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Arizona Corporation Commission

BEFORE THE ARIZONA CORPORATION COMMISSION

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CARL J. KUNASEK
Chairman

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JIM IRVIN
Commissioner
WILLIAM A. MUNDEL
Commissioner

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IN THE MATTER OF THE GENERIC)
INVESTIGATION OF THE DEVELOPMENT)
OF A RENEWABLE PORTFOLIO STANDARD)
AS A POTENTIAL PART OF THE RETAIL)
ELECTRIC COMPETITION RULES.)

DOCKET NO. E-00000A-99-0205

STAFF'S CLOSING BRIEF

I. INTRODUCTION.

In 1996, the Commission adopted a Solar Portfolio Standard as part of the Retail Electric Competition Rules ("Rules"). The Solar Portfolio Standard required utilities and Electric Service Providers ("ESPs") to provide up to 1 percent of their electricity from solar resources. The Solar Portfolio was to be phased in over a number of years and included incentives for economic development in Arizona of solar power plants and manufacturing plants.

The Solar Portfolio Standard was deleted from the Rules in early 1999. In April 1999, the Commission commenced a process to consider the adoption of a new Environmental Portfolio Standard. The proposed new rules for an Environmental Portfolio Standard include additional environmentally-friendly resources such as solar electric, solar water heating, wind, hydro power, landfill gas, biomass and geothermal energy. Hearings were held on the new proposed Portfolio in September 1999. At conclusion of the hearings a briefing schedule was set and time provided for the parties' negotiation for settlement of all or some of the issues presented. Although the parties have met and discussed settlement extensively, they were unable to resolve these matters.

Staff submits this brief in support of the Commission's adoption of an Environmental Portfolio Standard. At the hearings in this case, Staff's testimony reflected its recommendation that the Commission adopt a portfolio standard based upon a kWh requirement. This approach to a portfolio standard is discussed below as the "kWh Requirement". In addition, there is another approach the Commission could consider in adopting a portfolio standard. The alternative approach is based upon funding levels as a standard, and is referred to in the brief as the "Current

1 Funding Level” approach. Both of these approaches are discussed with important aspects
2 highlighted for the Commission’s consideration. Also, attached to this brief as Appendix A are
3 proposed rule changes for a kWh Requirement standard, with a cover page summary. Attached as
4 Appendix B, are proposed rule changes for a Current Funding Level standard, also with a cover page
5 summary.

6 **II. CHOOSING AN APPROPRIATE PORTFOLIO STANDARD IS A MATTER OF**
7 **POLICY.**

8 Arizona is faced with a choice today. All through the 1980s and 1990s, the
9 Corporation Commission, through Integrated Resources Planning efforts, through rate case
10 settlements, and related workshops, has attempted to encourage Arizona’s electric utilities to
11 diversify into new technologies such as renewable energy technologies. Unfortunately, the
12 Commission’s target of 19 MWs of renewables to be installed by the year 2000 that was established
13 by the Commission in 1994 in Decision No. 58643 is unlikely to be met. Only a little over one-third
14 of the target will have been met by the end of 1999, and current utility plans do not contemplate
15 significant increases in the next year.

16 The choice that the Commission is faced with in adoption of a portfolio standard is
17 between the “Current Funding Level” approach or the bolder “kWh Requirement” approach. The
18 “Current Funding Level” approach is consistent with testimony of most of the utilities and ESPs that
19 were active in this docket. However, the “kWh Requirement” approach is consistent with the
20 testimony of the solar advocates, the environmental group representatives, and the Commission
21 Staff. Either is a valid policy choice. The consequences of each approach will be quite different.
22 The “Current Funding Level” approach is a safe, marginal improvement, which will slowly bring
23 renewable and clean energy technologies to Arizona. The “kWh Requirement” approach is more
24 aggressive and will rapidly increase the use of renewable and clean electric generation technologies
25 in Arizona. Thus, the impact will be more immediate and the level of renewable and clean energy
26 development will be greater in the “kWh Requirement” portfolio standard.

27 In the “kWh Requirement” approach, the portfolio standard would reflect a portfolio
28 kWh requirement expressed as a percentage of retail electricity sales. This approach would require

1 Affected Utilities and their competitors to obtain enough electricity to meet the Portfolio
2 requirements through either the purchase or installation of eligible technologies or the purchase of
3 electricity from eligible power plants owned by others.

4 Although the differences appear to be subtle, the basic premises of the approaches
5 are different. In the "Current Funding Level" approach, those Affected Utilities with current System
6 Benefits program requirements and funding levels would simply re-allocate existing System Benefits
7 funds to meet portfolio requirements. Then, in 2004, as regulatory assets and stranded costs are fully
8 or partially recovered, there would be room for additional charges to fund a larger portfolio
9 commitment.

10 The most significant difference in the two approaches is in the scope of the portfolio.
11 In the "Current Funding Level" approach, a fixed dollar amount would be allocated toward
12 "portfolio resources," reflecting the current level of funding for System Benefits for the next three
13 to four years and then increase after 2003. Further, the "Current Funding Level" approach would
14 not require any mandated kWh output until 2004. In the "kWh Requirement" approach, the portfolio
15 standard would be a specific percentage of retail electricity sales. The percentage would start at .2%
16 and increase over time to 1% of retail electricity sales, reflecting the kWh portfolio percentages as
17 included in Chairman Kunasek's April 8, 1999 letter.

