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Arizona Corporation Commission
DOCKETED

October 25, 2004

OCT 25 2004

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

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2004 OCT 25 P 3:41
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RE: APS RATE CASE; DOCKET NO. E-01345A-03-0437

Dear Sir/Madame:

Pursuant to the Amended Procedural Order dated August 20, 2004, Arizona Public Service Company ('APS') hereby files it's Settlement Rebuttal Testimony of Steven M. Wheeler, David J. Rumolo and Stephen J. Bischoff.

If you or your staff have any questions, please feel free to call me.

Sincerely,

Jana Van Ness
Manager
Regulatory Compliance

JVN/bec

Cc: Parties of Record

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SETTLEMENT REBUTTAL TESTIMONY

OF

STEVEN M. WHEELER

On Behalf of Arizona Public Service Company

Docket No. E-01345A-03-0437

October 25, 2004

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1 **SETTLEMENT REBUTTAL TESTIMONY OF STEVEN M. WHEELER**
2 **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**
3 **(Docket No. E-01345A-03-0437)**

4 I. INTRODUCTION

5 **Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

6 A. My name is Steven M. Wheeler. I am Executive Vice President of Customer
7 Service and Regulation for Arizona Public Service Company ("APS" or
8 "Company").

9 **Q. DID YOU FILE DIRECT SETTLEMENT TESTIMONY IN THIS**
10 **PROCEEDING?**

11 A. Yes.

12 **Q. WHAT IS THE PURPOSE OF YOUR SETTLEMENT REBUTTAL**
13 **TESTIMONY?**

14 A. My settlement rebuttal testimony addresses, at a high level, the testimony
15 submitted by the Arizona Cogeneration Association ("AzCA") in
16 opposition to certain select portions of the August 18, 2004 settlement
17 agreement. APS witnesses David Rumolo and Steve Bischoff will respond
18 to the technical substance of AzCA's testimony.

19 **Q. DID PANDA GILA RIVER, L.P., ALSO FILE A STATEMENT OF**
20 **POSITION ON THE SETTLEMENT?**

21 A. Yes. But since such a pleading is not evidence, it would not be appropriate
22 for APS to provide rebuttal testimony addressing the allegations made in
23 the Panda statement. The Company will submit whatever response is
24 appropriate in a pleading of its own.

25 **Q. HAS THE COMMISSION ALSO INDICATED SOME CONCERNS**
26 **ABOUT BILLING ESTIMATION ISSUES SINCE THE FILING OF**
THE PROPOSED SETTLEMENT?

1 A. Yes. Again, no evidence on this issue was presented by any party to this
2 proceeding. Even the allegations made in another Commission docket do
3 not involve a party to the Company's rate case. APS did submit a separate
4 application relating to bill estimation on October 22, 2003, and a procedural
5 schedule for resolving both that matter and the related individual complaint
6 by Ms. Avis Reed will no doubt be established by the Commission. APS
7 also submitted Supplemental Comments on October 21, 2004 outlining
8 certain positions on these latter two proceedings and indicating the
9 Company's hope that the Commission's consideration of the proposed
10 settlement would not be delayed by their resolution.

11 **II. SUMMARY OF SETTLEMENT REBUTTAL TESTIMONY**

12 **Q. WOULD YOU PLEASE SUMMARIZE YOUR REBUTTAL**
13 **TESTIMONY IN SUPPORT OF THE PROPOSED SETTLEMENT?**

14 A. Yes. Of the nearly thirty parties to this rate proceeding, only one has filed
15 testimony in opposition. Even here, the AzCA has taken issue with portions
16 of just two of the 22 sections of the proposed settlement. For my part, I
17 wish to simply reiterate the Company's three fundamental positions with
18 regard to the interconnection and operation of customer-owned generation
19 on the APS system. The Commission should not mandate measures that:

- 20 (1) compromise system reliability;
- 21 (2) compromise employee or public safety; or,
- 22 (3) subsidize distributed generation with other customers' money.

23 **III. REBUTTAL TO AZCA**

24 **Q. HAS THE AZCA INDICATED THAT IT OPPOSES ALL PORTIONS**
25 **OF THE PROPOSED SETTLEMENT?**

26 A. No. In fact, in response to a specific data request by APS, AzCA indicated
that it only objected to the following provisions of the proposed settlement:

1 i) paragraphs 108 and 109 of Section XVII, even though
2 these two paragraphs are intended to address the very issues
raised in much of AzCA's testimony; and,

3 ii) paragraphs 118 through 122, and also paragraph 126,
4 both because they reference rate design for General Service
5 customers and because AzCA indicated, incorrectly, that the
proposed settlement would eliminate rate Schedules E-21, E-
22, E-23, and E-24.

6 In total, AzCA has objected to, at most, only eight of the 143
7 paragraphs in the proposed settlement.

8 **Q. DOES APS SUPPORT THE COST-EFFECTIVE USE OF**
9 **DISTRIBUTED GENERATION?**

10 A. Yes. Distributed generation, whether owned by APS itself, an APS
11 customer, or a third party, can defer the need for additional local
12 transmission and distribution investment, as well as provide additional
13 generating resources, especially during peak periods. Whether any of these
14 benefits are actually realized and to what degree depends entirely upon: (1)
15 the reliability and efficiency of the distributed generation; (2) the ability of
16 APS to call on the resource as needed; (3) its location on the grid; and (4)
17 the state of the existing transmission and distribution infrastructure.

18 And even when some or all of these benefits are realized, they can be offset
19 or even eliminated if APS full-requirements customers have to subsidize the
20 distributed generation resource's use of system power for backup,
21 supplemental and emergency power needs. APS has avoided this problem
22 by properly designing a variety of partial requirements rates for both large
23 and small distributed generators. Mr. Rumolo describes these rates in his
24 Settlement Rebuttal Testimony.

25 The same loss of benefit can occur if uneconomic or inefficient rate designs
26 are introduced for full-requirements customers in an effort to artificially

1 promote distributed generation. This is why the proposed settlement calls
2 for careful study of such rate design proposals before they are offered for
3 Commission review and approval. See Proposed Settlement at Paragraph
4 57. These last two points are discussed in more detail by Mr. Rumolo in his
5 Settlement Rebuttal Testimony.

6 **Q. DOES APS HAVE ESTABLISHED INTERCONNECTION**
7 **REQUIREMENTS FOR DISTRIBUTED GENERATION?**

8 A. Yes. APS first developed interconnection requirements in the mid-1980s.
9 After a series of Commission workshops in 1999 and 2000 – workshops in
10 which both APS and AzCA were active participants – further refinements
11 were incorporated. The APS interconnection requirements successfully
12 address the legitimate safety concerns customer-owned generation entail for
13 APS employees and provide for the integrated operation of such generation
14 in tandem with that of APS without compromising system operations or
15 reliability. Mr. Bischoff discusses this in his Settlement Rebuttal
16 Testimony.

