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BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
COMMISSIONER-CHAIRMAN
JIM IRVIN
COMMISSIONER
WILLIAM A. MUNDELL
COMMISSIONER

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-0000A-99-0205

JOINT POST HEARING BRIEF OF:

ARIZONA COMMUNITY ACTION ASSOCIATION

CYPRUS CLIMAX METALS COMPANY

NEW ENERGY

NEW WEST ENERGY

RESIDENTIAL UTILITY CONSUMER OFFICE

TUCSON ELECTRIC POWER COMPANY

Following the hearings in this docket, all of the parties held a series of meetings in which the parties attempted to reach a consensus position. Although all of the parties did not agree on a single position, a substantial number of the parties did reach agreement on a set of "guiding principles" and ultimately on a proposal that incorporated these principles.

As discussed below, this brief represents the consensus position of several of the intervenors in this matter.[1] We believe that this is a significant proposal that, if implemented at similar levels statewide, would provide approximately $240 million investment in new, renewable technologies through 2012. Importantly, this approach will not eliminate or reduce the agreed upon price decreases for the customers and it will insure that money is spent in a responsible and cost effective manner.

Several parties to this joint brief support the "guiding principles" and joint proposal outlined in this brief but wish to raise additional issues and are filing supplemental briefs.

A proposed form of rule which is consistent with the discussions contained in this brief is attached as Exhibit A.

Description of Settlement Discussions Following the Hearings

All of the parties engaged in extensive settlement talks following the hearings. The undersigned parties believe that the following points should serve as guiding principles for the development of the Renewables Program:

- All parties want to encourage the development of renewable resources through a careful program designed to achieve maximum benefit for the money spent.

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[1] The positions set forth in this joint brief are also supported by ASARCO, Inc. and Arizonans for Electric Choice and Competition

- Customers do not want the imposition of a renewable portfolio standard to eliminate or reduce the hard-fought price cuts gained in the competition proceeding.
- Customers want to be sure that their money is spent efficiently and that the expenditure of money will be reviewed through a public process.
- The money for an Environmental Portfolio Standard (EPS) should initially come from distribution utilities.
- The distribution utilities are willing to pledge millions to EPS without eliminating or reducing the price decreases.
- The focus should be on dollar commitments rather than percent of kWh sales to protect electric customers from highly uncertain hardware costs.
- Programs benefiting low-income customers that are funded by the Systems Benefit Charge should not be reduced below current funding levels.

Based upon these guiding principles, the parties have developed the joint proposal outlined below.

The Joint Proposal[2]

1. FUNDING LEVELS

The Affected Utilities would be required to commit and SRP would voluntarily commit to the schedule of expenditures on environmentally friendly technologies for their distribution areas at the levels indicated below. Funding for years 2000-2003 will be guaranteed. Funding for years 2004-2012 will be contingent on approval by the

Commission or the SRP Board following a public process.

Funding Levels for SRP Renewable Program				
Year	Funding Level		Year	Funding Level
2000	$8,200,000		2004	$12,000,000
2001	$7,000,000		2005	$12,000,000
2002	$7,000,000		2006	$12,000,000
2003	$7,000,000		2007[3]	$12,000,000

Funding Levels for TEP Renewable Program[4]				
Year	Funding Level		Year	Funding Level
2000	$1,500,000		2004[5]	$2,250,000
2001	$1,600,000		2005	$2,250,000
2002	$1,800,000		2006	$2,250,000
2003	$2,000,000		2007	$2,250,000

2. NO INCREASE IN SYSTEMS BENEFIT CHARGE

Initial funding for the program will not increase the systems benefit charge to the

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[2] During the hearings, New West Energy advanced a proposal put forward by SRP management. This revised proposal has been developed in conjunction with, and is supported by, SRP management.

[3] In 2007, SRP will complete another review of the program to determine whether the program will continue through 2012.

[4] TEP "net expenditures do not include revenues from "Green Pricing" programs or sales of renewable energy to other utilities, federal and state grants, and any federal or state tax credits received by a particular utility for solar and other renewables. It does not include TEP's investment of shareholder funds in Global Solar. These amounts would have to be added to net expenditures to determine the utility's "gross expenditures" on renewables.