18 **III. ADVANTAGES OF THE "kWh REQUIREMENTS" PORTFOLIO STANDARD.**

19 There are a number of advantages of selecting the "kWh Requirement" approach.

- 20 • The "kWh Requirement" approach is designed to get results. Rather than merely
21 requiring dollars to be spent, this approach requires the utilities and their competitors
22 to choose technologies wisely and to get results from their purchases (i.e. solar or
23 clean kWh delivered to customers).
- 24 • By requiring a significant "ramp-up" in purchases over a short number of years, this
25 approach would create a "critical mass" of technology purchases that will offer
26 incentives to manufacturers to build manufacturing facilities in Arizona.
- 27 • By concentrating mostly on solar electric resources, this approach provides an
28 incentive to build solar power plants in Arizona, which has the nation's best solar
energy resource. This new power plant construction in Arizona would benefit the
state economy, creating jobs and a new, clean industry.
- By taking a bold step forward, this approach will bring national focus to Arizona as
the place to build the next generation of solar and clean energy technologies.

- 1 • By moving toward the use of in-state renewable energy resources, Arizona will start
2 to change from a net energy importer to a state that is taking control of its energy
future by developing and using its own abundant natural energy resources.

3 **IV. ADVANTAGES OF THE “CURRENT FUNDING LEVEL” PORTFOLIO**
4 **STANDARD.**

5 Similarly, there are a number of advantages of selecting the “Current Funding Level”
6 approach.

- 7 • By limiting expenditures in this approach to the current funding levels, there will be
8 no need to require increased costs on customers to support a large portfolio effort.
- 9 • This approach would allow a longer, slower “learning curve” for utilities and their
10 competitors to adapt to the newer renewable and clean energy technologies, while
allowing the utilities to continue to add conventional gas power plants and other
conventional power plants to their power plant mix.
- 11 • This approach will allow utilities and their competitors to invest in out-of-state
12 renewable power plants, such as wind, geothermal, and biomass. Those energy
technologies are not economically viable in Arizona, due to a lack of wind,
13 geothermal, and biomass resources.

14 **V. RATEPAYER IMPACT.**

15 The “Current Funding Level” approach is designed specifically to allow for portfolio
16 development without raising rates to customers. For those utilities, such as Arizona Public Service
17 Company (“APS”) and Tucson Electric Power Company (“TEP”), that currently have System
18 Benefits programs, funding of the portfolio requirement would merely entail re-allocation of System
19 Benefits funds already being collected in rates to pay for portfolio resources. Thus, there would be
20 no increase in rates for the APS and TEP customers. Unfortunately, for other Affected Utilities that
21 do not have System Benefits funding included in current rates, some new funding mechanism would
22 have to be developed. This could include a new System Benefits Charge, a fuel adjuster mechanism,
23 or some other appropriate mechanism.

24 The “kWh Requirement” approach would establish a percentage of retail kWh sold
25 requirement. The Affected Utilities and ESPs would procure portfolio resources as needed to meet
26 the kWh requirement. In Staff’s testimony, Mr. Williamson demonstrated that, at least for the two
27 largest utilities, APS and TEP, the impact of a portfolio would not raise rates, but rather, would
28 lessen the reduction in rates contemplated in their stranded cost settlements.

1 However, for those Affected Utilities without rate reductions contemplated, an
2 increase in costs for the portfolio would require an increase in costs passed on to customers. For
3 many of the Affected Utilities that currently have fuel cost adjusters, the adjuster mechanism would
4 be an appropriate way to handle the new costs. Of course, if the other Affected Utilities are as
5 successful as APS and TEP have been in past years in reducing operating costs, the net increased
6 cost, from the combination of the portfolio and the reduction of operating costs, may not be as large
7 as it would otherwise be.

8 **VI. PENALTY PROVISIONS FOR FAILURE TO MEET A PORTFOLIO STANDARD.**

9 This discussion supports the Commission's authority to promulgate the proposed
10 rules as to penalties provisions as they are now reflected in R14-2-1618. Whether the Commission
11 determines that the kWh Requirements portfolio standard is appropriate or instead adopts some other
12 alternative standard, the Commission has the power to impose penalties for the failure to meet an
13 environmentally friendly portfolio standard.

14 The Commission has both the constitutional and statutory authority to prescribe the
15 terms and conditions of service to the public, including the provision of electricity. Under its
16 constitutional authority in Article 15, Section 3 and statutory provisions such as A.R.S. §§ 40-321
17 and 40-331, the Commission may adopt rules requiring sales of electricity to conform to an
18 environmental standard for the benefit of the Affected Utilities, ESPs and the public.

19 Several parties have raised the issue of whether the Commission may impose a
20 penalty for the failure of an ESP to meet the portfolio requirement set forth in proposed R14-2-1618
21 (A) or (B) in any year. Under R14-2-1618 (F), an ESP must pay an amount equal to 30 cents per
22 kWh to the Solar Electric Fund for deficiencies in the provision of solar electricity. Proceeds from
23 the fund will be used for the purchase of solar electric generators or solar electricity for public
24 entities such as schools or government agencies.