17 **Q. DOES APS AGREE WITH THE AZCA THAT THE COMMISSION**
18 **SHOULD ESTABLISH UNIFORM POLICIES FOR**
19 **INTERCONNECTION AND IN THE DESIGN OF RATES FOR**
20 **PARTIAL REQUIREMENTS CUSTOMERS WHO HAVE THEIR**
21 **OWN GENERATION?**

22 A. I don't know whether that is either possible or desirable. That is why the
23 proposed settlement calls for a series of workshops on these specific
24 technical issues – workshops that should involve all the state's regulated
25 electric utilities, as well as other interested parties. You certainly will not
26 develop a uniform policy on anything in the context of a single utility's rate
case, as has been urged by AzCA in its testimony.

1 IV. CONCLUSION

2 Q. DO YOU HAVE ANY CONCLUDING REMARKS?

3 A. Yes. I believe the proposed settlement is in the public interest. It resolves
4 outstanding issues from the past that are of importance to the Company and
5 its customers. It establishes a current basis for preserving the Company's
6 financial ability to continue to provide its nearly one million and growing
7 customers reliable service at reasonable prices. It sets a course for the future
8 through its commitments to energy efficiency, renewable energy, and fair
9 and open resource procurement. AzCA's attempt to resolve in one fell
10 swoop, with an inadequate evidentiary record and without the input of
11 many other affected entities, complex issues concerning distributed
12 generation, should not deter this Commission from recognizing that the
13 proposed settlement deserves its full support and approval. Neither should
14 the unsupported allegations of a single disgruntled merchant generator.

15 Q. DOES THAT CONCLUDE YOUR REBUTTAL SETTLEMENT
16 TESTIMONY?

17 A. Yes.
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SETTLEMENT REBUTTAL TESTIMONY

OF

STEPHEN J. BISCHOFF

On Behalf of Arizona Public Service Company

Docket No. E-01345A-03-0437

October 25, 2004

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1 **SETTLEMENT REBUTTAL TESTIMONY OF STEPHEN J. BISCHOFF**
2 **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**
3 **(Docket No. E-01345A-03-0437)**

4 I. INTRODUCTION

5 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

6 A. Stephen J. Bischoff. My business address is 2121 W. Cheryl Drive,
7 Phoenix, Arizona 85021.

8 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

9 A. I am the General Manager, Construction, Operations and Maintenance of
10 Arizona Public Service Company (“APS” or “Company”).

11 **Q. WOULD YOU DISCUSS YOUR EDUCATIONAL BACKGROUND**
12 **AND BUSINESS EXPERIENCE.**

13 A. I received a Bachelor of Science degree in Electrical Engineering from the
14 University of Arizona. I worked as a summer engineer trainee between my
15 Sophomore / Junior and Junior / Senior college years at Southern California
16 Edison Company in the Los Angeles area. Upon graduation, I went to work
17 for APS and have been employed with the Company for over 31 years. I
18 have worked in various Engineering and Operations roles, with extensive
19 experience in transmission and distribution construction, design,
20 maintenance, and operations. Also during this time, I have worked as the
21 Manager of the Commercial & Industrial (“C&I”) Marketing department,
22 which included responsibilities to assist our C&I customers in evaluating
23 various end-use technologies, including self-generation.

24
25 I am a Registered Professional Electrical Engineer in the State of Arizona,
26 and I am a member of the Institute of Electrical and Electronics Engineers
 (“IEEE”).

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Q. WHAT IS THE PURPOSE OF YOUR SETTLEMENT REBUTTAL TESTIMONY?

A. The purpose of my testimony is to address the direct settlement testimonies of Arizona Cogeneration Association ("AzCA") witnesses Peter F. Chamberlain, Robert T. Baltes, and William J. Murphy.

II. SUMMARY OF SETTLEMENT REBUTTAL TESTIMONY

Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A. Yes. The AzCA has made a number of inaccurate statements concerning the reliability benefits of distributed generation and the need to address standardized interconnection requirements more specifically through the adoption of IEEE-1547. Although some of the issues discussed by AzCA, such as standardized interconnection requirements, could potentially be advantageous to all involved parties, there is no specific proposal presented by AzCA and these issues should be properly addressed through the Arizona Corporation Commission ("Commission") sponsored distributed generation workshops specified in the proposed settlement agreement.

III. DISTRIBUTED GENERATION TREATMENT IN SETTLEMENT AGREEMENT ("AGREEMENT")

Q. DID YOU PARTICIPATE IN THE COMMISSION GENERIC INVESTIGATION OF DISTRIBUTED GENERATION AND INTERCONNECTION ("DGI") (DOCKET NO. E-00000A-99-0431)?

A. Yes. I represented APS as a panelist for the DGI Workshop hosted by the Commission on June 28, 1999, and later as a member of both the Access, Metering, and Dispatch Committee and the Commission's DGI Advisory Committee.

1 **Q. PLEASE DESCRIBE THE PREVIOUS EFFORTS OF THE**
2 **COMMISSION REGARDING DISTRIBUTED GENERATION.**

3 A. In June of 1999, the Commission initiated a generic investigation of DGI in
4 Docket No. E-00000A-99-0431. The investigation began with a DGI
5 Workshop on June 28, 1999. Numerous issues and concerns identified at
6 this workshop were then investigated utilizing a formal workgroup process.
7 Three separate committees, each representing many different firms and
8 interests, were formed to consider various issues such as siting,
9 standardized interconnection procedures, and appropriate partial
10 requirements rates for DGI customers.

11 The three committees completed their assigned tasks and submitted
12 individual committee reports. An Advisory Committee was then formed to
13 complete the workgroup process and produce a summary report of the
14 investigation. The results of this investigation, including the identification
15 of key issues, an assessment of each issue from the perspective of
16 participating stakeholders, and recommendations for developing standards,
17 policies and tariffs, were included in the Workgroups Final Report. The
18 Final Report addressed the following topics:

- 19
- 20 • the need to design fair and reasonable tariffs considering
21 proper recovery of utility costs, backup power or partial-
22 requirements tariffs, and Public Utilities Regulatory
23 Policies Act of 1978 ("PURPA") Qualifying Facilities
24 ("QF") tariffs while providing consistent treatment of
25 distributed generation relative to other consumer services;
 - 26 • the need to consider the benefits and costs of distributed
generation to the utility distribution grid;
 - the need to address operational issues, such as the
scheduling and accounting of distributed generation
energy transactions, the control of distributed generation

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by a control area operator, and the operational protocols for system disturbances;

- the need to address certain technical issues and processes necessary to interconnect distributed generation to the grid;
- the need to define distributed generation and related terminology consistent with the Commission’s Electric Competition Rules and the Federal Energy Regulatory Commission (“FERC”);
- the need to define planning processes for distributed generation operating in parallel with the distribution grid, and the appropriateness of public access to distribution system operational information;
- the need to address distributed generation applications on network distribution systems;
- the need to establish a periodic review process for monitoring the progress of implementing the policies and standards necessary for distributed generation; and
- the need to consider how to extend distributed generation interconnection rules to electric utilities not subject to Commission jurisdiction.

