

EXCEPTION



0000085198

BEFORE THE ARIZONA CORPORATION COMMISSION

DOCKETED

CARL J. KUNASEK
Chairman
JIM IRVIN
Commissioner
WILLIAM A. MUNDEL
Commissioner

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AZ CORP COMMISSION
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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 EXCEPTIONS TO
PROPOSED ORDER

Staff hereby files its exceptions to the proposed order in the above-captioned matter.

I. THE BACKGROUND AND THE RECORD OF THIS PROCEEDING REFLECT THAT A PORTFOLIO STANDARD SHOULD BE ADOPTED BY THE COMMISSION.

Chairman Kunasek's letter that commenced this process in April 1999 identified an Environmental Portfolio Standard that included not only solar, but other eligible technologies. The Environmental Portfolio Standard proposal had three components. First, it proposed to change the phase-in schedule for the portfolio percentage. Second, it proposed to allow up to 20% of the portfolio to be met by solar water heating. And third, it proposed to allow other "environmentally friendly" technologies to fulfill up to 10% of the portfolio requirements. It is clear that the April 1999 proposal contemplated a variation or modification of the former Solar Portfolio Standard (adopted in 1996 and modified in 1998) to become "a more reasonable approach to developing alternative environmentally friendly fuels for future use."

There were two important evaluation criteria that were identified in the April 1999 letter. First was that the "price impact is minimal." The second was that "a cost benefit analysis will show that this is good public policy." Staff believes that the record in this docket demonstrates both criteria are met by the Portfolio Standard in Attachment A to the proposed order.

1 The first criterion was that “the price impact is minimal.” Staff witness
2 Williamson demonstrated that the price impact of the portfolio is minimal (Direct, p. 13-14;
3 Appendices RTW-2 & RTW-3). The “back of the envelope” calculations presented were similar
4 to those any average homeowner could perform. Even with conservative estimates of the
5 portfolio costs, the resulting price impact is minimal. For instance, in the first year of the
6 portfolio, a residential customer who uses 1,000 kWh per month would have an extremely small
7 portfolio cost since only 2 kWh would come from the Environmental Portfolio, while 998 kWh
8 would come from conventional energy resources. Similarly, the written testimony of Staff
9 witness Hoff (Direct, Appendix THE-2, p. 7) confirms that, even with the Portfolio Standard,
10 customer rates will decrease and the impact on final price would be minimal.

11 The second criterion related to a cost benefit analysis showing that a Portfolio
12 Standard is “good public policy.” Staff witness Marshall Goldberg (Direct, p. 4-10 and
13 Appendix MRG-2) conducted an extensive input-output/cost-benefit analysis of the Portfolio
14 Standard which clearly showed the Portfolio Standard to be good for Arizona and to be good
15 public policy. Mr. Goldberg’s analysis showed the significant positive economic impact of the
16 Portfolio Standard on Arizona’s economy, job creation, and economic development.

17 The urgency to start moving toward renewables and environmentally clean
18 technologies is even more important today than it was four years ago in 1996 when the
19 Commission first adopted the Solar Portfolio Standard. The Commission is or will be presented
20 with requests for approval of construction of almost 12,000 MW of new power plants. Every
21 plant uses polluting conventional generators and most of them are either in or upwind of
22 Maricopa County and the Phoenix Non-Attainment Area. Most of them will use significant
23 amounts of Arizona’s limited water supply. It does Arizona’s citizens no good to have cheap,
24 competitive electricity if the result is for us to choke on the air pollution the plants create and
25 lose our valuable drinking water supply. It is more than ironic that some of the same companies
26 that are willing to gamble billions of dollars on these huge merchant power plants are affiliates of
27 the intervenors in this docket who have complained that building 200 MW of clean power plants
28 is too expensive.

