</sup> See Florida Supreme Court in \_\_\_\_\_

<sup>22</sup> See the Supreme Court of the United States recent discussion of this issue in

<sup>23</sup> See discussion of benefits in Exhibit B, RES Opinion at page 45

1           **E.    The Methodology for cost Recovery Proposed by APS is Wholly**  
2           **Inadequate to Justify the Granting of Any Cost Recovery on the**  
3           **Present Record**

4  
5           While on the present record it is not at all clear just  
6 what methodology APS is proposing to utilize to determine what  
7 amount should be utilized in recovering the "lost revenues" it  
8 requests as a result of offering its proposed net metering  
9 tariff, at least Mr. DeLizio stated clearly that the chart  
10 presented as Attachment GAD-5RB of his Rebuttal Testimony was  
11 the proposed methodology for the calculation of net metering  
12 cost recovery<sup>24</sup>."

14           Examination of the methodology proposed on Attachment GAD-  
15 5RB reveals the following:

- 16  
17           1. In general, the chart as presented appears to be more  
18           than it is. Note that in the shaded boxes there are  
19           seemingly relevant figures listed such as:

- 20                   a. 5% Excess kWh sold back to APS per year (%)  
21                   b. 22% Excess kWh sold back to APS per year (%)  
22  
23  
24

---

25           <sup>24</sup> See Cross Examination of DeLizio, Transcript Volume XII 10/30/2006 at page 2580 begin at line 6  
26 Q. You have testified several times that this exhibit was offered to the Commission and to the parties in  
27 the case as your proposed methodology to recover lost revenues.

28           Is this your proposed methodology or is there something else you intend to do?

          A. This is the proposed methodology for collecting uncollected fixed costs. The numbers here are based  
on the assumptions in the gray box. It's an assumption to provide for and to illustrate a method that the  
company is proposing to collect the uncollected fixed costs.

          It is what it is.

1 However, these figures regarding "Excess kWh sold  
2 back" are used nowhere in the remainder of the chart  
3 which computes the proposed lost revenue adjustment.  
4 While perhaps innocent, we note that the "excess sold  
5 back" to the company appears to be a figure of merit  
6 in the Staff's proposal for cost recovery. According  
7 to staff Witness Keane in response to questioning from  
8 Judge Farmer, her prefiled testimony indicating that  
9 she supported the Company's cost recovery proposal was  
10 based on other charts discussed with the Company  
11 involving costs for "excess" paid for by the Company,  
12 but apparently not in evidence. Perhaps the presence  
13 of the assumed excess production figures not otherwise  
14 utilized in the chart was an attempt to comfort the  
15 unwary that somewhere in the calculations presented in  
16 GAD-5RB the excess production sold to the company was  
17 a relevant parameter. They are not!

21 In any case, the present record justifies neither  
22 the Company's nor the staff's approach to cost  
23 recovery.

- 24  
25 2. The proposed methodology, upon analysis, is simply the  
26 total assumed production by systems utilized net  
27 metering, multiplied by a calculated class average  
28 rate paid, and reduced by the assumed "avoided cost"

1 multiplied by the same total production figure, as  
2 shown in illustrative form below:

3  
4 Total Production in kWh × Calculated Average Rate Paid  
5 By Customers Utilizing the  
6 Specific Tariff

7  
8 Reduced By

9 Total Production in kWh × Calculated Avoided Cost

10  
11 For illustration Using the provided by APS for E12

12  
13  
14 13,500,000 kWh × Calculated Average Rate Paid (\$0.10895) By \$588,352  
15 Customers Utilizing E12

16 Reduced By

17 13,500,000 kWh × Calculated Avoided Cost (\$0.05765) = (\$311,303)

18 \$277,049

19  
20  
21 Note that this methodology assumes that customers who utilize the net metering tariff  
22 will come from four customer tariffs: E12, E11, EC11R, and E32 (0-20 kW.) It then  
23 assumes that each solar system will be of 3kW size, and that each kW of installed solar  
24 systems will generate 1500 kWh annually. During cross examination, APS witness  
25 DeLizio stated that the actual calculation for purposes of net cost recovery would not be  
26 done until the actual facts regarding what customers using what rates, and the actual  
27  
28

1 production, were known<sup>25</sup>. While that would definitely be an improvement, the proposed  
2 "methodology" still ignores the need to quantify other offsetting benefits, and, the  
3 theoretically and pragmatic objections to the claiming of "lost revenues" in the middle of  
4 a rate case.