Q. WHAT WORK HAS APS DONE AS A RESULT OF OR FOLLOWING THE WORKSHOPS?

A. APS has taken several steps concerning distributed generation since the conclusion of the previous Commission-sponsored DGI workshops:

- APS has developed internal procedures for use in determining interconnection and associated contractual requirements applicable to distributed generation units that operate in electric parallel with the APS system. These procedures specify how APS operates internally regarding the processing of distributed generation interconnection requests and identifies any specific FERC/Commission regulatory requirements that must be met prior to any interconnection.

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- In conjunction with the Commission's EPS program, APS has offered incentives to encourage the use of distributed generation from renewable resources. This EPS-based program offers to purchase renewable energy credits from APS customers who install solar/photovoltaic units. This has resulted in a significant increase in the number of solar/photovoltaic distributed generation installations.
- APS has been very active in the development of larger scale solar distributed generation applications and has installed over 3000 kW since 2000. The APS Technology Development Department has been very active in the developing large scale commercial distributed generation projects throughout the APS service territory.
- APS worked in cooperation with Salt River Project, Tucson Electric Power, and Sulphur Springs Electric Cooperative to develop and implement a uniform set of generator size classifications used in determining specific minimum protective requirements for distributed generator interconnection.

Q. WOULD IT BE MORE APPROPRIATE TO ADDRESS THE REMAINING DISTRIBUTED GENERATION ISSUES RAISED BY AZCA IN THE COMMISSION-SPONSORED DISTRIBUTED GENERATION WORKSHOPS SPECIFIED IN THE PROPOSED AGREEMENT?

A. Yes, many of the issues raised by the AzCA witnesses were discussed in detail during the Commission's previous investigation under Docket No. E-00000A-99-0431. Utilization of these Commission-sponsored distributed generation workshops allows everyone with an interest in distributed generation technologies to participate in the development of key issues/findings, which can then be standardized and used in any needed Commission rulemaking on distributed generation. These workshops also provide Commission Staff and others with the opportunity to utilize the previous work on distributed generation and address many of the highly technical aspects of connecting distributed generation to a utility's

1 distribution grid on a statewide basis that would be applicable to all
2 regulated utilities in Arizona.

3
4 IV. EFFECTS OF DISTRIBUTED GENERATION ON SYSTEM PLANNING
AND POWER QUALITY

5 Q. ON PAGE 3 OF HIS DIRECT TESTIMONY, MR. MURPHY
6 DISCUSSES THE DIVERSE NATURE OF DISTRIBUTED
7 GENERATION AND STATES THAT THE INSTALLATION OF
8 DISTRIBUTED GENERATION NECESSARILY INCREASES
RELIABILITY WHILE IMPROVING A UTILITY'S
TRANSMISSION AND DISTRIBUTION SYSTEM. DO YOU
AGREE?

9 A. No, not as a categorical statement. In terms of reliability, while the
10 installation of distributed generation may improve reliability for an
11 individual customer, if not designed, located, and operated properly, it may
12 actually decrease reliability for other nearby customers on the APS system.
13 Distribution circuits are radial, which means that power typically flows in
14 only one direction. However, these circuits are often reconfigured and
15 connected to other circuits to restore power. A distributed generator that
16 introduces an additional power source to a distribution circuit may change
17 the direction of power flowing on the circuit. This makes operating the
18 feeder and restoring power more complicated, thus slowing restoration
19 efforts to ensure safety. This could cause outage durations to increase.

20
21 Furthermore, grid connected distributed generation can complicate the
22 distribution system planning and operating process, increase system
23 protection concerns and add additional complications to routine load
24 transfers and other switching activities. And, for any benefit to either the
25 transmission or distribution infrastructure to be realized, it must be assured
26 that the distributed generation unit will be there for a sufficiently long term.

1 Our history with small fossil fuel-driven distributed generation units does
2 not support this assumption of long-term operations.

3
4 V. INTERCONNECTION OF DISTRIBUTED GENERATION TO THE APS
DISTRIBUTION SYSTEM

5 Q. **MR. BALTES ON PAGE 2 AT LINES 26-27 REFERS TO THE
6 NECESSITY FOR A FAIR AND EQUITABLE INTERCONNECTION
AGREEMENT. DO YOU AGREE?**

7 A. Yes. And APS' current interconnection agreements are all applied in a fair
8 and equitable manner. APS utilizes one of two standard "boiler-plate"
9 interconnection agreements for customer-owned generation interconnected
10 with the APS distribution system and not otherwise subject to the FERC
11 Open Access Transmission Tariff ("OATT") requirements: a residential
12 agreement and a commercial agreement. Both agreements contain customer
13 and site-specific information and are applied in an equitable manner to the
14 respective classes of service. The primary focus of these agreements is to
15 ensure a safe and reliable interconnection. As such, they include technical
16 requirements from the APS "Interconnection Requirements for Distributed
17 Generation" manual, information contained in schedules on file with the
18 Commission, and industry-standard contract language that is commonly in
19 use for such interconnections.

20
21 APS also uses a "Non-parallel Connection Agreement" in lieu of an
22 Interconnection Agreement. This is used for instances where a generation
23 source is not designed or intended to operate in parallel with the utility grid,
24 but nonetheless poses a potential back feed source threat to our system.

25 Q. **DOES THE PRESENT APS INTERCONNECTION PROCESS
26 ALLOW DISTRIBUTED GENERATION CUSTOMERS TO SAFELY
INTERCONNECT?**

1 A. Yes. APS is committed to making sure that interconnection applications are
2 handled promptly, and we complete the interconnection process in a safe
3 and timely manner. APS also is committed to making every interconnection
4 as easy as reasonably possible, including meeting and working closely with
5 customers, contractors, engineers, equipment manufacturers, and vendors
6 on a continual basis to assist in expeditiously resolving issues that may
7 surface. APS also reviews, at no charge, all interconnection designs
8 submitted under the distribution interconnection application and provides
9 assistance on design, interconnection and code issues.