[5] In 2004 and 2005, until the Commission rules on TEP's 2004 rate case, surplus "Other" credits could be used by TEP to make up for deficit "Solar Electric" or "Solar Hot Water" credits at a ratio of 10 "Other" credits equals 1 "Solar Electric" or 5 "Solar Hot Water". 2005 through 2012 – expenditure commitment would be a minimum of $2,250,000, dependent upon the result of the 2004 TEP rate case, pending a Commission determination (as a result of the 2003 EPS review hearing) to change that funding commitment, or to move to a straight "percent of sales" EPS.

customers nor will there be a deferral of costs for future recovery. Other Affected Utilities would have obligations proportionate to those reflected in the above tables provided this can be accomplished without a rate increase. If Arizona's Cooperative Utilities can not fund such a program within currently authorized rates they may opt out of the program until 2004, after which time they will be required to comply with any environmental portfolio standard rules that apply to Affected Utilities.

3. MEASURABLE GOALS

The Commission and SRP will establish measurable goals for the programs at the time the programs are initiated. The goals will be established with technical support in the areas of pricing, market behavior, economic development, environmental protection and technology development. The goals will be used in the program reviews to be completed by the end of year four, and will include measurable goals in at least the following areas:

- The success of the industry in meeting price targets for eligible technologies.
- The demonstrated market support for "green energy products."
- The success of the program in creating a wholesale "green energy" market capable of sustaining itself without ongoing subsidies.
- The cost-effectiveness of the program in creating new jobs and business in Arizona.
- The cost-effectiveness of the program in improving air quality in Arizona.

4. ELIGIBLE TECHNOLOGIES

Technologies eligible for support under the program, as well as the maximum per-unit support level and required performance for each technology will be established at the time program goals are established. However, it is anticipated that the following "environmentally friendly" technologies will be eligible for support in some way:

- Photovoltaics – both central station and distributed.
- Solar thermal generation – including dish and trough technologies.
- Solar domestic hot water heating that displaces electricity usage.
- Hydroelectric generation units smaller than 5 MWp.
- Geothermal generation.
- Wind generation.
- Generation which makes use of Arizona landfill gas, sewage digester gas or waste biomass.
- Through the year 2003, limited funding may be allowed for demonstration of fuel cells which are projected to convert fuel to electricity at efficiencies of over 40%, reduce the level of emissions for a given energy use or reduce the need for transmission expansion.
- Limited funding for public information, program administration and R&D will be allowed.

5. <u>PROGRAM REVIEW</u>

Commission review of the EPS would be postponed until 2002-2003. The review would begin no later than July 1, 2002, and would be completed and an order issued by June 30, 2003. The review will be an all-encompassing examination of all aspects of the EPS program, including but not limited to: funding levels, energy source quotas, rate impacts, penalty provision impacts, results achieved by both utilities and the solar industry, and cost-effectiveness of the program from the viewpoints of electric supply acquisition, environmental protection, and economic development. Projected future results should be considered as well as past results.

SRP will complete a similar review by June 30, 2003. Both SRP and the Commission will share any information used in such reviews.

All interested parties will have the opportunity to participate. The review will result in recommendations to the Commission and SRP board about whether or not the program should be extended and, if so, for what length of time and at what funding levels. The presumption will be that the program will be extended for another four years if it is meeting its measurable goals and if doing so will not result in a rate increase. The review will also recommend whether the funding mix for the various program components should be adjusted or whether some components should be dropped or others added and program changes that would help the program better achieve its goals.

6. FUND ALLOCATION GUIDELINES

Several goals have been articulated for the EPS program. Technologies will differ in their contribution to each goal. For example, a dollar spent on one technology may contribute more to air quality improvement whereas the same dollar spent on another technology may contribute more to job creation. For this reason, the parties to this brief believe that the allocation of funds should be technology independent. However, with the condition that they are guidelines only and not limits, the parties support the following fund allocation guidelines:

- 2000 – at least 50% solar electric/no more than 20% solar hot water/no more than 30% other "environmentally friendly" resources or research and development ("R&D") on solar electric resources, but with no more than 20% on R&D

- 2001 - at least 55% solar electric/no more than 20% solar hot water/no more than 25% other "environmentally friendly" resources or R&D on solar electric resources, but with no more than 15% on R&D
- 2002 - at least 60% solar electric/no more than 20% solar hot water/no more than 20% other "environmentally friendly" resources or R&D on solar electric resources, but with no more than 10% on R&D
- 2003 – at least 65% solar electric/no more than 20% solar hot water/no more than 15% other "environmentally friendly" resources or R&D on solar electric resources, but with no more than 5% on R&D
- 2004 through 2012 – at least 70% solar electric/no more than 20% solar hot water/ no more than 10% other 'environmentally friendly" resources or R&D on solar electric, but not more than 5% R&D.[6]

The ability to leverage available funding to meet program goals may be influenced by the types of program components that are supported. The parties believe that the following program components have a role in the program:

- Customer-side renewable credits – This component will be designed to encourage the establishment of a viable, liquid, transparent wholesale market for qualifying green energy and to encourage the offering of "green content" products to distribution customers.
- New near-commercial renewable generation – This component will provide subsidies that decline over time for new sustainable or renewable generating plants that produce energy to be sold into the market.