5  
6  
7 ***F. There are exactly the same "lost revenues" when a customer***  
8 ***chooses to install any Demand Side Management Equipment or***  
9 ***Operating Technique—and Staff does not support recovery of lost***  
10 ***revenues in such circumstances.***

11 ***G. "What's sauce for the goose is sauce for the gander"***

12  
13 While the folk wisdom "*What's sauce for the goose is sauce for the gander*" is  
14 *perhaps not literally one of Bonbright's Principles of Regulation*, surely the principle  
15 that customers of similar circumstances should receive similar treatment is on  
16 everyone's list. And yet, while APS make much of the potential, and unproven,  
17 alleged subsidy resulting from the availability of net metering—they casually dismiss  
18 the existence of a precisely calculated subsidy of other ratepayers in the amount of  
19

---

20  
21 <sup>25</sup> Note that this statement is entirely consistent with Solar Advocates  
22 recommendation that no cost recovery decision be made in this case,  
23 postponing such issue until APS has determined such facts, and can make a  
24 proper filing under Rule R14-2-1808, or the principles thereof, which will be  
25 utilized by all other Affected Utilities in the State. This suggests yet  
26 another basis for denial of net metering cost recovery in this docket—the  
27 need for uniformity of regulatory principles through-out the Commission's  
28 jurisdiction.

1 \$839,000<sup>26</sup> annually as not worth the cost of paying them back<sup>27</sup>. While Solar  
2 Advocates does not argue the conclusion of the Company is wrong, as there are  
3 many such small inequities in rate making, we do note that APS appears to take  
4 some alleged subsidies far more seriously than clearly know and identified  
5 subsidies. That would appear to violate the non-discrimination principle in applying  
6 the strict construction approach to the alleged net metering subsidy.  
7

8  
9 ***H. Finally, the RES Decision specifies clearly the methodology that***  
10 ***is to be utilized in calculating any cost recovery to which an affected***  
11 ***utility may be entitled, and the reasoning behind the limitations***  
12 ***therein.***

13  
14 The COMMISSION'S FINAL DECISION AND ORDER NO. 69127 IN DOCKET  
15 NO. RE-00000C-05-0030 clearly sets forth the manner in which APS should recover  
16 its costs for all aspects of meeting the Renewable Energy Standard, including Net  
17 Metering. The Rule R14-2-1808 Tariff provides, in part,  
18  
19

20  
21 <sup>26</sup> SurePay and AutoPay are APS' least expensive payment processing options. APS currently  
22 experiences operating and cost of money savings of \$.48 per month, or \$5.76 annually  
23 from each SurePay or AutoPay customer as shown in Attachment 1. ***The annual savings***  
***associated with these programs is approximately \$820,000 per year.*** (emphasis added) From "An

24 Analysis of SurePay Program, and Attachment to Rumolo Direct Testimony, DRJ 10, 9 of 12. "

25 <sup>27</sup> See Rumolo, Direct Testimony on page 20, "Our review of the SurePay program leads us to the conclusion that offering  
26 discounts to encourage participation is not warranted. We currently offer two automatic payment options to customers. SurePay  
27 authorizes a customer's bank to transfer funds to APS. AutoPay is an on-line version of SurePay in which the customer will get  
28 an e-mail notification when the fund transfers occur. AutoPay customers can print a paper copy of their bill from APS.COM if  
the customer so desires. We do not believe that a discount is required to encourage participation since we have a high level of  
participation in the automatic payment programs even when compared to companies that offer financial inducements. Also, our  
analysis indicates that many of the inducements offered by other companies are not cost effective and result in cost shifting from  
customers who participate to

Customers who do not elect to participate."

1           **1. R14-2-1808 Tariff**

2

3           **A. Within 60 days of the effective date of these rules, each Affected**

4           **Utility shall file with the Commission a Tariff in substantially the**

5           **same form as the Sample Tariff set forth in these rules that proposes**

6           **methods for recovering the reasonable and prudent costs of**

7           **complying with these rules.** The specific amounts in the Sample Tariff

8           are for illustrative purposes only and Affected Utilities may submit, with

9           proper support, Tariff filings with alternative surcharge amounts.