10 **Q. DO YOU BELIEVE THAT THE COST OF ANY NECESSARY**
11 **UTILITY STUDY SHOULD BE CAPPED IN A STANDARD**
12 **AGREEMENT AS PROPOSED BY MR. BALTES ON PAGE 3 AT**
13 **LINES 1 AND 2?**

14 A. No. Setting an artificial cap does not recognize there are many differing
15 issues and variables that can impact a particular proposed interconnection.
16 A customer may also request the utility to perform the study for various
17 different scenarios, which could further increase costs. APS should be fully
18 compensated by the distributed generation owner for any and all costs
19 associated with interconnecting distributed generation. Other APS
20 customers should not be required to subsidize any distributed generation
21 interconnection and installation costs.

22 **Q. DO YOU AGREE WITH MR. BALTES' STATEMENT ON PAGE 3**
23 **AT LINES 12-13 THAT THIS COMMISSION SHOULD**
24 **RECOGNIZE 12.47 KV (CORRECTED) AND BELOW AS A**
25 **SEPARATE INTERCONNECTION CATEGORY?**

26 A. No. APS has radial distribution feeders that operate at higher voltages and
setting an upper limit of 12.47 kV may unduly exclude generators from
being able to interconnect under the same rules. The current APS

1 distribution interconnection requirements allow generators to interconnect
2 under the same rules to distribution feeders of 21 kV and less.

3
4 **Q. REFERRING TO MR. BALTES' SUGGESTION ON PAGE 4 AT**
5 **LINES 9-10; DO YOU BELIEVE THAT STANDARDIZATION OF**
6 **INTERCONNECTION REQUIREMENTS IS BENEFICIAL?**

7
8 **A.** In theory, yes. Standardizing the technical interconnection requirements
9 could have a benefit in that all regulated utilities will interconnect
10 according to the same basic "model", which will assist designers and
11 installers of generation by having the same rules applied uniformly
12 throughout the State. However, due to differences in the safety practices,
13 distribution system designs, and operating methods used by different
14 utilities in the state, additional work needs to be done in this area at a
15 statewide level through Commission-sponsored workshops as proposed in
16 the Agreement. APS believes that a model Interconnection Requirements
17 document, such as the Interconnection Requirements draft that was
18 developed during the generic investigation of DGI (Docket No. E-00000A-
19 99-0431), would be beneficial provided that it could be customized by each
20 utility without changing the basic intent of the document.

21
22 When considering the basic process of interconnection, emphasis needs to
23 be placed on the fact that no two projects are alike. Any interconnection
24 involves close collaboration between the utility and the installer to ensure
25 that the interconnection process proceeds smoothly and results in a reliable,
26 safe installation.

27
28 **Q. MR. CHAMBERLAIN STATES ON PAGE 3 AT LINES 3-5, THAT**
29 **NO PROVISIONS HAVE BEEN MADE IN THE AGREEMENT FOR**
30 **THE EXPEDITIOUS ADOPTION OF WHAT HE BELIEVES ARE**
31 **MEANINGFUL INTERCONNECTION STANDARDS AND**
32 **PROCEDURES, WHICH INCORPORATE AND IMPLEMENT**
33 **STANDARDS CONTAINED IN IEEE-1547. SHOULD THE**
34 **COMMISSION INFER FROM SUCH TESTIMONY THAT THE**

1 **EXISTING APS INTERCONNECTION STANDARDS AND**
2 **PROCEDURES ARE INAPPROPRIATE?**

3 A. No. The APS Interconnection Requirements, which have been revised from
4 time to time, have been in existence since the 1980s and have served to
5 successfully interconnect projects ranging from the order of a few kilowatts
6 to many megawatts. It has been used throughout the state for
7 interconnecting over 120 projects in a safe and reliable manner. This
8 document was also used as the "straw man" for developing the Arizona
9 State Draft Interconnection Requirements during the Commission's generic
10 investigation of distributed generation and interconnection (Docket No. E-
11 00000A-99-0431), and has served as the basis for interconnection
12 requirements used by other utilities.

13 **Q. WHY NOT JUST INCORPORATE IEEE-1547 STANDARDS FOR**
14 **INTERCONNECTION?**

15 A. Some of the provisions included in IEEE-1547 are covered in APS'
16 Interconnection requirements. However, IEEE-1547 focuses on technical
17 specifications and testing of an interconnection. It does not purport to
18 address an overall procedure for implementing an interconnection. APS
19 already includes minimum (utility-required) technical and testing
20 requirements in the current APS Interconnection Requirements manual, and
21 the Company does not believe that adopting IEEE-1547 as a uniform
22 interconnection policy would help "streamline" the processing of
23 interconnection requests.

24 **Q. ARE YOU AWARE OF ANY TECHNICAL ISSUES IN IEEE-1547**
25 **THAT COULD ADVERSELY EFFECT DISTRIBUTED**
26 **GENERATION INTERCONNECTION IF THIS STANDARD WERE**
 TO BE EMBRACED?

1 A. Yes. Representatives from APS, the International Brotherhood of Electrical
2 Workers, Local 387, and other Arizona utilities actively participated in the
3 IEEE-1547 proceedings, and we are aware of several issues, including
4 those in the areas of safety and protection, that are not in our view
5 adequately addressed by IEEE-1547. Two examples are provided:

- 6 • IEEE-1547 does not require the isolation device (which
7 isolates the distributed generation from the grid) to be
8 capable of interrupting current flow (load break). APS will
9 not ask any person to open a switch, which could
10 potentially be under load, if it were not rated to break that
11 load. Additionally, IEEE-1547 does not address proper
12 grounding and labeling of the switch.
- 13 • “Potential **OPEN**-points” (covered in section 8.1.5 of the
14 APS Interconnection Requirements manual) are also not
15 addressed in IEEE-1547. A potential open-point would
16 typically be a breaker or switch, which, if not properly
17 protected, could be opened and closed causing a
18 synchronous generator to be catastrophically “closed”
19 onto a utility grid in an “out-of-sync” condition.