1 **II. "VOLUNTARY" DOES NOT WORK.**

2 Although the proposed order suggests the commencement of a voluntary
3 renewables program, past voluntary efforts to utilize renewables have failed. Testimony of
4 utility witnesses, Land and Water Fund witness Gilliam (Direct, p. 5) and Staff witness
5 Williamson (TR. p. 669-70) showed that voluntary renewables efforts of Arizona's utilities in the
6 1990s have been significantly less than originally promised. In 1993, the Staff recommended
7 that four Arizona utilities be required to install a total of 19 MW of renewables by 2000. Very
8 much as in this docket, the four utilities complained of the cost and requested that the 19 MW
9 target be called a "goal" rather than a requirement. In its subsequent Integrated Resource
10 Planning ("IRP") order (Decision No. 58643, dated June 1, 1994), the Commission accepted the
11 utilities' argument and made the 19 MW requirement a goal.

12 Testimony in this docket showed that, as of the September 1999 hearing in this
13 docket, APS had installed around .5 MW of its 12 MW goal and APS projected that it would
14 only install 2 MW of its 12 MW goal by the deadline of December 2000. Tucson Electric
15 testified that it has already met its 5 MW goal with a new landfill gas plant. AEPCO and
16 Citizens have both done a handful of small, token projects but are not close to their 1 MW goals.
17 The evidence has shown that a "voluntary" renewables effort is not taken seriously by Arizona's
18 utilities. By the deadline, only about 40-45% of the IRP renewables "goals" will have been
19 voluntarily met.

20 Much has been made of the solar efforts of APS. What is forgotten is that most of
21 that effort was required by a rate case settlement. That settlement required a minimum of \$3
22 million a year to be spent on solar. APS had the option to go significantly beyond the annual \$3
23 million minimum amount, but voluntarily chose not to do that.

24 Staff recommends that the Commission adopt a mandatory rather than a voluntary
25 program. Under a voluntary program, the utilities have no incentive to negotiate because the
26 program will be no greater than that which they voluntarily agree to do. A voluntary program
27 dooms the Environmental Portfolio Standard to, at most, a continuation of the meager (or in
28 some cases, non-existent) renewables efforts by utilities to date. Or at least, the result could be a

1 voluntary effort that is less than current efforts. Instead, Staff recommends that the Commission
2 adopt, in principle, the Portfolio Standard included in Attachment A to the proposed order and
3 then require the parties to negotiate to settle certain details. (For instance, Staff believes that the
4 APS proposed phase-in of the solar set aside shown on pages 5 and 6 of the proposed order is a
5 reasonable adjustment to Attachment A that all parties should be able to agree to it in a
6 settlement.)

7 The settlement could include reasonable, increasing annual caps on utility
8 expenditures that go well beyond current efforts, but still limit the exposure of utilities and
9 customers to future rate increases. This, too, would be reasonable, and all parties should be able
10 to come to some kind of an agreement. A similar cap approach could be used to protect large
11 customers from extremely high dollar costs to support the Portfolio Standard. Finally, a list of
12 acceptable technologies to be included in the portfolio should be relatively easy for the parties to
13 agree upon in a settlement.

14 **III. MISCELLANEOUS COMMENTS AND CORRECTIONS.**

15 Staff believes that the proposed order's Findings of Fact section should be
16 amended to reflect the testimony of parties who favored a mandatory Portfolio Standard.

17 **A. Finding of Fact 11.**

18 Proposed Finding of Fact 11 appears to rely upon a comment in the docket about
19 reduced performance of some photovoltaic panels in hot weather and extrapolated that to the
20 assertion that, " Arizona is less than an optimal solar resource." This comment is akin to the
21 logic that since some Yugo automobiles are poorly manufactured and need extensive repairs,
22 therefore all automobiles are poorly constructed.