10

11           **B. The Affected Utility's Tariff filing shall provide the following information:**

- 12
- 13           1. Financial information and supporting data sufficient to allow the
- 14           Commission to determine the Affected Utility's fair value for
- 15           purposes of evaluating the Affected Utility's proposed Tariff.
- 16           Information submitted in the format of the Annual Report required
- 17           under R14-2-212(G)(4) will be the minimum information necessary
- 18           for filing a Tariff application but Commission Staff may request
- 19           additional information depending upon the type of Tariff filing that is
- 20           submitted.
- 21
- 22           2. A discussion of the suitability of the Sample Tariff set forth in
- 23           Appendix A for recovering the Affected Utility's reasonable and
- 24           prudent costs of complying with these rules,
- 25
- 26           3. Data to support the level of costs that the Affected Utility contends
- 27           will be incurred in order to comply with these rules,
- 28

- 1  
2  
3  
4  
5  
6
4. Data to demonstrate that the Affected Utility's proposed Tariff is designed to recover only the costs in excess of the Market Cost of Comparable Conventional Generation, and
  5. Any other information that the Commission believes will be relevant to the Commission's consideration of the Tariff filing.

7  
8  
9

(emphasis added)

10  
11  
12

--From Decision No. 69127, Appendix a pp 17-19

13  
14  
15  
16

2. The critical issues thus controlled and determined by the newly adopted Tariff rule R14-2-1808, whether because the rule itself is in effect or because the Commission has already decided in a quasi legislative forum the principles that should apply to cost recovery of any costs of net metering incurred by a jurisdictional utility include the following:

- 17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28
- a) All Affected Utilities Must File Cost Recovery Mechanisms for Net Metering under Tariff rule R14-2-1808 within 60 days of the effective date.
  - b) Rule 14-2-1808 (B) (2) clearly requires a utility demonstrating that its proposed method of recovery "is designed to recover only the costs in excess of the Market Cost of Comparable Conventional Generation"
  - c) APS's proposed Cost Recovery Mechanism Does not Meet the Letter or the Spirit of Rule 14-2-1808 (B) (2). In order to demonstrate that its proposed cost recovery mechanism "is designed to recover only the costs in excess of

1 the Market Cost of Comparable Conventional Generation,”  
2 APS will be required to determine its “Market Cost of  
3 Comparable Conventional Generation.” Market Cost of  
4 Conventional Generation is defined in the rules as:

5 d) "Market Cost of Comparable Conventional Generation"  
6 means the Affected Utility's energy and capacity cost of  
7 producing or procuring the incremental electricity that would  
8 be avoided by the resources used to meet the Annual  
9 Renewable Energy Requirement, taking into account hourly,  
10 seasonal and long-term supply and demand circumstances.  
11 Avoided costs include any avoided transmission and  
12 distribution costs and any avoided environmental compliance  
13 costs.

14 **R14-2-1801(K) Definitions.**

15 The only proposed offset to its erroneous request for the full amount of “lost  
16 revenues” currently proposed by APS is simply the single, company-wide,  
17 territory-wide, annual average<sup>28</sup> avoided cost computed, apparently, for PURPA  
18 purposes.  
19

20 This “avoided cost” figure, shown for illustrative purposes in APS Exhibit  
21 filed with Mr. DeLizio’s Rebuttal Testimony Attachment GAD-5RB as \$0.05765,  
22 **clearly does not and could not comply with the approach mandated in Rule**  
23 **R14-2-1808.** As argued during the hearing, and recognized in Rule R14-2-1808,  
24  
25

26 <sup>28</sup> (Rather than the far more accurate data available by the hour and including actual local distribution marginal costs  
27 available today and required by the definition of "Market Cost of Comparable Conventional Generation" provided in  
28 the new rule.)

1 PV generation producing during the afternoon of the summer peak, where the  
2 listed price at Palo Verde for the 2006 summer peak hour was \$399.00<sup>29</sup> per MW  
3 hour, should be entitled to an offset greater than \$0.05765! As required by the  
4 rule and simple fairness, APS must take into account "hourly, seasonal and long-  
5 term supply and demand circumstances."  
6

7 This has not been done, and is itself good and sufficient reason for the  
8 Commission to deny cost recovery of any potential net metering costs at this  
9 time, but ordering APS to file a new request if and when it can comply with the  
10 requirements of R14-2-1808.  
11

12 **3. APS proposed Tariff and Cost Recovery Mechanism Must Be**  
13 **Refiled under the Requirements of Rule R14-2-1808**

14 On the present state of the record, no prejudice will result in the  
15 Commission's denial of any cost recovery to the Company with respect to the  
16 implementation of a full and true net metering program as proposed by Solar  
17 Advocates. Pursuant to APS's own admission during the hearing, APS intends  
18 to gather specific and accurate information regarding the net costs (including  
19 benefits) as part of its roll out of the net metering tariff and other programs under  
20 the RES. The delay incurred in recovering such net costs, if any, would have  
21 been incurred in any case given the lack of evidentiary basis offered to the  
22 Commission in this Docket.  
23  
24  
25  
26  
27