20 **Q. ON PAGE 13 AT LINES 21-22 OF HIS TESTIMONY, MR. CHAMBERLAIN AGREES THAT IEEE 1547 IS ONLY A TECHNICAL STANDARD, AND THERE IS MUCH WORK THAT NEEDS TO BE DONE TO AFFECT A SUCCESSFUL STANDARDIZATION PROGRAM. DO YOU AGREE?**

21 A. Yes. As noted above, IEEE-1547 is a technical standard that we believe is
22 going to need further clarification and revision, along with the completion
23 of the associated guides and standards before it would be useful from an
24 interconnection standpoint. As a technical standard only, we do not believe
25 that it can serve as the basis for a successful standardization program. There
26 have been a few states that have referenced, or are attempting to
incorporate, certain provisions of IEEE-1547 into their existing
interconnection requirements to varying degrees (e.g. New York and

1 California) but, to our knowledge, no utilities exclusively use IEEE-1547 as
2 a stand-alone document.

3
4 **Q. DO YOU AGREE WITH MR. CHAMBERLAIN'S BELIEF THAT A**
5 **SUCCESSFUL STANDARDIZATION PROGRAM CAN BE**
6 **ACHIEVED IN A REASONABLY SHORT AMOUNT OF TIME BY**
7 **DRAWING UPON THE WORK THAT HAS ALREADY BEEN DONE**
8 **IN OTHER STATES, AS STATED ON PAGE 13 OF HIS**
9 **TESTIMONY AT LINES 22-25?**

10 A. No. This would particularly not be the case if this involves incorporating
11 IEEE-1547 into the standard. There remains much work to be completed on
12 IEEE 1547 and its yet unfinished associated guides and Conformance Test
13 Procedures Standard (P1547.1, P1547.2, P1547.3 and P1547.4). IEEE-
14 1547, itself, after approximately four years of often very contentious
15 debate, was eventually approved, but it still contains unfinished sections
16 that simply state: "[T]his topic is under consideration for future revisions of
17 this standard." Section 1.3 of IEEE-1547 lists additional limitations of this
18 standard. These limitations do not bode well for attempting to achieve a
19 "successful standardization program in a reasonably short period of time,"
20 be it from a technical, procedural or contractual standpoint.

21 The installers and operators of distributed generation in Arizona deserve a
22 concise, user-friendly, understandable and readily implementable
23 interconnection document. We believe that the current APS interconnection
24 document(s), as well as other Arizona utility interconnection requirements
25 accomplish this goal to a commendable degree. In the interest of
26 standardization, APS fully supports continuation of work on the Arizona
State Draft Interconnection Requirements document under the direction of
Commission-sponsored distributed generation workshops to finalize this
document.

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VI. CONCLUSION

Q. DO YOU HAVE ANY CONCLUDING REMARKS?

A. Yes. Although APS' current interconnection requirements are satisfactory, I believe the distributed generation issues brought in the AzCA witnesses' testimony should be properly addressed in Commission-sponsored workshops as specified in our current Agreement. This allows everyone with an interest in distributed generation technologies to participate in the development of key issues/findings that can be standardized and used in any needed rulemaking on distributed generation and be applied consistently by all regulated utilities in Arizona.

Q. DOES THIS CONCLUDE YOUR SETTLEMENT REBUTTAL TESTIMONY

A. Yes.

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SETTLEMENT REBUTTAL TESTIMONY OF

DAVID J. RUMOLO

On Behalf of Arizona Public Service Company

Docket No. E-01345A-03-0437

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1 **SETTLEMENT REBUTTAL TESTIMONY OF DAVID J. RUMOLO**
2 **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**
3 **(Docket No. E-01345A-03-0437)**

4 I. INTRODUCTION

5 **Q. PLEASE STATE YOUR NAME.**

6 A. My name is David J. Rumolo.

7
8 **Q. ARE YOU THE SAME DAVID RUMOLO WHO HAD PREVIOUSLY**
9 **FILED TESTIMONY IN THIS DOCKET?**

10 A. Yes. I previously filed direct and rebuttal testimony in this docket, as well
11 as Settlement Direct Testimony.

12 **Q. WHAT WAS THE NATURE OF YOUR PREVIOUSLY FILED**
13 **TESTIMONY?**

14 A. My Direct Testimony focused on Arizona Public Service Company's
15 ("APS" or "Company") proposed revisions to the Company's Service
16 Schedules. Service Schedules are the part of our tariff that contains the
17 rules and regulations concerning provision of electric service. These rules
18 and regulations include general policies on billing and collections, service
19 establishment, etc., as well as specific policies on matters such as line
20 extensions or curtailment. My Rebuttal Testimony commented on the
21 direct testimony of several parties in this docket and focused on the Service
22 Schedules, General Service rate schedules, and the rate adjustment
23 mechanisms that would apply to retail sales. I also provided Settlement
24 Direct Testimony in which I expressed support for the Settlement
25 Agreement ("Agreement") and described the rate design aspects of the
26 Agreement as well as the service schedules that were attached to the
 Agreement.

1 **Q. WHAT IS THE PURPOSE OF YOUR SETTLEMENT REBUTTAL**
2 **TESTIMONY?**

3 A. My Settlement Rebuttal Testimony addresses the settlement testimony filed
4 by Mr. William Murphy, Mr. Peter F. Chamberlain, and Mr. Robert Baltes.
5 Each of these witnesses filed direct settlement testimony on behalf of the
6 Arizona Cogeneration Association ("AzCA"). AzCA is the only party that
7 has filed testimony that does not support the Agreement in its entirety. My
8 testimony addresses the conclusions found in the AzCA testimony, corrects
9 erroneous information contained in the AzCA testimony, and explains the
10 partial requirements rate elements contained in the APS tariff. Responding
11 in great detail to the Settlement Testimony provided by AzCA has been
12 frustrated by the fact that our attempts to clarify sweeping and non-specific
13 statements contained in their testimony through the discovery process
14 yielded non-responsive and non-specific results. Also, AzCA never
15 provides specific alternative rate design proposals that AzCA asserts would
16 meet their objectives, which could then be compared to the proposed rate
17 designs that were negotiated during the settlement discussions and are
18 attached to the Agreement.

19 **II. SUMMARY OF SETTLEMENT REBUTTAL TESTIMONY**

20 **Q. WOULD YOU PLEASE SUMMARIZE YOUR SETTLEMENT**
21 **REBUTTAL TESTIMONY?**

22 A. Yes. AzCA has made a number of inaccurate statements concerning the
23 rates proposed under the Agreement. And although some of the changes
24 suggested by AzCA would be advantageous to the AzCA's members and to
25 the owners of distributed generation ("DG"), they would not be consistent
26 with proper ratemaking and cost causation. Their impact on non-DG full-
requirements customers of the Company would be both significant and

1 adverse. The rate design proposed by the Agreement is balanced,
2 progressive, and reflects a broad consensus of the customer groups that will
3 actually be asked to pay the rates. Also, my testimony calls attention to the
4 fact that the Agreement recognizes the need to finally address the issues
5 raised by AzCA, by directing Commission Staff to resolve any outstanding
6 distributed generation issues in workshops and, if necessary, rulemaking.

7
8 **III. DISTRIBUTED GENERATION'S TREATMENT UNDER PROPOSED**
SETTLEMENT AGREEMENT

9 **Q. DOES THE AGREEMENT ADDRESS AREAS OF INTEREST TO**
AZCA?