25 The Commission has the constitutional authority to set an appropriate market
26 structure for just and reasonable rates in a competitive environment. If the Commission determines
27 that the market structure for just and reasonable rates in a competitive market includes
28 environmentally-friendly sources such as solar, the Commission may adopt rules under Section 3

1 to ensure that its goals are met. Ariz. Corp. Comm'n v. State ex rel. Woods, 171 Ariz. 286, 294, 830
2 P.2d 807, 815 (1992)(“Woods”)(court will give deference to the Commission’s determination of
3 what regulation is necessary for effective ratemaking). If the collection of penalties is reasonably
4 related to these goals, the Commission may impose the penalties as a necessary step in its rate setting
5 powers and under its authority to ensure the health and welfare of the public, including customers
6 and employees of ESPs. Id.

7 Similarly, directing the use of the funds collected for failure to follow the
8 Environmental Portfolio Standard is also within the Commission’s powers to encourage the
9 development of solar use in a competitive energy market. Public entities will benefit from the solar
10 electricity, and their use will move the development of solar electricity forward toward the
11 Commission’s goals of a competitive energy market that is environmentally friendly. Thus, all of
12 these requirements under the rules are within the Commission’s Section 3 powers to protect the
13 public and establish just and reasonable rates. Ratemaking issues which encompass a much broader
14 spectrum of actions than simply setting rates, Woods, 171 Ariz. at 295, 830 P.2d at 816, are matters
15 uniquely for Commission determination. Id. at 292, 830 P.2d at 813.

16 The rules also provide that if an ESP’s provision of solar energy is consistently
17 deficient, the Commission may void the ESP’s contracts negotiated under the rules. R14-2-1618(F).
18 This provision is within the Commission’s broad Section 3 powers as well. If an ESP consistently
19 fails to meet the portfolio standard, then the Commission's authority to develop an environmentally
20 friendly energy market is impeded. The contracts can be set aside to ensure the development of a
21 competitive solar market.

22 Some parties may object to this provision upon grounds that the Commission may
23 not set aside or impair a contract for energy services. However, the rule does not violate any
24 constitutionally protected contract clause. The Arizona courts have adopted the same three part test
25 used by the federal courts to determine whether a legislative enactment impairs a contract for
26 purposes of Article II, Section 25 of the Arizona Constitution. McClead v. Pima County, 174 Ariz.
27 348, 359, 849 P.2d 1378, 1389 (Ct. App. 1992). First, the threshold inquiry is whether the law has
28 operated to substantially impair a contractual relationship. Energy Reserves Group, Inc. v. Kansas

1 Power & Light Co., 459 U.S. 400, 411, 103 S.Ct. 697, 704, 74 L.Ed.2d 569 (1983). If the regulation
2 constitutes a substantial impairment, the State must be able to identify a significant and legitimate
3 public purpose to justify the regulation. Id. at 412-13, 103 S.Ct. at 704-05. Finally, once a legitimate
4 public purpose has been identified, the state must show that the adjustment of the rights and
5 responsibilities of the contracting parties has been based upon reasonable conditions and is of a
6 character appropriate to the public purpose justifying the regulation's adoption. Id. at 412, 103 S.Ct.
7 at 705.

8 In this instance, the rule sets forth a legitimate public purpose. Requiring ESPs to
9 meet an Environmental Portfolio Standard protects the public interest in a safe and healthy
10 environment, as well as conserving natural resources. Similarly, the balancing of interests in
11 requiring contracts to be set aside for failure to meet the portfolio standard is reasonable and
12 appropriate to the public purpose behind the rules.

13 In light of the above, if the Commission determines in its discretion, that penalties
14 are appropriate to ensure that the Environmental Portfolio Standard's goals are met, the
15 Commission's adoption of the penalty provisions is lawful. Similarly, if the Commission chooses
16 to adopt some modification to the penalties currently set forth in proposed R14-2-1618(F), it has the
17 authority to do so.

18 **VII. WAIVERS.**

19 Several parties, namely AEPCO and the cooperatives ("cooperatives"), have raised
20 issues related to their inability to meet the proposed portfolio standard for various reasons. Similar
21 arguments were raised by the cooperatives in the promulgation of the Electric Competition Rules
22 as a whole. As was the case with the earlier expressions of concern as to the rules' applicability for
23 the cooperatives, the cooperatives may seek a waiver of the standard's provisions and the timing of
24 implementation of any standard the Commission adopts. In other words, merely because the
25 cooperatives allege they may have problems in meeting a portfolio standard, this should not be
26 grounds for the failure to adopt a standard the Commission determines is appropriate and in the
27 public interest. If the cooperatives believe they cannot meet the standard, they may petition the

28 ...

1 Commission for a waiver. This is equally true of any other ESP who seeks a waiver from the
2 applicability of an adopted standard and its timing requirements.

3 **VIII. CONCLUSION.**

4 In conclusion, Staff urges the adoption of a meaningful Environmental Portfolio
5 Standard that will accomplish the Commission's goals of developing environmentally-friendly
6 sources of energy. Both of the approaches to a portfolio standard discussed herein have certain
7 advantages. The Commission's choice of a particular portfolio standard will reflect policy choices
8 made in the Commission's discretion to encourage alternative energy sources that are just and
9 reasonable priced in the competitive retail electric market.