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[6] This would be dependent upon the Commission's and SRP's 2003 review of the EPS program.

- Emerging technologies support – This component will provide support for sustainable or renewable technologies which show promise but which are not commonly deployed in commercial-scale operation.

7. METHOD OF RECOVERY

SRP and TEP would be permitted to recover the above committed amounts through a Systems Benefit Charge (SBC) or similar mechanism. This would require no increase in the present SBC for SRP until 2004. TEP's SBC would not increase prior to July 1, 2005. However, pursuant to Decision No._____ (November __, 1999), all TEP EPS expenditures after 2004 would be recovered through its revised SBC mechanism beginning July 1, 2005 or as determined by the Commission as part of the TEP July 1, 2004 rate filing.

Other Affected Utilities subject to the EPS would be permitted to recover their costs of compliance through either a SBC or through their present purchased power adjustment mechanisms, as determined by the Commission, subject to there being no increase in the SBC or purchase power adjustment mechanism prior to a rate filing.

Recovery methods will ensure that direct access customers do not pay for both standard offer renewable costs and direct access renewable costs, if mandatory programs are adopted for competitive ESPs in the future.

8. PRIOR APPROVAL OF EXPENDITURES

For the year 2000, TEP and other Affected Utilities would submit proposed EPS expenditure plans ("EPS Plans") by January 4, 2000, which plans would be either approved or modified by the Commission's Utilities Division Director ("Director") on or before March 1, 2000. Interested parties will have 20 days to provide comments to the Director.

Thereafter (beginning no later than October 1, 2000, and continuing each year on such date until further order of the Commission), Affected Utilities would submit EPS Plans for the following year's expenditures. The EPS Plan would have to be approved or modified by the Director on or before December 1st of the year in which the EPS Plan was submitted. Interested parties will have 20 days to provide comments to the Director. Changes to the annual EPS Plan could be made with the Director's approval.

SRP would establish a similar procedure for annual approval of an EPS Plan by its Board of Directors after a public process as determined by SRP. A copy of SRP management's proposed annual EPS Plan will be provided to the Commission on request. Similarly, SRP may request from the Commission or any Affected Utility a copy of such utility's proposed EPS Plan.

9. REPORTING REQUIREMENTS

SRP and each Affected Utility will prepare semi-annual reports concerning expenditures made or committed, results achieved or anticipated, problems encountered, and other relevant information about their annual EPS Plans. For Affected Utilities, such reports shall be submitted to the Commission's Utilities Division Director, within sixty (60) days following each July 1 and December 31 in a format to be determined by the Director. For SRP, such reports should be submitted to the SRP Board on approximately the dates indicated above in a format to be determined by SRP management. Both SRP and the Commission will share any information in such reports.

10. "PERCENT OF SALES" GUIDELINES FOR EPS

EPS phase-in percentages would be as shown in the table below. These percentages would be targets or guidelines, but not required minimums, and would be used as a basis for evaluation of the EPS. No penalties would be imposed for failure to meet the targets.

Portfolio Percentage for All Sales	
Year	Percentage
2000-2001	0.25%
2002	0.40%
2003	0.55%
2004	0.70%
2005	0.85%
2006	1.00
2007-2012	1.1%

11. <u>ESP PARTICIPATION IN THE EPS PROGRAM</u>

ESP's would be exempted from the EPS program through 2004, but could voluntarily elect to participate beginning in 2001 and would, in such latter instance, receive their pro rata share of any funds to be expended by the UDC during the relevant election year. Any ESP wishing to participate in the EPS program during any calendar year after 2000 ("Election Year") would have to make an election by July 1 of the preceding calendar year. Such election would be irrevocable for the duration of the Election Year.

12. <u>MISCELLANEOUS PROVISIONS</u>

a. <u>Coordination With Other Programs and Legislative Efforts</u> -- The EPS program, where possible, will be coordinated with other similar programs, including low-income weatherization programs, both private and public, and will encourage the use of other available funding support. For example, information and technical assistance will be provided to Arizona taxpayers who can take advantage of the 25% solar tax credit provided for by A.R.S. §43-1083. Eligible developers will be encouraged to apply, and if requested, assisted in applying, for funds available from the United States Department of Energy. "Green" power entrepreneurs will be encouraged to participate in the Arizona Venture Capital Conference and to seek other sources of public and private small business financing where appropriate and available.