10
11 A. Despite the fact AzCA elected to not sign the Agreement, the Agreement
12 includes a proposal under which substantive issues that have been raised by
13 AzCA, such as generation interconnection, will be addressed.

14 **Q. HOW ARE DISTRIBUTED GENERATION ISSUES ADDRESSED IN**
THE AGREEMENT?

15
16 A. AzCA is concerned with the promotion of distributed generation.
17 Paragraphs 108 and 109 in Section XVII of the Agreement directs the
18 Commission Staff to schedule workshops to address outstanding distributed
19 generation issues that would build on the information developed during the
20 distributed generation workshops conducted several years ago. The
21 Agreement states that workshops may be followed with rulemaking.

22 **Q. IS DISTRIBUTED GENERATION REFERENCED IN ANY OTHER**
AREAS IN THE AGREEMENT?

23
24 A. Yes. Distributed generation is also addressed in Section VIII and Section IX
25 of the Agreement. In these sections, distributed generation participation in
26 APS renewable energy programs and competitive power procurement
processes is described. Distributed generation will be provided the

1 opportunity to bid into APS resource procurement processes in the future
2 and will be considered as part of the portfolio of resources that APS will
3 acquire to serve its customers' load requirements.

4 **Q. HAS THE COMMISSION ADDRESSED DISTRIBUTED**
5 **GENERATION IN OTHER DOCKETS?**

6 A. Yes, in July of 1999, the Arizona Corporation Commission ("Commission")
7 initiated a generic investigation of distributed generation and
8 interconnection ("DGI") in Docket No. E-00000A-99-0431. The
9 investigation began with a DGI Workshop on June 28, 1999 and concluded
10 with a series of reports and recommendations for future actions. APS
11 Witness Steve Bischoff has sponsored testimony that provides more details
12 in his Settlement Rebuttal Testimony.

13 **Q. DID THESE EARLIER WORKSHOPS PROVIDE VALUABLE**
14 **BACKGROUND INFORMATION ON THE TECHICAL,**
15 **ECONOMIC, OPERATIONAL AND SAFETY ISSUES AFFECTING**
16 **DG?**

17 A. Absolutely. However, they did not get to the specifics of how to design
18 partial requirements rates or even a specific interconnection process.

19 **Q. WOULD IT BE MORE APPROPRIATE TO ADDRESS THE**
20 **SPECIFIC DISTRIBUTED GENERATION ISSUES RAISED BY**
21 **AZCA IN THE COMMISSION STAFF-SPONSORED DISTRIBUTED**
22 **GENERATION WORKSHOPS CALLED FOR IN THE PROPOSED**
23 **SETTLEMENT AGREEMENT?**

24 A. Yes, many of the issues brought up by the AzCA witnesses were discussed
25 during the Commission's previous investigation under Docket No. E-
26 00000A-99-0431. What we need to do now is to drill down into the details
of specific DG issues. Utilization of Commission-sponsored DG workshops
allows everyone with an interest in distributed generation technologies to

1 participate in the development of key issues/findings which can be
2 standardized and used in any needed rulemaking on distributed generation.

3
4 These workshops also provide Commission staff with the opportunity to
5 utilize the previous work on distributed generation and address many of the
6 highly technical aspects of connecting distributed generation to a utility's
7 distribution grid on a statewide basis that would be applicable to all
8 regulated utilities in Arizona.

9 **IV. RATES FOR PARTIAL REQUIREMENTS SERVICE**

10 **Q. PLEASE DESCRIBE WHAT IS MEANT BY PARTIAL**
11 **REQUIREMENTS SERVICE?**

12 A. APS provides Partial Requirements Service when a customer has other
13 electric resources available to meet some or all of the customer's usual
14 load. Partial Requirements Service can be used to supplement the
15 customer's own generation or to provide standby or maintenance energy
16 when a customer's generation is not available.

17 **Q. DOES APS HAVE SPECIFIC RATE SCHEDULES THAT APPLY TO**
18 **PARTIAL REQUIREMENTS SERVICE?**

19 A. Yes. Schedule E-32-R is the partial requirements companion to our most
20 commonly-used general service schedules, including Schedule E-32. It
21 modifies the general service schedules in that it establishes minimum
22 billing demand levels based on the greater of: 1) the average kW supplied
23 by APS in the 15 minute period of maximum use each month, 2) 80% of the
24 customer's peak demand during summer months, and 3) the demand level
25 specified in the customer's contract. For customers on Time-of-Use
26 ("TOU") service, the demand levels described above are only the demands

1 during on-peak periods. Schedule E-32-R is limited to partial-requirements
2 customers with loads of under three megawatts.

3
4 APS also has several other Partial Requirements rate schedules that allow
5 customers to select specific services such as standby or maintenance power.
6 Schedule E-51 is frozen to new customers and currently is used to serve
7 four customers. Schedule E-52 is available as an alternative to Schedule E-
8 32-R and is also for customers with loads under three megawatts. The
9 customer can select the rate most advantageous for the customer's
10 particular application. Schedule E-32-R charges the customer based on the
11 customer's capacity and energy requirements without regard to whether the
12 electricity is required for standby or supplemental service. Schedule E-52
13 provides separate pricing elements for supplemental service, standby
14 service or maintenance service. Schedule E-55 is structured in a similar
15 manner as Schedule E-52 and is applicable to Partial Requirements Service
16 for customers with loads of three megawatts or greater. Currently, no
17 customers have elected service under Schedules E-52 or E-55.

18 APS has three additional rates that apply to certain types of distributed
19 generation applications. Schedule EPR-2, EPR-3 and EPR-4 specify rates,
20 terms and conditions for the purchase by APS of the electrical output of
21 cogeneration and small power production facilities.

22
23 **Q. PLEASE DESCRIBE THE TREATMENT OF THE PARTIAL**
24 **REQUIREMENTS RATES UNDER THE TERMS OF THE**
25 **AGREEMENT.**

26 **A.** Because service under E-32-R is tied to other general service rate
schedules, generally E-32, the overall rate impact is expected to be the
same as other E-32 customers, which impact I described in my Direct

1 Settlement Testimony. Individual customer impacts will vary depending on
2 several factors such as the customer's load factor. Schedule E-51 rate
3 elements, like other frozen rate elements, were increased by 5%. Schedules
4 E-52 and E-55 would be unchanged. Schedules EPR-2, EPR-3 and EPR-4
5 were not changed in the rate case or proposed Agreement but, in accordance
6 with their terms, are updated on a periodic basis as APS' avoided energy
7 costs change.