10 RESPECTFULLY SUBMITTED this 17th day of November, 1999.

11 By: Janice Alward
12 Janice Alward
13 Arizona Corporation Commission
14 1200 West Washington
15 Phoenix, Arizona 85007
16 (602) 542-3402
17
18
19
20
21
22
23
24
25
26
27
28

1 Certificate of Service

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4 Docket Control
5 Arizona Corporation Commission
6 1200 West Washington
7 Phoenix, Arizona 85007

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9 LEE TANNER
10 ELECTRISOL LTD
11 1215 E HARMONT DRIVE
12 PHOENIX AZ 85020

MICHELLE L. HART
PHOTOCOMM INC
7681 E GRAY ROAD
SCOTTSDALE AZ 85260

11 DALE ROGERS
12 ROCKETDYNE DIVISION
13 BOEING NORTH AMERICA
14 PO BOX 7922 - MS FA-66
15 CANOGA PARK CA 91309-7922

HARRY BRAUN, III
STIRLING ENERGY SYSTEMS
6245 N 24TH PARKWAY - SUITE 209
PHOENIX AZ 85016

15 STEVE CHALMERS
16 POWERMARK CORPORATION
17 4044 E WHITTON
18 PHOENIX AZ 85018

ROBERT WALKER
ENTECH INC
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KELLER TX 76248

18 MICHAEL NEARY
19 ARISEIA
20 2034 N 13TH STREET
21 PHOENIX AZ 85001

MONEER H AZZAM
ASE AMERICAS
4 SUBURBAN PARK DRIVE
BILLERICA ME 01821

21 JAN MILLER
22 SRP
23 1600 N PRIEST DRIVE
24 TEMPE AZ 85281

RAY DRACKER
BECHTEL CORPORATION
PO BOX 193965
SAN FRANCISCO CA 94119

24 VINCENT HUNT
25 CITY OF TUCSON
26 4004 S PARK AVE
27 BUILDING #2
28 TUCSON AZ 85714

BARRY L. BUTLER, PH.D
SCIENCE APPLICATIONS INT'L CORP
10260 CAMPUS POINT DRIVE - MS-C2
SAN DIEGO CA 92121

ROBERT H. ANNAN
6605 E EVENING GLOW DRIVE
SCOTTSDALE AZ 85262

...

1	RICK GILLIAM	JAMES H. CALDWELL, JR.
2	LAW FUND	CEERT
3	2260 BASELINE ROAD - SUITE 200	PO BOX 26
	BOULDER CO 80302	TRACY'S LANDING MD 20779
4	VAHAN GARBOUSHIAN	HERB HAYDEN
5	AMONIX INC	APS
6	3425 FUJITA STREET	P O BOX 53999 - MAIL STN 9110
	TORRANCE CA 90505	PHOENIX AZ 85072-3999
7	JEFFREY R. GOLDEN	ERIC WILLS
8	AMOCO/ENRON SOLAR POWER DEV	DAGGETT LEASING CORPORATION
9	PO BOX 1188	20668 PASEO DE LA CUMBRE
	HOUSTON TX 75221-1188	YORBA LINDA CA 92887
10	DAN GREENBERG	ALPHONSE BELLAC
11	ASCENSION TECHNOLOGY	YORK RESEARCH CORPORATION
12	235 BEAR HILL ROAD	6 LADYSLIPPER LANE
	WALTHAM ME 02154	OLD LYME CT 06371
13	KATHY KELLY	JANE WEISSMAN
14	CORP FOR SOLAR TECHNOLOGY &	PV4U
	RENEWABLE	15 HAYDEN STREET
15	6863 W CHARLESTON	BOSTON MASSACHUSETTS 02131-4013
16	LAS VEGAS NV 89117	
17	RICK MACK	DAVID BERRY
18	TEP	RESOURCE MGMT INT'L - INC
	220 W 6TH STREET	302 N FIRST AVENUE - SUITE 810
19	TUCSON AZ 85701	PHOENIX AZ 85003
20	SOLAR ENERGY INDUSTRIES ASSOC.	BARRY M. GOLDWATER, JR.
21	122 C STREET, N.W., 4TH FLOOR	ARISELIA
	WASHINGTON DC 20001-2109	3104 E CAMELBACK RD - SUITE 274
22	HOWARD WENGER	PHOENIX AZ 85016
23	PACIFIC ENERGY GROUP	FRANK BRANDT
24	32 VALLA COURT	1270 E APPALACHIAN ROAD
	WALNUT CREEK CA 94596	FLAGSTAFF AZ 86004
25	JIM B COMBS	CHRISTY HERIG
26	CONSERVATIVE ENERGY SYSTEMS	1617 COLE BLVD
27	40 W BASELINE #112	GOLDEN CO 80401
	MESA AZ 85210	
28	...	

1	MARK RANDALL	DEBBIE TEWA
2	DAYSTAR CONSULTING LLC	NATIVE SUN
	PO BOX 761	PO BOX 660
3	CLARKSDALE AZ 86324	KYKOTSMOVI AZ 86039
4	JANE WINIECKI	CAMERON DANIES
5	YAVAPAI-APACHE NATION	HUALAPAI TRIBE
	ECONOMIC DEVELOPMENT	PO BOX 179
6	AUTHORITY	PEACH SPRINGS AZ 86434
7	PO BOX 1188	
	CAMP VERDE AZ 86322	JIMMY DANIELS
8	FRED SANCHEZ	NAVAJO TRIBAL UTILITY
9	YAVAPAI-APACHE NATION	AUTHORITY
	PO BOX 1188	PO BOX 170
10	CAMP VERDE AZ 86322	FT DEFIANCE AZ 86504
11	PHYLLIS BIGPOND	LEONARD GOLD
12	INTER TRIBAL COUNCIL OF ARIZONA	398 S MILL AVE - SUITE 306
	2214 N CENTRAL - SUITE 100	TEMPE AZ 85281
13	PHOENIX AZ 85004	STEVE SECREST
14	ROBERT JACKSON	GOLDEN GENESIS COMPANY
15	COLORADO RIVER INDIAN TRIBES	PO BOX 14230
	ROUTE 1 - BOX 23-B	SCOTTSDALE AZ 85267
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	INDIAN COMMUNITY	ACAA
22	PO BOX 17779	2627 N 3RD STREET - SUITE 2
23	FOUNTAIN HILLS AZ 85269	PHOENIX AZ 85004
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25	OFFICE OF ECONOMIC	GALLAGHER & KENNEDY
	DEVELOPMENT	2600 N CENTRAL AVENUE
26	THE HOPI TRIBE	PHOENIX AZ 85004-3020
	PO BOX 123	
27	KYKOTSMOVI AZ 86039	
28	...	