The Commission, in partnership with the Parties, will develop, find sponsorship for and promote legislation to eliminate or significantly reduce property tax rates on renewable technologies for the 2000 through 2013. The Parties and the Commission will also seek legislation to expand the tax credit program under A.R.S. §43-1083 to include public utilities and to encourage participation in the EPS program by other municipal electric providers such as the City of Mesa and special districts.

b. Evaluation for Solar Water Heating -- Residential solar water heating would be load profiled by energy metering in 10% of the first 200 installations in each service territory. Profile data from the first two years of the program would be used to determine solar energy production from solar hot water heating for the remaining term of the EPS. During 2000 and 2001, residential solar water heating energy production would be based on a fixed factor of 1850 kWh per year (assuming 28% solar factor, 100% heat utilization and 75% efficiency) of the south facing aperture area in square meters of the collector. Any unit with an expected annual output of over 20,000 kWh per year will require continuous thermal energy metering.

c. Evaluation for Hybrid Application -- Solar energy electric production of a hybrid fueled/solar electrical generation unit would be based on the following formula using metered parameters:

$$\text{Solar electric output} = \frac{((\text{Solar heat input, in MMBtu/h})*(\text{Net Electrical Output, in kWh}))}{(\text{Total heat input, in MMBtu/h})}$$

d. <u>Ownership and Procurement of Environmentally Friendly Resources</u> – UDC ownership of solar electric generation resources shall be exempted from the divestiture requirements of A.A.C. R14-2-1615. UDC procurement of electricity from any "Environmentally Friendly" resource shall be exempted from the requirements of A.A.C. R14-2-1606(B).

e. <u>Warranties and Standards</u> – Additional requirements deemed to be in the customer interest will be established. For example, a manufacturer may be required to meet certain industry standards or to provide minimum product warranties as a condition of participation.

CONCLUSION

The parties respectfully request the Commission approve an environmental portfolio standard rule in the attached form.

RESPECTFULLY SUBMITTED this 15th day of November, 1999.

ARIZONA COMMUNITY ACTION PROGRAM

By Betty K Pruitt

Betty Pruitt
2627 N. 3rd Street, Suite 2
Phoenix, Arizona 85004

RESPECTFULLY SUBMITTED this 17th day of November, 1999.

FENNEMORE CRAIG, P.C.

By [signature]

C. Webb Crockett
Suite 2600
3003 North Central Avenue
Phoenix, Arizona 85012
Attorney for Cyprus Climax Metals Company, ASARCO, Inc. and Arizonans for Electric Choice and Competition

RESPECTFULLY SUBMITTED this 17th day of November, 1999.

NEWENERGY SOUTHWEST, L.L.C.

By
Chuck Miessner
5151 East Broadway Boulevard, Suite 1000
Tucson, Arizona 85711-3784

RESPECTFULLY SUBMITTED this 17th day of November, 1999.

JENNINGS, STROUSS & SALMON, P.L.C.

By ______________________

Kenneth C. Sundlof, Jr.
Two North Central Avenue
Sixteenth Floor
Phoenix, Arizona 85004
Attorney for New West Energy

RESPECTFULLY SUBMITTED this 17th day of November, 1999.

RESIDENTIAL UTILITY CONSUMER OFFICE

By Barbara Wytaske

Barbara Wytaske
Scott Wakefield
2828 N. Central Avenue, Suite 1200
Phoenix, Arizona 85004

RESPECTFULLY SUBMITTED this 17th day of November, 1999.

TUCSON ELECTRIC POWER COMPANY

By ____________________

Bradley S. Carroll
Counsel, Regulatory Affairs
Legal Department - DB203
220 West Sixth Street - P.O. Box 711
Tucson, Arizona 85702

EXHIBIT A

TITLE 14. PUBLIC SERVICE CORPORATIONS: CORPORATIONS AND ASSOCIATIONS; SECURITIES REGULATION
CHAPTER 2. CORPORATION COMMISSION FIXED UTILITIES
ARTICLE 16. RETAIL ELECTRIC COMPETITION

R14-2-1618 Solar and Environmentally-Friendly Portfolio Standard

A. Funding Levels. The Affected Utilities shall commit to the schedule of expenditures on environmentally friendly technologies for their distribution areas at the levels indicated below. Funding for years 2000-2003 will be guaranteed. Funding for years 2004-2012 will be contingent on approval by the Commission.