8
9 **Q. IN HIS TESTIMONY, MR. CHAMBERLAIN PROVIDES**
10 **COMMENTS ON THE DESIGN OF THE APS PARTIAL**
11 **REQUIREMENTS RATES, DO YOU AGREE WITH HIS**
12 **COMMENTS?**

13 A. No. His comments make several erroneous conclusions. First, the AzCA
14 testimony confuses fixed with variable costs and the appropriate manner to
15 recover those costs. The bulk of APS' costs to provide service to its
16 customers are fixed costs. These include the costs of ownership of facilities
17 such as generators, transmission towers, poles, wires, and cable;
18 depreciation costs associated with facilities and equipment; taxes; and
19 many elements of operations and maintenance expenses. The only true
20 variable expenses are fuel and purchased power. If rates were designed
21 perfectly, the fixed costs would all be recovered through fixed prices or
22 capacity/demand charges and variable costs recovered through energy
23 charges. However, moving from current rate designs to a "perfect" design
24 ("perfect" from the perspective of cost causation and recovery) would result
25 in significant rate shock for our customers. The Agreement rate designs
26 move rates toward cost of service while recognizing and ameliorating rate
impact concerns.

1 Second, Mr. Chamberlain alleges that the E-32/E-32-R rate design assumes
2 no "demand diversity." That assertion is simply incorrect. Demand
3 diversity reflects the fact that not all customers on the APS system or
4 within a specific customer class (e.g., residential) have their individual peak
5 demands at the same time. Thus, both system peak and class peak will be
6 something less than the arithmetic sum of individual customer peaks. Our
7 cost allocation model clearly assigns generation and backbone capacity
8 costs to customer classes based on a coincident peak methodology. This
9 methodology uses a customer's or a customer class' demand during system
10 or class peak to allocate costs. The use of coincident peak methodology
11 accounts for demand diversity on both the individual customer level as well
12 as at the class level. Local distribution investment is allocated based on
13 class non-coincidental peak contribution, which also recognizes individual
14 customer load diversity. Thus, the total revenue requirement for each
15 customer class encompasses the appropriate degree of demand diversity.
16 Because retail electric rates are designed for a group or class of customers
17 taken as a whole, demand diversity is an integral part of the rate design
18 process.

19
20 Third, Mr. Chamberlain compares APS rates for partial requirements
21 service with rates of Consolidated Edison Company ("Con Ed"), an electric
22 distribution utility in New York City. Despite the fact that such a
23 comparison between two utilities on opposite ends of the country is
24 basically meaningless, Mr. Chamberlain's comparison is factually-flawed.
25 His testimony fails to point out that the APS partial requirements rate
26 includes a generation component, while the Con Edison rates are only for
"wires" services. I would note that it is my understanding that it was the

1 generation component of its previous bundled rate that was responsible for
2 much of Con Ed's reputation for high retail rates. Con Edison has now sold
3 most of its generation, and the generation portion of the Con Edison partial
4 requirements rate is a market-based rate that exposes the partial
5 requirements customers to market price fluctuations. We made similar
6 comparisons, and only in an extreme set of customer owned generation
7 operating scenarios can the rates of Con Edison be potentially lower than
8 APS' bundled E-32-R rate. In fact, in most cases, APS' partial
9 requirements rates, including generation costs, are substantially lower than
10 Con Edison's partial requirements rate schedules when generation rates are
11 added to Con Edison's wires charges. Finally, Mr. Chamberlain states that
12 under the Con Edison partial requirements rate, the customer's standby
13 capacity is based on the customer's load during the hour of the Con Edison
14 peak or the coincident peak. That is not correct. According to the Con
15 Edison tariff, the customer's "as needed" capacity charge is based on the
16 customer's load during Con Edison's on-peak hours. That is not the same
17 as coincident peak, which is during the utility's peak hour. Also, the
18 "reservation charge" portion of the Consolidated Edison partial
19 requirements rate is non-time differentiated. I would also note that this is
20 another area in which APS asked AzCA for data to support its claims. APS
21 did not receive this data in a timely fashion, and I may have additional
22 comments upon receiving Mr. Chamberlain's supporting calculations.

23
24 V. GENERAL SERVICE SCHEDULE RATE DESIGN

25 Q. **MR. CHAMBERLAIN DISCUSSES THE FACT THAT AN E-32**
26 **CUSTOMER WHOSE LOAD IS OFF PEAK WILL PAY THE SAME**
DEMAND CHARGE AS A CUSTOMER WHOSE LOAD IS ON-
PEAK. IS THAT A CORRECT STATEMENT?

1 A. Yes, but it is not particularly relevant. Mr. Chamberlain is merely stating an
2 obvious fact for any rate that is not TOU-based. Schedule E-32 is a non-
3 timed rate and is designed to be used for a wide variety of customer uses
4 ranging from railroad crossing signals to air-conditioned warehouses where
5 customers have limited flexibility to time manage their consumption. APS
6 offers a series of TOU-based rates for customers who have the ability to
7 shift load to off-peak periods.

8
9 **Q. DO YOU AGREE WITH MR. CHAMBERLAIN'S STATEMENT
10 THAT THE E-32 RATE DESIGN DOES NOT RECOVER VARIABLE
11 FUEL COSTS IN THE TAILBLOCK OF THE RATE?**

12 A. No. Schedule E-32 is an hours-use or load factor rate. Energy sold in the
13 tail block is billed at the listed energy charge plus an implicit demand
14 charge so that APS' costs are fully recovered. The rates are designed on an
15 average cost basis and not strictly on marginal generation costs.

16 **Q. DO YOU AGREE WITH MR. CHAMBERLAIN'S ARGUMENT
17 THAT APS' RATES SOMEHOW "PUNISH" CUSTOMERS WHO
18 PARTICIPATE IN VOLUNTARY LOAD REDUCTION?**

19 A. No. I do not agree with either his basic premise or his conclusions as to the
20 impact on APS customers of voluntary load reduction. Mr. Chamberlain
21 appears to believe that rate design should be based on crisis conditions.
22 The voluntary load reductions that were made by our customers this past
23 summer were in response to an extreme situation threatening reliability, and
24 our customers reacted admirably. Customer participation came from all
25 classes of customers, including our customers who are served under rates
26 without demand charges. Rates are not designed to address extreme
operating situations, but rather are designed to fairly recover costs in a
rational manner under normal business assumptions. And, customers who
are served under rate schedules with demand-based billing elements who

1 can reduce load under any situation will experience bill savings due to
2 lower demand charges. Under load factor rates such as Schedule E-32,
3 lowered demand also results in lower overall bills due to improved load
4 factor, which is the primary purpose for having a load factor-based rate in
5 the first instance. Improved load factors allow for more efficient use of the
6 large capital investment that makes up the bulk of our costs. In short, our
7 customers who can manage their demand directly benefit from load factor-
8 based rates rather than being in any sense "punished" by them.