1 PETER GLASER
2 SHOOK, HARDY & BACON, LLP
3 600 14TH STREET N.W SUITE 800
4 WASHINGTON DC 20005-2004
5
6 DAVID G CALLEY
7 SOUTHWEST WINDPOWER INC
8 2131 N FIRST STREET
9 FLAGSTAFF AZ 86004
10
11 KENNETH R. SALINE
12 K R SALINE & ASSOCIATES
13 160 N PASADENA - SUITE 101
14 MESA AZ 85201-6764
15
16 LEE TANNER
17 ELECTRICSOL LTD
18 1215 E HARMONT
19 PHOENIX AZ 85020
20
21 TOM LEPLEY
22 PHASOR ENERGY CO.
23 4202 E EVANS DRIVE
24 PHOENIX AZ 85032
25
26 MIKE PATTERSON
27 RT. 1 - BOX
28 SWANSEA
LONE PINE CA 93545
29
30 DERRICK REBELLO
31 QUANTUM CONSULTING
32 2030 ADDISON STREET
33 BERKELEY CA 94704
34
35 BRYAN SCOTT CANADA
36 620 E BROADWAY LANE
37 TEMPE AZ 85282
38
39 C WEBB CROCKETT
40 FENNEMORE CRAIG
41 3003 N CENTRAL AVE - SUITE 2600
42 PHOENIX AZ 85012-2913
43
44 ...

GREG PATTERSON
RUCO
2828 N CENTRAL AVE - SUITE 1200
PHOENIX AZ 85004

PETER GLASER
DOHERTY RUMBLE & BUTLER PA
1401 NEW YORK AVE NW SUITE 1400
WASHINGTON DC 20005

DOUGLAS C NELSON
DOUGLAS C NELSON PC
7000 NORTH 16TH STREET #120-307
PHOENIX AZ 85020

CHRIS SHERRING
PVI
171 COMMERCIAL STREET
SUNNYVALE CA 94086

CHRIS KING
UTILITY.COM INC
828 SAN PABLO AVENUE
ALBANY CA 94706

DONALD W AITKEN PHD
UNION OF CONCERNED SCIENTISTS
2397 SHATTUCK AVENUE - SUITE 203
BERKELEY CA 94704

BARBARA KLEMSTINE
PO BOX 53999
PHOENIX AZ 85072-3999

BRADLEY S CARROLL
TEP
220 W 6TH STREET
PO BOX 711
TUCSON AZ 85702-0711

DAVID L. DEIBEL
CITY OF TUCSON
PO BOX 27210
TUCSON AZ 85726-7210

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

PAUL R MICHAUD
MARTINEZ & CURTIS
2712 N 7TH STREET
PHOENIX AZ 85006-01090

JON WELLINGHOFF
411 WEDGEWOOD DRIVE
HENDERSON NV 89014

BRUCE FEDER
FEDERAL LAW OFFICE
2525 E ARIZONA BILTMORE CIRCLE
#140
PHOENIX AZ 85016

EDWARD SALGIAN
DISTRIBUTED ENERGY ASSOCIATION
OF ARIZONA
7250 N 15TH STREET - STE 102
PHOENIX AZ 85020-5270

By Monica A. Martinez

APPENDIX A

SUMMARY OF APPENDIX A -- kWh Requirement

Appendix A includes proposed Environmental Portfolio Standard rules using the "kWh Requirement" approach. This approach encompasses concepts drawn from the testimony of the Arizona Clean Energy Industries Alliance (ACEIA), the Land and Water Fund of the Rockies, the City of Tucson, and the Commission Staff.

The "kWh Requirement" approach uses as its base the proposed rules suggested in Chairman Kunasek's April 8, 1999 letter that initiated the opening of this docket. This approach requires that Electric Service Providers (ESPs) obtain a portion of the electricity to be sold at retail from solar and other environmentally friendly resources. The percentage requirement would start at .2% of retail electricity sales and would increase over time to 1% of retail electricity sales. (To put this in context, the growth in electricity sales in Arizona each year is approximately 2-3%. The portfolio requirement would be approximately one-third to one half of the annual growth in electricity sales.)

The proposed rules include a provision to allow up to 20% of the portfolio requirement to be met by solar water heating (R14-2-1618 (M)). The proposed rules also include a provision (R14-2-1618 (N)) to allow certain environmentally friendly technologies located in Arizona to be used to meet up to 10% of the portfolio requirement.

Note for readers: Both Appendix A and Appendix B include essentially the same rule wording, with a few changes to reflect the unique differences of each approach. The wording differences in the two Appendices will be highlighted in bold.