23 There are four major solar electric technologies that are eligible for the portfolio
24 standard. Only one of them is photovoltaics. The others are solar troughs, solar dish Stirling, and
25 solar central receivers. In fact, the last three technologies thrive in hot temperatures, because
26 their thermal losses are less on hot days. Although some photovoltaic panels do not perform
27 well in hot weather, some other photovoltaic technologies (such as certain thin film panels) are
28 reported to perform better in hot climates. But even that is not the most important point.

1 Arizona has the best solar radiation in the nation and some of the best annual
2 sunshine levels (in langleys per year) in the entire world. To say that this advantage is
3 outweighed by minor performance degradation in hot weather by some of the eligible
4 technologies is to miss the point that a solar system's annual performance is the result of a
5 multitude of factors. Clearly, the most important factor is the amount of sunshine falling on the
6 solar collector. That is why Arizona is the optimum location in the U.S. for solar system
7 installations. In fact, the clear, mostly cloud-free skies and excellent direct beam solar radiation
8 make Arizona the ideal spot for concentrating solar collection systems. Staff recommends that
9 this finding be deleted from the proposed order.

10 **B. Finding of Fact 20.**

11 Proposed Finding of Fact 20 states, "Solar and other renewable technologies are
12 not cost effective when compared against conventional technologies now and in the foreseeable
13 future." This is too broad of a generalization based upon the record. Many, if not most, of the
14 renewable technologies produce electricity at a per kWh cost that is less than many of the
15 conventional peaking plants in operation in Arizona and the U.S. today. It is like asserting that
16 "all nuclear power plants are more cost-effective than coal plants." Some certainly are, while
17 others certainly are not. Staff recommends that this finding be deleted from the proposed order.

18 **C. Finding of Fact 28.**

19 Proposed Finding of Fact 28 states: "Based on a survey by the Behavior Research
20 Center, the majority of Arizonans reject paying higher bills for solar-generated electricity."
21 Finding of Fact 28 correctly describes a survey result submitted by Staff's consultant, Behavior
22 Research Center. However, the Findings of Fact should include a similar survey result presented
23 in Staff witness Williamson's rebuttal testimony (Rebuttal, Appendix RTW-1, p. 17) that a
24 national survey conducted by the Electric Power Research Institute found that "Eighty-four
25 percent of respondents nationwide say they would be willing to forgo a 5% discount in electricity
26 prices to select power from renewable resources." This is a powerful finding of fact that rebuts
27 the assertions of the "voluntary program" advocates that Arizonans would not give up a portion
28

1 of rate reductions to have renewable resources in the generation mix. Staff suggests that a new
2 Finding of Fact 29 (renumbered) be inserted that reflects this testimony.

3
4 **IV. STAFF'S SUGGESTED LANGUAGE CHANGES FOR THE PROPOSED ORDER.**

5 Page 19, Line 3:

6 **DELETE:** Finding of Fact 11.

7 Page 20, Lines 22-23:

8 **DELETE:** Finding of Fact 20.

9 Page 21, Line 18.5:

10 **INSERT:** New Finding of Fact 29 and renumber:

11 " A national survey by the Electric Power Research Institute
12 found that 84% of respondents nationwide would forgo a 5%
13 discount in electricity prices to select power from renewable
resources."

14 Page 22, Lines 10-12:

15 **DELETE:** First ordering paragraph.

16
17 **INSERT:** "IT IS THEREFORE ORDERED that an Environmental
18 Portfolio Standard based on Attachment A of this order is hereby
approved in principle. Final details of the Portfolio Standard shall be
recommended in a negotiated settlement of the parties.

19 IT IS FURTHER ORDERED that the settlement shall result
20 in a significant Portfolio Standard which is substantially greater than
the current voluntary efforts of the Affected Utilities."

21 **V. CONCLUSION.**

22 In light of the above, Staff recommends the Commission adopt a mandatory
23 Portfolio Standard and amend the proposed order as discussed herein.

24 **RESPECTFULLY SUBMITTED** this 22nd day of March, 2000.

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4 Proposed Order" were
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6 March, 2000 to:

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