28 <sup>29</sup> From ICE data available for Palo Verde Hub, July 24-25, 2006 at <https://www.theice.com/marketdata/indices>

1 Lest there be any misunderstanding regarding the omission of any  
2 mention of recovery of "lost revenues" see also the following discussion of  
3 benefits and fairness from the RES decision:

4 Analysis: We agree with Staff that customers who pay capital costs to  
5 install distributed generation, benefit not only themselves, but the  
6 system by not contributing to overloading of transmission lines,  
7 overheating of distribution lines, wear and stress on substations and

8 transformers, and the need  
9 for utilities to procure or  
10 generate the most  
11 expensive peaking power  
12 during peak load times,  
13 and utility customers who  
14 do not install distributed

We agree with the VSI statement that  
Net Metering is an important piece of  
the regulatory infrastructure for  
distributed generation, and disagree  
with APS' assertion the terms of the  
definition go beyond what is  
necessary to define the term

15 generation will therefore receive a benefit from distributed

16 generation. We agree with the VSI statement that Net Metering is an  
17 important piece of the regulatory infrastructure for distributed generation,  
18 and disagree<sup>30</sup> with APS' assertion the terms of the definition go beyond  
19 what is necessary to define the term. We see no reason to delete  
20 language requiring Affected Utilities to pay for power it receives from  
21 customer-generators, and find that it is preferable to have the definition of  
22 Net Metering set forth at this time in order to provide: certainty for the  
23  
24  
25  
26  
27

28 <sup>30</sup> Final Decision in DOCKET NO. RE-00000C-05-0030 at page 6, Exhibit B

1 Distributed Generation Working Group, which can then move forward with  
2 other important interconnection issues. We note that the definition of Net  
3 Metering adopted herein does not allow for the "zeroing out" of credits at  
4 the end of the year, as the SunShare customer stated: currently occurs in  
5 her comments, but requires that the customer-generator receive  
6 compensation for credits at the end of the annualized period.  
7

8 **Resolution: No change required.**

9 Thus for the following two wholly adequate reasons (in addition to the  
10 others set forth above, not restated here):

- 11 • Failure to demonstrate any credible grounds for recovery of so-called lost  
12 revenues, and
- 13
- 14 • The present or very shortly required need to comply with the requirements  
15 of Rule R14-2-1808  
16

17 Solar Advocates urges the Commission to deny any cost recovery relating to  
18 "Lost Revenues" in the present general rate case docket, with the right of APS to  
19 refile an amended or more likely, wholly new request at any time under the  
20 requirements of Rule R14-2-1808.  
21  
22  
23  
24  
25  
26  
27  
28

1 **IV. REMAINING ISSUES AND CONCLUSION**

2 **A. OBJECTION TO USE OF NON TIME DIFFERENTIATED**  
3 **MEASUREMENT OF PEAK DEMAND IN PROPOSED TARIFFS E-56 AND**  
4 **E-57.**

5 In both of the above reference tariffs, the Company has proposed the use of the  
6 peak demand recorded at any time during the month. This could result in a customer  
7 with solar generation whose use peaks at midnight paying the same demand based  
8 charge as a customer that peaks sometime in the afternoon. In 2007, there is no longer  
9 any reason to create such misleading and discriminatory rate structures, which send the  
10 wrong price signals to the market (even demand charges incurred in off peak times of  
11 use should reflect actual underlying prices.)

12 As adopted in the RES decision the concept of "Market Cost of Comparable  
13 Conventional Generation" which incorporates the consideration of the Affected Utility's  
14 energy and capacity cost of producing or procuring the incremental electricity ...  
15 taking into account hourly, seasonal and long-term supply and demand circumstances  
16 has taken the right path toward more accurate pricing signals. APS should not be  
17 allowed to utilize the same metering excuses that have been present for decades in  
18 setting these tariffs. Solar Advocates urges the Commission to order the Company to  
19 revise the E-56 and E-57 tariffs to better match the actual costs incurred as a result of  
20 serving the customers involved, through more precise metering and costing information.