APPENDIX A

PROPOSED RULE WORDING FOR "KWH REQUIREMENT" APPROACH

R14-2-1618. Environmental Portfolio Standard

- A. Starting on January 1, 2000, any Electric Service Provider selling electricity or aggregating customers for the purpose of selling electricity under the provisions of this Article **must derive** at least .2% of the total retail energy sold **competitively** from new solar energy resources, whether that solar energy is purchased or generated by the seller. Solar resources include photovoltaic resources and solar thermal resources that generate electricity. New solar resources are those installed on or after January 1, 1997.
- B. The portfolio percentage shall increase after December 31, 2000.
1. Starting January 1, 2001, the portfolio percentage shall increase annually and shall be set according to the following schedule:

YEAR	PORTFOLIO PERCENTAGE
2001	.4%
2002	.5%
2003	.6%
2004	.8%
2005-2012	1.0%

2. The Commission would continue the annual increase in the portfolio percentage after December 31, 2003 only if the cost of solar electricity has declined to a Commission-approved cost/benefit point. The Director, Utilities Division shall establish, not later than January 1, 2002, a Solar Electricity Cost Evaluation Working Group to make recommendations to the Commission of an acceptable solar electricity cost/benefit point or solar kWh cost impact cap that the Commission could use as a criteria for the decision to continue the increase in the portfolio percentage. The recommendations of the Working Group shall be presented to the Commission not later than December 31, 2002.
- C. The portfolio requirement **shall only apply to competitive retail electricity in the year 2000 and** shall apply to all retail electricity in the years **2001** and thereafter.
- D. Electric Service Providers shall be eligible for a number of extra credit multipliers that may be used to meet the portfolio standard requirements:
1. Early Installation Extra Credit Multiplier: For new solar electric systems installed and operating prior to December 31, 2003, Electric Service Providers would qualify for multiple extra credits for kWh produced for 5 years following operational start-up of the solar electric system. The 5-year extra credit would vary depending upon the year in which the system started up, as follows:

YEAR	EXTRA CREDIT MULTIPLIER
1997	.5
1998	.5
1999	.5
2000	.4
2001	.3
2002	.2
2003	.1

The Early Installation Extra Credit Multiplier would end in 2003.

2. Solar Economic Development Extra Credit Multipliers: There are 2 equal parts to this multiplier, an in-state installation credit and an in-state content multiplier.
 - a. In-State Power Plant Installation Extra Credit Multiplier: Solar electric power plants installed in Arizona shall receive a .5 extra credit multiplier.
 - b. In-State Manufacturing and Installation Content Extra Credit Multiplier: Solar electric power plants shall receive up to a .5 extra credit multiplier related to the manufacturing and installation content that comes from Arizona. The percentage of Arizona content of the total installed plant cost shall be multiplied by .5 to determine the appropriate extra credit multiplier. So, for instance, if a solar installation included 80% Arizona content, the resulting extra credit multiplier would be .4 (which is $.8 \times .5$).

3. Distributed Solar Electric Generator and Solar Incentive Program Extra Credit Multiplier: Any distributed solar electric generator that meets more than one of the eligibility conditions will be limited to only one .5 extra credit multiplier from this subsection. Appropriate meters will be attached to each solar electric generator and read at least once annually to verify solar performance.
 - a. Solar electric generators installed at or on the customer premises in Arizona. Eligible customer premises locations will include both grid-connected and remote, non-grid-connected locations. In order for Electric Service Providers to claim an extra credit multiplier, the Electric Service Provider must have contributed at least 10% of the total installed cost or have financed at least 80% of the total installed cost.
 - b. Solar electric generators located in Arizona that are included in any Electric Service Provider's Green Pricing program.
 - c. Solar electric generators located in Arizona that are included in any Electric Service Provider's Net Metering or Net Billing program.
 - d. Solar electric generators located in Arizona that are included in any Electric Service Provider's solar leasing program.

- e. All Green Pricing, Net Metering, Net Billing, and Solar Leasing programs must have been reviewed and approved by the Director, Utilities Division in order for the Electric Service Provider to accrue extra credit multipliers from this subsection.
- 4. All multipliers are additive, allowing a maximum combined extra credit multiplier of 2.0 in years 1997-2003, for equipment installed and manufactured in Arizona and either installed at customer premises or participating in approved solar incentive programs. So, if an Electric Service Provider qualifies for a 2.0 extra credit multiplier and it produces 1 solar kWh, the Electric Service Provider would get credit for 3 solar kWh (1 produced plus 2 extra credit).
- E. Electric Service Providers selling electricity under the provisions of this Article shall provide reports on sales and solar power as required in this Article, clearly demonstrating the output of solar resources, the installation date of solar resources, and the transmission of energy from those solar resources to Arizona consumers. The Commission may conduct necessary monitoring to ensure the accuracy of these data.
- F. If an Electric Service Provider selling electricity under the provisions of this Article fails to meet the requirement in R14-2-1618(A) or (B) in any year, the Commission shall impose a penalty on that Electric Service Provider that the Electric Service Provider pay an amount equal to 30¢ per kWh to the Solar Electric Fund for deficiencies in the provision of solar electricity. This Solar Electric Fund will be established and utilized to purchase solar electric generators or solar electricity in the following calendar year for the use by public entities in Arizona such as schools, cities, counties, or state agencies. Title to any equipment purchased by the Solar Electric Fund will be transferred to the public entity. In addition, if the provision of solar energy is consistently deficient, the Commission may void an Electric Service Provider's contracts negotiated under this Article.
 - 1. The Director, Utilities Division shall establish a Solar Electric Fund in **2000** to receive deficiency payments and finance solar electricity projects.
 - 2. The Director, Utilities Division shall select an independent administrator for the selection of projects to be financed by the Solar Electric Fund. A portion of the Solar Electric Fund shall be used for administration of the Fund and a designated portion of the Fund will be set aside for ongoing operation and maintenance of projects financed by the Fund.
- G. Photovoltaic or solar thermal electric resources that are located on the consumer's premises shall count toward the solar portfolio standard applicable to the current Electric Service Provider serving that consumer.
- H. Any solar electric generators installed by an Affected Utility to meet the solar portfolio standard shall be counted toward meeting renewable resource goals for Affected Utilities established in Decision No. 58643.