9
10 **Q. DO YOU AGREE WITH MR. CHAMBERLAIN'S COMMENT THAT**
11 **APS' PROPOSED E-32-TOU RATE IS NOT ACTUALLY A TOU**
12 **RATE?**

13 A. No, I do not. Mr. Chamberlain argues that the E-32 TOU rate is not a TOU
14 rate because it only provides for what he characterizes as a small on-
15 peak/off-peak price differential. Although again offering no alternative, Mr.
16 Chamberlain has ignored the fact that the demand charge is based on the
17 customer's peak demand during the on-peak hours. Incentives to shift load
18 to reduce capacity costs is the most significant driver for offering TOU
19 rates.

20 **Q. DO YOU WISH TO OFFER ANY CLARIFYING INFORMATION**
21 **REGARDING THE E-32-TOU RATE DESIGN AS SHOWN IN THE**
22 **AGREEMENT?**

23 A. Yes. There was an inadvertent omission in the residual charge element of
24 the E-32-TOU rate that is listed in Appendix J of the Agreement. Residual
25 charges are applied to all measured off-peak kW that are higher than on-
26 peak kW. For example, if a customer's off-peak demand is 75 kW and the
customer's on-peak demand is 50 kW, the residual charge is applied to 25
kW. The unbundled delivery charge consists of two rate blocks: the first
100 kW is charged at rate of \$7.722 per kW for secondary service and

1 demand over 100 kW is charged at a rate of \$3.497 per kW. The
2 corresponding charges for primary service are \$7.102 per kW and \$2.877
3 per kW. The Appendix J table lists residual capacity charges for off-peak
4 capacity which correspond to the first billing block of the delivery charges.
5 The second residual blocks were inadvertently omitted. In other words, the
6 residual billing blocks and charges should be identical to the billing blocks
7 for the delivery charge in the non-TOU version of E-32.

8
9 VI. TRANSMISSION ISSUES

10 **Q. DOES APS AGREE WITH MR. CHAMBERLAIN'S ASSESSMENT**
11 **OF THE PROBLEMS EXPERIENCED THIS SUMMER WITH THE**
12 **LOSS OF THE WESTWING TRANSFORMERS?**

13 A. No. Mr. Chamberlain testifies that the Westwing fire resulted in a single
14 contingency condition and that APS should be expected to be able to meet
15 all load under a single contingency condition without relying on voluntary
16 load reduction. APS agrees that it should be able to and can meet all load
17 under single contingency conditions. The fact is that the fire that occurred
18 at Westwing on July 4th resulted in all three 525/230kV transformer banks
19 being out of service for four days, and two of the three remaining
20 transformers being out of service until the BPA transformer was installed
21 and placed in service in early August of 2004. During the entire period of
22 time that APS and SRP were requesting voluntary load reduction, the
23 Phoenix Area Transmission System was in a severe multiple contingency
24 condition. The voluntary load reduction reduced the likelihood that
25 involuntary load reduction would be required under very heavy load
26 conditions, or under additional outage conditions (local generating units
unavailable).

1 **Q. DOES APS AGREE WITH MR. CHAMBERLAIN'S ASSESSMENT**
2 **THAT THE PHOENIX AREA IS A LOAD POCKET SIMILAR TO**
3 **NEW YORK CITY?**

4 A. No. It is true that the Phoenix Area does not have sufficient transmission
5 import capability to serve the entire load at peak demand and is therefore
6 reliant on local generation during certain hours during the summer.
7 However the extent to which it is reliant on this local generation is much
8 lower than in New York City. If as Mr. Chamberlain testifies, New York
9 City relies on local generation to serve 80% of its peak demand, then it will
10 have local generation requirements at all times. The APS requirement for
11 local generation is less than 23% of the Phoenix Area peak demand and
12 local generation is required for less than 700 hours of the year. Most telling
13 of all, the energy requirement of this local generation is only one percent of
14 the total annual energy consumption in the Phoenix Area. Studies
15 performed by APS the last two years show that the cost of running this local
16 generation to meet load instead of procuring other market resources is
17 insignificant because for most hours, when the loading requires local
18 generation, the market price for energy is higher than the cost of the local
19 generators.

20 **Q. MR. CHAMBERLAIN ALLEGES THAT APS COST ALLOCATIONS**
21 **USED TO DEVELOP RATES ARE INCONSISTENT WITH**
22 **WESTCONNECT'S OATT AND APS RECOVERY OF**
23 **TRANSMISSION COSTS IS NOT APPROPRIATE. DO YOU**
24 **AGREE WITH THAT ASSESSMENT?**

25 A. Mr. Chamberlain's basic premise is in error for several reasons. First,
26 WestConnect is still in the formation stage, and the draft OATT that was
filed with FERC is not in effect. Thus, it is not clear to me why retail rates
should somehow be impacted by unimplemented draft wholesale rates. The
Scheduling Coordinator for APS' Standard Offer customers purchases

1 transmission and ancillary services under the terms of the APS OATT, and
2 Part IV of the OATT provides for those charges, some of which are demand
3 based and some of which are energy based. The APS retail rates are
4 designed to recover the costs incurred by the APS retail Scheduling
5 Coordinator.

6
7 Second, any attempt to compare APS retail rate designs to the WestConnect
8 OATT is a meaningless exercise. For example, he discusses the fact that
9 there is demand rate block at 500 kW in the APS E-32 rate and there is no
10 corresponding rate block in the WestConnect tariff. The WestConnect tariff
11 is a wholesale tariff that will be designed to recover costs for wholesale
12 transmission service. Schedule E-32 is a retail tariff designed to recover
13 costs incurred to provide retail service.

14 Third, and perhaps more to the point from a practical perspective, Mr.
15 Chamberlain is ignoring the unbundled rate designs that inherent in the
16 proposed Agreement. The transmission component of APS unbundled
17 retail rates recovers transmission costs on a per kilowatthour basis.
18 Therefore, his argument that customers who elect partial requirements
19 service somehow overpay for transmission service is without factual merit.
20 All retail customers will pay the same unbundled rate for transmission
21 service.

22
23 **VII. CONCLUSION**

24 **Q. DO YOU HAVE ANY CONCLUDING REMARKS?**

25 A. Yes. I believe the Agreement is a fair settlement that reflects the input of
26 the stakeholders involved in the settlement process, including AzCA. In
testimony, the AzCA attempts to use the settlement process of an APS rate

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case to address concerns of a much more global nature despite the fact that the Agreement provides a process to resolve outstanding issues on the treatment of distributed generation. AzCA's testimony provides no compelling reasons for the Commission not to accept the Agreement which was the result of lengthy stakeholder process in which AzCA participated.

Q. DOES THAT CONCLUDE YOUR REBUTTAL SETTLEMENT TESTIMONY?

A. Yes.