21 **B. THE PROBLEM OF "NET BILLING" AS A SUBSTITUTE FOR TRUE**  
22 **NET METERING**

23 Careful reading of the prefiled testimony and the transcript of the witnesses  
24 presenting the net metering tariff will reveal that whenever pressed on the fact that the  
25 proposed net metering "pilot" applies only to very small systems—(10kw or under—the  
26 least efficient sized installation possible) the witness would fall back on the availability of  
27  
28

1 APS's "net billing" tariffs<sup>31</sup>. See for example the following from witness DeLizio's  
2 rebuttal testimony, page 13, line

3 "APS believes that the proposed 10 kW cap on the individual generator size is  
4 appropriate for net metering, even in light of an expanded RES program because  
5 the Company already offers net billing rate options for distributed generation  
6 systems up to 100 kW, which do not have any cap on aggregate participation"

7 There are two fundamental problems with this position as espoused by APS:

8 **1. *First, note that is the company claiming that net billing***  
9 ***should be adequate—not its customers.*** And there is a reason for  
10 that—the treatment is not as satisfactory for customers as true net  
11 metering. If this were not true, the Company would presumably not  
12 resisting a more significant net metering program, applicable to a broader  
13 range of customers and installation sizes. Customer's like choices—APS  
14 doesn't want to provide this choice.

15  
16 **2. *The other fundamental problem with "net billing" is that***  
17 ***it depends on a "fictional sale" that has been rejected at the***  
18 ***federal level in both the relatively small circumstances of***  
19 ***renewable generation, and also at the much larger***  
20 ***circumstance involving what is called "station power."*** Just as  
21 utilities commonly resist distributed generation on various grounds  
22 using whatever means available, utilities also resisted the idea of  
23 independent generators first allowed under PURPA. After being  
24 forces to interconnect to the grid by PURPA, FERC, and many state  
25 commissions, utilities often still resented that generators not a  
26 member of the club were on "their" grid selling energy at wholesale.  
27

28 <sup>31</sup> See DeLizio Rebuttal at page 13 beginning at line 12: "APS currently utilizes the net billing methodology for customers taking service under rate schedules EPR-2 and EPR-4."

1           Once last ditch solution widely tried involved charging an independent  
2           operator for all electricity consumed onsite even if generated at the plant,  
3           on the theory that the local utility had the monopoly right to sell all  
4           electricity consumed by the purchaser for local use. Thus, the local  
5           distribution or integrated utilities attempted to bill the independent power  
6           stations at their retail commercial rates.

7           FERC has consistently condemned such practices, under what  
8           Solar Advocates would call the “station Power Doctrine. As noted earlier,  
9           FERC applied similar reasoning in deciding the MidAmerican series of  
10          cases brought to prevent net metering in the State of Iowa, holding that  
11          the whole idea of the fictional, or “imputed” sale was inappropriate in both  
12          the independent power and net metering circumstances, with the better  
13          analysis treating the production of excess power for what it is—an  
14          instantaneous rate of flow that must be integrated over some period of  
15          time, better treated as an exchange (or, in the language of EPACT – an  
16          “offset.” Again, much to the surprise of Solar Advocates, the otherwise  
17          environmentally sensitive APS places itself in the company of such well  
18          known anti solar zealots as Colorado’s Intermountain Energy. IREA led  
19          the effort to pass legislation in Colorado that only applies to Rural  
20          Cooperatives—for some reason ensuring that the rural electric  
21          associations can charge retail while buying all renewable production at  
22          wholesale. This, in spite of the well advertized fact that the only potential  
23          customers who wanted net metering were the “owner members who are  
24          often said to control such associations!

25  
26          3.       ***Solar Advocates thus urge the Commission to discount***  
27          ***any weight that might be given to the APS arguments based on***  
28          ***the availability of the so-called “net billing” tariffs. Solar***

1           Advocates is confident that in any state with a long standing  
2           tradition and experience with true net metering, the utility would not  
3           have the audacity to even attempt to utilize net billing as a substitute.

4           ***C.    ACKNOWLEDGEMENT OF SIGNFICANT REDUCTION IN THE***  
5           ***TARIFFED RATE FOR THE TOTAL SOLAR RATE TARIFF***

6           That the Company was able to reduce the cost of the Total Solar Tariff from the  
7           37.5 cents as initially filed to the 16.6 cents per kWh as later filed upon challenge  
8           speaks volumes about the potential of solar in Arizona—including the ability and  
9           willingness of APS to listen and respond to customer feedback—and perhaps also the  
10          continuing need for such review as this industry continues to develop.