- I. Any Electric Service Provider or independent solar electric generator that produces or purchases any solar kWh in excess of its annual portfolio requirements may save or bank those excess solar kWh for use or sale in future years. Any eligible solar kWh produced subject to this rule may be sold or traded to any Electric Service Provider that is subject to this rule. Appropriate documentation, subject to Commission review, shall be given to the purchasing entity and shall be referenced in the reports of the Electric Service Provider that is using the purchased kWh to meet its portfolio requirements.
- J. Environmental Portfolio Standard requirements shall be calculated on an annual basis, based upon electricity sold during the calendar year.
- K. An Electric Service Provider shall be entitled to receive a partial credit against the portfolio requirement if the Electric Service Provider or its affiliate owns or makes a significant investment in any solar electric manufacturing plant that is located in Arizona. The credit will be equal to the amount of the nameplate capacity of the solar electric generators produced in Arizona and sold in a calendar year times 2,190 hours (approximating a 25% capacity factor).
 - 1. The credit against the portfolio requirement shall be limited to the following percentages of the total portfolio requirement:

1999	Maximum of 50 % of the portfolio requirement
2000	Maximum of 50 % of the portfolio requirement
2001	Maximum of 25 % of the portfolio requirement
2002	Maximum of 25 % of the portfolio requirement
2003 and on	Maximum of 20 % of the portfolio requirement
 - 2. No extra credit multipliers will be allowed for this credit. In order to avoid double-counting of the same equipment, solar electric generators that are used by other Electric Service Providers to meet their Arizona portfolio requirements will not be allowable for credits under this Section for the manufacturer/Electric Service Provider to meet its portfolio requirements.
- L. The Director, Utilities Division shall develop appropriate safety, durability, reliability, and performance standards necessary for solar generating equipment to qualify for the portfolio standard. Standards requirements will apply only to facilities constructed or acquired after the standards are publicly issued.
- M. An Electric Service Provider shall be entitled to meet up to 20% of the portfolio requirement with solar water heating systems purchased by the Electric Service Provider for use by its customers, or purchased by its customers and paid for by the Electric Service Provider through bill credits or other similar mechanisms. The solar water heaters must replace or supplement the use of electric water heaters for residential, commercial, or industrial water heating purposes. For the purposes of this rule, solar water heaters will be credited with 1 kWh of electricity produced for each 3,415 British Thermal Units of heat produced by the solar water heater. Solar water heating systems shall be eligible for Early Installation Extra Credit Multipliers as defined in R14-2-1618

D.1 and Solar Economic Development Extra Credit Multipliers as defined in R14-2-1618 D.2.b.

- N. An Electric Service Provider shall be entitled to meet up to 10% of the portfolio requirement with electricity produced **in Arizona** by environmentally-friendly renewable electricity technologies, including **in-state** landfill gas generators, wind generators, biomass generators, and small hydropower generators. Systems using such technologies shall be eligible for Early Installation Extra Credit Multipliers as defined in R14-2-1618 D.1 and Solar Economic Development Extra Credit Multipliers as defined in R14-2-1618 D.2.b.

APPENDIX B

SUMMARY OF APPENDIX B -- Current Funding Level

Appendix B includes proposed Environmental Portfolio Standard rules using the "Current Funding Level" approach. This approach encompasses concepts drawn from the testimony of Arizona Public Service Company, Tucson Electric Power Company, and New West Energy.

The "Current Funding Level" approach uses as its base the proposed rules suggested in Chairman Kunasek's April 8, 1999 letter that initiated the opening of this docket. This approach limits the costs of the portfolio standard to the current amounts that are in the approved System Benefits programs for certain utilities. Rather than a kWh requirement, the Affected Utilities and ESPs would be held to a "dollar cap" for a certain period of time. The portfolio percentages would only be "targets" in the years 2000-2003. Starting in 2004, the kWh requirement would become mandatory and a penalty provision would become effective.

The proposed rules include a provision to allow up to 20% of the portfolio requirement to be met by solar water heating (R14-2-1618 (M)). The proposed rules also include a provision (R14-2-1618 (N)) to allow certain environmentally friendly technologies that could be located anywhere to be used to meet up to 10% of the portfolio requirement.

Note for readers: Both Appendix A and Appendix B include essentially the same rule wording, with a few changes to reflect the unique differences of each approach. The wording differences in the two Appendices will be highlighted in bold.