11           ***D.    OFFER TO WORK COLLABORATIVELY WITH ALL PARTIES TO***  
12           ***DEVELOP CONSENSUS BASED RULES AND TARIFFS IN THE EVENT THE***  
13           ***COMMISSION REQUESTS THE PARTIES TO ATTEMPT A SETTLEMENT***  
14           ***OF THE SOLAR RELATED ISSUES, PRIMARILY THE NET METERING***  
15           ***TARIFF, WITH WHATEVER GUIDANCE MAY BE OFFERED***

16           Solar Advocates recognizes that the hearing room is not the best environment to  
17           enter into discussions of areas of agreement, and regrets that there has not been an  
18           opportunity to work informally with the Company's solar staff, the Commission staff, and  
19           the other parties in order to seek to simplify or even eliminate the issues now facing the  
20           Commission. Solar Advocates has indeed been impressed by the environmental  
21           reputation enjoyed by APS, and even the response to the initial complaint regarding the  
22           Total Solar tariff. Thus, Solar Advocates has been somewhat confused by some of the  
23           positions taken in the context of this litigation, and continues to hope that such  
24           seemingly anti customer choice, anti customer owned generation are a result of the  
25           complex nature of this case, and the ease with which old beliefs and arguments rise to  
26           the top when time is short.  
27  
28

## EXHIBITS

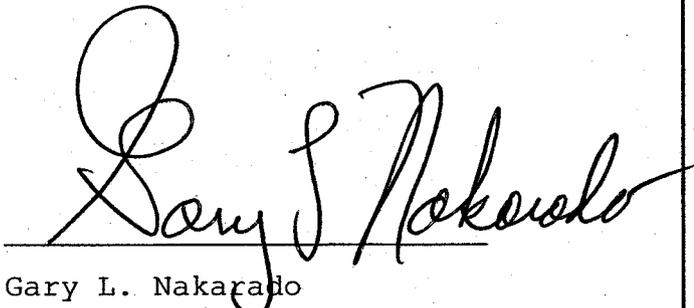
EXHIBIT A - APS Net Metering Tariff --RATE SCHEDULE EPR-5 -- with redlined  
changes suggested by Solar Advocates

EXHIBIT B -- IREC Model Net-Metering Rules

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

RESPECTFULLY SUBMITTED THIS 22<sup>nd</sup> DAY OF JANUARY, 2007.



A handwritten signature in cursive script, reading "Gary L. Nakarado", is written over a horizontal line.

Gary L. Nakarado  
Counsel for the Solar Advocates  
24657 Foothills Drive North  
Golden, CO, 80401

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28



**RATE SCHEDULE EPR-5  
CLASSIFIED SERVICE  
RATES FOR RENEWABLE RESOURCE FACILITIES  
OF 10 kW OR LESS FOR PARTIAL REQUIREMENTS**

AVAILABILITY

This rate schedule is available in all territory served by the Company at all points where facilities of adequate capacity and the required phase and suitable voltage are adjacent to the sites served.

APPLICATION

This rate schedule is offered as a three-year pilot program to renewable resource generation facilities with a nameplate service continuous output power rating of 10 kW or less where the customer's generator(s) and load are located at the same premise. Renewable resources eligible to participate in this pilot program include solar and other renewable resources, as defined in A.A.C. R14-2-1618, as it may be modified or updated from time to time. This pilot program is capped at 15 MW of total renewable generation nameplate capacity. Environmental Portfolio Surcharge (EPS) funding will be utilized to recover the metering costs, billing system modification cost and revenue loss associated with the pilot program. This pilot program is conditioned upon continued and sufficient EPS funding. Participation under this schedule is subject to availability of enhanced metering and billing system upgrades.

TYPE OF SERVICE

Electric sales to the Company must be single phase or three phase, 60 Hertz, at one standard voltage as may be selected by customer (subject to availability at the premises).

SALES TO THE CUSTOMER

Power sales and special services supplied by the Company to the customer in order to meet the customer's supplemental or interruptible electric requirements will be priced at the Standard Retail Rate as may be selected by the customer. Refer to the Definitions section, No. 5, of this rate schedule to identify rate schedules that qualify for this pilot program.

RATE

Energy will not be purchased from the customer under this schedule; instead, the kWh of energy provided will be credited to the customer. Through the net metering method, the customer shall receive the full retail value of the energy component (charges assessed on a kWh basis) of their bundled Standard Offer Service Rate for the power fed into the system from the customer-owned renewable resource generator(s). In cases where customer owned generation output exceeds the customer's total usage in a given month, the customer will receive a kWh credit equal to this excess generation output on the next monthly bill. Any remaining kWh credit amount will be zeroed out (no payment made to the customer) in the customer's last monthly bill rendered in the calendar year or at the time of a customer shut off. The Company shall provide one bi-directional meter under this EPR-5 pilot program.