APPENDIX B

PROPOSED RULE WORDING FOR "CURRENT FUNDING LEVEL" APPROACH

R14-2-1618. Environmental Portfolio Standard

A. Starting on January 1, 2000, any Electric Service Provider selling electricity or aggregating customers for the purpose of selling electricity under the provisions of this Article will **have a target to provide** at least .2% of the total retail energy sold ~~competitively~~ from new solar energy resources, whether that solar energy is purchased or generated by the seller. Solar resources include photovoltaic resources and solar thermal resources that generate electricity. New solar resources are those installed on or after January 1, 1997.

1. **Competitive ESPs, that are not UDCs, are exempt from portfolio requirements until 2004, but could voluntarily elect to participate. ESPs choosing to participate would receive a pro rata share of funds collected for portfolio purposes.**
2. **Utility Distribution Companies would recover the costs of the portfolio standard through current System Benefits Charges, if they exist, including a re-allocation of demand side management funding to portfolio uses. The minimum annual allocation of System Benefits Charges for portfolio expenditures for the years 2000 through 2003 would be \$6 million per year for Arizona Public Service Company and \$2 million per year for Tucson Electric Power Company. Expenditures by a UDC or ESP on in-state solar equipment manufacturing facilities or operations would qualify for meeting up to 25% of the portfolio expenditures in 2000, for up to 15% of expenditures in 2001, and for up to 5% of expenditures in 2002. The Commission, at its discretion, may require similar levels of portfolio expenditures for Affected Utilities that do not currently have System Benefits Charges, through fuel cost adjuster mechanisms, system benefits charges, or other appropriate financing mechanisms.**

B. The portfolio percentage shall increase after December 31, 2000.

1. Starting January 1, 2001, the portfolio percentage shall increase annually and shall be set according to the following schedule:

YEAR	PORTFOLIO PERCENTAGE
2001	.4%
2002	.5%
2003	.6%
2004	.8%
2005-2012	1.0%

2. **Targets identified in R14-2-1618(A) and (B) shall be voluntary in years 2000-2003. In 2004, the targets will become mandatory and the penalty provisions in R14-2-1618(F) will apply if ESPs or UDCs fail to meet the portfolio requirements.**
 3. The Commission would continue the annual increase in the portfolio percentage after December 31, 2003 only if the cost of solar electricity has declined to a Commission-approved cost/benefit point. The Director, Utilities Division shall establish, not later than January 1, 2002, a Solar Electricity Cost Evaluation Working Group to make recommendations to the Commission of an acceptable solar electricity cost/benefit point or solar kWh cost impact cap that the Commission could use as a criteria for the decision to continue the increase in the portfolio percentage. The recommendations of the Working Group shall be presented to the Commission not later than December 31, 2002.
- C. The portfolio requirement ~~shall only apply to competitive retail electricity in the year 2000 and~~ shall apply to all retail electricity in the years 2000 and thereafter.
- D. Electric Service Providers shall be eligible for a number of extra credit multipliers that may be used to meet the portfolio standard requirements:
1. Early Installation Extra Credit Multiplier: For new solar electric systems installed and operating prior to December 31, 2003, Electric Service Providers would qualify for multiple extra credits for kWh produced for 5 years following operational start-up of the solar electric system. The 5-year extra credit would vary depending upon the year in which the system started up, as follows:

YEAR	EXTRA CREDIT MULTIPLIER
1997	.5
1998	.5
1999	.5
2000	.4
2001	.3
2002	.2
2003	.1

The Early Installation Extra Credit Multiplier would end in 2003.

2. Solar Economic Development Extra Credit Multipliers: There are 2 equal parts to this multiplier, an in-state installation credit and an in-state content multiplier.
 - a. In-State Power Plant Installation Extra Credit Multiplier: Solar electric power plants installed in Arizona shall receive a .5 extra credit multiplier.
 - b. In-State Manufacturing and Installation Content Extra Credit Multiplier: Solar electric power plants shall receive up to a .5 extra credit multiplier related to the manufacturing and installation content that comes from

Arizona. The percentage of Arizona content of the total installed plant cost shall be multiplied by .5 to determine the appropriate extra credit multiplier. So, for instance, if a solar installation included 80% Arizona content, the resulting extra credit multiplier would be .4 (which is .8 X .5).

3. Distributed Solar Electric Generator and Solar Incentive Program Extra Credit Multiplier: Any distributed solar electric generator that meets more than one of the eligibility conditions will be limited to only one .5 extra credit multiplier from this subsection. Appropriate meters will be attached to each solar electric generator and read at least once annually to verify solar performance.
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- E.** Electric Service Providers selling electricity under the provisions of this Article shall provide reports on sales and solar power as required in this Article, clearly demonstrating the output of solar resources, the installation date of solar resources, and the transmission of energy from those solar resources to Arizona consumers. The Commission may conduct necessary monitoring to ensure the accuracy of these data.
- F.** **Commencing on January 1, 2004**, if an Electric Service Provider selling electricity under the provisions of this Article fails to meet the requirement in R14-2-1618(A) or (B) in any year, the Commission shall impose a penalty on that Electric Service Provider that

the Electric Service Provider pay an amount equal to 30¢ per kWh to the Solar Electric Fund for deficiencies in the provision of solar electricity. This Solar Electric Fund will be established and utilized to purchase solar electric generators or solar electricity in the following calendar year for the use by public entities in Arizona such as schools, cities, counties, or state agencies. Title to any equipment purchased by the Solar Electric Fund will be transferred to the public entity. In addition, if the provision of solar energy is consistently deficient, the Commission may void an Electric Service Provider's contracts negotiated under this Article.

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