CONTRACT PERIOD

Any applicable contract period(s) will be set forth in an Agreement between the customer and the Company.

DEFINITIONS

1. **Partial Requirements Service** – Electric service provided to a customer that has an interconnected renewable resource generation system configuration whereby the output from its electric generator(s) first supplies its own electric requirements and any excess energy (over and above its own requirements at any point in time) is then provided to the Company. The Company supplies the Customer's supplemental electric requirements (those not met by their own generation facilities). This configuration may also be referred to as the "parallel mode" of operation.



**RATE SCHEDULE EPR-5  
CLASSIFIED SERVICE  
RATES FOR RENEWABLE RESOURCE FACILITIES  
OF 10 kW OR LESS FOR PARTIAL REQUIREMENTS**

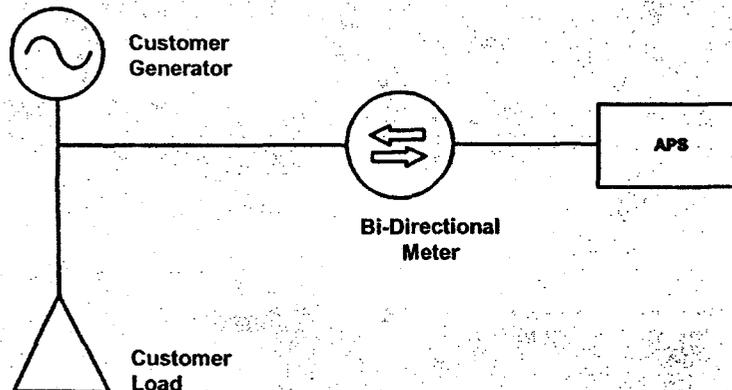
DEFINITIONS (cont)

2. Special Service(s) - The electric service(s) specified in this section that will be provided by the Company in addition to or in lieu of normal service(s).
3. Time Periods - Mountain Standard Time shall be used in the application of this rate schedule. Because of potential differences of the timing devices, there may be a variation of up to 15 minutes in timing for the pricing periods.
4. Pilot Program - The term of this pilot program is three years from the issuance of Decision No. XXXXX. If this experimental pilot rate schedule later becomes a standard Company rate schedule, the Company reserves the right to modify the rate schedule.
5. Standard Retail Rate - Qualifying standard retail rates for service under this pilot program are limited to Rate Schedules E-12, ET-1, ET-2, ECT-1R and ECT-2 for residential customers and Rate Schedules E-32 and E-32 TOU for general service customers with Monthly Maximum Demands of 20 kW or less.

TERMS AND CONDITIONS

Service under this rate schedule is subject to the Company's Schedule 1, Terms and Conditions for Standard Offer and Direct Access Services and Schedule 2, Terms and Conditions for Energy Purchases from Qualified Cogeneration or Small Power Production Facilities. This schedule has provisions that may affect the customer's bill. In addition, service may be subject to special terms and conditions as provided for in a customer interconnection or service agreement.

METERING CONFIGURATION





## IREC Model Net-Metering Rules

[www.irecusa.org/connect/netmeteringrules.pdf](http://www.irecusa.org/connect/netmeteringrules.pdf)

### Net Metering

#### 1.000 Definitions

*[[insert appropriate definitions here]]*

#### 2.000 Net metering general provisions

2.100 All electricity providers shall offer net metering to customers with solar, wind and other eligible generators defined at 2.114 that generate electricity on the customer's side of the meter and are interconnected with the electricity provider pursuant to the interconnection rules in Section *[[reference state interconnection rules here]]*, provided that the generating capacity of the customer-generator's facility meets both of the following criteria:

- (a) The rated capacity of the generator does not exceed two megawatts (MW); and
- (b) The rated capacity of the generator does not exceed the customer's service entrance capacity.

2.101 The electricity provider shall develop a net-metering tariff that provides for customer-generators to be credited in kilowatt-hours (kWh) at a ratio of 1:1 for any excess production of their generating facility that exceeds the customer-generator's on-site consumption of kWh in the billing period following the billing period of excess production. However, any excess kWh credits shall not reduce any fixed monthly customer charges imposed by the electricity provider.

2.102 The electricity provider shall carry over any excess kWh credits earned under 2.101 and apply those credits to subsequent billing periods to offset any customer-generator consumption in those billing periods until all credits are used or until the end of the calendar year. An electricity provider that uses cycle bills may use the December billing month as the end of the calendar year.

2.103 At the end of each calendar year, the electricity provider shall either carry forward any excess kWh credits for use against consumption in future months, or shall compensate the customer-generator for any excess kWh credits at the electricity provider's average hourly incremental cost of electricity supply over the same calendar-year period.

2.104 If a customer-generator terminates its service with the electricity provider *[[or switches electric providers]]*, the electricity provider shall compensate the customer-generator for any excess kWh credits at the electricity provider's average hourly incremental cost of electricity supply over the calendar-year period immediately prior to termination of service.

IREC MR-NM2005: IREC Model Net-Metering Rules

- 2.105 A customer-generator facility used for net metering shall be equipped with metering equipment that can measure the flow of electricity in both directions at the same rate. For customer-generator facilities less than 10 kilowatts (kW) in rated capacity, this shall be accomplished through the use of a single, bi-directional electric revenue meter that has only a single register for billing purposes.
- 2.106 A customer-generator may choose to use an existing electric revenue meter if the following criteria are met:
- (a) The meter is capable of measuring the flow of electricity both into and out of the customer-generator's facility at the same rate and ratio; and
  - (b) The meter is accurate to within plus or minus five percent when measuring electricity flowing from the customer-generator facility to the electric distribution system.
- 2.107 If the customer-generator's existing electric revenue meter does not meet the requirements at 2.106 above, the electricity provider shall install and maintain a new revenue meter for the customer-generator, at the electricity provider's expense. Any subsequent revenue meter change necessitated by the customer-generator, whether because of a decision to stop net metering or for any other reason, shall be paid for by the customer-generator.
- 2.108 The electricity provider shall not require more than one meter per customer-generator. However, an additional meter may be installed under either of the following circumstances:
- (a) The electricity provider may install an additional meter at its own expense if the customer-generator consents; or
  - (b) The customer-generator may request that the electricity provider install a meter, in addition to the revenue meter addressed in 2.106 above, at the customer-generator's expense. In such a case, the electricity provider shall charge the customer-generator no more than the actual cost of the meter and its installation.
- 2.109 A customer-generator owns the renewable energy credits (RECs) of the electricity it generates, and may apply to the state regulatory commission or its authorized designee for issuance of renewable-energy credits (RECs) or solar renewable-energy credits (S-RECs) as appropriate and based on actual on-site electric generation, or the calculated estimate for customer-generators less than 10 kW in rated capacity and as further defined in Section *[[reference any state renewable portfolio standard (RPS) requirements here]]*.
- 2.110 An electricity provider shall provide to net-metered customer-generators electric service at non-discriminatory rates that are identical, with respect to rate structure, retail rate components and any monthly charges, to the rates that a customer-generator would be charged if not a customer-generator.
- 2.111 An electricity provider shall not charge a customer-generator any fee or charge; or require additional equipment, insurance or any other requirement not specifically authorized under this sub-section or the interconnection rules in Section *[[reference state interconnection rules here]]*, unless the fee, charge or other requirement would apply to other similarly situated customers who are not customer-generators.

*IREC MR-NM2005: IREC Model Net-Metering Rules*

- 2.112 Each electricity provider shall make net metering available to eligible customer-generators in a timely manner and on a first-come, first-served basis up to five percent of the electricity provider's most recently measured annual peak load.
- 2.113 *[[optional]]* Each electricity provider shall submit an annual net-metering report to the state regulatory commission. The report shall be submitted by *[[insert date]]* of each year, and shall include the following information for the previous compliance year:
- (a) The total number of customer-generator facilities;
  - (b) The total estimated rated generating capacity of its net-metered customer-generators;
  - (c) The total estimated net kilowatt-hours received from customer-generators; and
  - (d) The total estimated amount of energy produced by customer-generators.

2.114 Eligible Generators

*[[insert definitions of appropriate eligible generators here]]*

3.000 General Provisions

- 3.001 If a customer-generator has been approved under the interconnection rules in Section *[[reference state interconnection rules here]]*, the electricity provider shall not require a customer-generator to test or perform maintenance on the customer-generator's facility except in the case of any testing or maintenance recommended by the system manufacturer.
- 3.002 An electricity provider shall have the right to inspect a customer-generator's facility during reasonable hours and with reasonable prior notice to the customer-generator. If the electricity provider finds that the customer-generator's facility is not in compliance with the requirements of the interconnection rules in Section *[[reference state interconnection rules here]]* and the requirements of IEEE Standard 1547, and non-compliance adversely affects the safety or reliability of the electricity provider's facilities or of other customers' facilities, the electricity provider may require the customer-generator to disconnect the facility until compliance is achieved.