Funding Levels for APS Renewable Program				
Year	Funding Level		Year	Funding Level
2000	$		2004	$
2001	$		2005	$
2002	$		2006	$
2003	$		2007	$

Funding Levels for TEP Renewable Program[1]				
Year	Funding Level		Year	Funding Level
2000	$1,500,000		2004[2]	$2,250,000
2001	$1,600,000		2005	$2,250,000
2002	$1,800,000		2006	$2,250,000
2003	$2,000,000		2007	$2,250,000

Funding Levels for Citizens Renewable Program				
Year	Funding Level		Year	Funding Level
2000	$		2004	$
2001	$		2005	$
2002	$		2006	$
2003	$		2007	$

[1] TEP "net expenditures do not include revenues from "Green Pricing" programs or sales of renewable energy to other utilities, federal and state grants, and any federal or state tax credits received by a particular utility for solar and other renewables. It does not include any TEP's investment of shareholder funds in Global Solar. These amounts are to be added to net expenditures to determine the utility's "gross expenditures" on renewables.

[2] In 2004 and 2005, until the Commission rules on TEP's 2004 rate case, surplus "Other" credits could be used by TEP to make up for deficit "Solar Electric" or "Solar Hot Water" credits at a ratio of 10 "Other" credits equals 1 "Solar Electric" or 5 "Solar Hot Water". 2005 through 2012 – expenditure commitment is a minimum of $2,250,000, dependent upon the result of the 2004 TEP rate case, pending a Commission determination (as a result of the 2003 EPS review hearing) to change that funding commitment, or to move to a straight "percent of sales" EPS.

B. <u>No increase in systems benefit charge</u>. Initial funding for the program will not increase the systems benefit charge to the customers nor will there be a deferral of costs for future recovery. If Arizona's Cooperative Utilities can not fund such a program within currently authorized rates they may opt out of the program until 2004, after which time they will be required to comply with any environmental portfolio standard rules that apply to Affected Utilities.

C. <u>Measurable goals</u>. The Commission will establish measurable goals for the programs at the time the programs are initiated. The goals will be established with technical support in the areas of pricing, market behavior, economic development, environmental protection and technology development. The goals will be used in the program reviews to be completed by the end of year four, and will include measurable goals in at least the following areas:

- The success of the industry in meeting price targets for eligible technologies.
- The demonstrated market support for "green energy products."
- The success of the program in creating a wholesale "green energy" market capable of sustaining itself without ongoing subsidies.
- The cost-effectiveness of the program in creating new jobs and business in Arizona.
- The cost-effectiveness of the program in improving air quality in Arizona.

D. <u>Eligible technologies</u>. Technologies eligible for support under the program, as well as the maximum per-unit support level and required performance for each technology will be established at the time program goals are established. It is anticipated that the following "environmentally friendly" technologies will be eligible for support in some way:

- Photovoltaics – both central station and distributed.
- Solar thermal generation – including dish and trough technologies.
- Solar domestic hot water heating that displaces electricity usage.
- Hydroelectric generation units smaller than 5 MWp.
- Geothermal generation.
- Wind generation.
- Generation which makes use of Arizona landfill gas, sewage digester gas or waste biomass.
- Through the year 2003, limited funding may be allowed for demonstration of fuel cells which are projected to convert fuel to electricity at efficiencies of over 40%, reduce the level of emissions for a given energy use orreduce the need for transmission expansion.
- Limited funding for public information, program administration and R&D will be allowed.

E. <u>Program review</u>. Commission review of the EPS will begin no later than July 1, 2002, and will be completed and an order issued by June 30, 2003. The review will be an all-encompassing examination of all aspects of the EPS program, including but not limited to: funding levels, energy source quotas, rate impacts, penalty provision impacts, results achieved by both utilities and the solar industry, and cost-effectiveness of the program from the viewpoints of electric supply acquisition, environmental protection, and economic development. Projected future results should be considered as well as past results.

All interested parties will have the opportunity to participate. The review will result in recommendations to the Commission about whether or not the program should be extended and, if so, for what length of time and at what funding levels. The presumption will be that the program will be extended for another four years if it is meeting its measurable goals and if doing so will not result in a rate increase. The review will also recommend whether the funding mix for the various program components should be adjusted or whether some components should be dropped or others added and program changes that will help the program better achieve its goals.

F. Fund allocation guidelines. Several goals have been articulated for the EPS program. Technologies will differ in their contribution to each goal. For example, a dollar spent on one technology may contribute more to air quality improvement whereas the same dollar spent on another technology may contribute more to job creation. The allocation of funds should be technology independent. The following are the fund allocation guidelines. These percentages are targets or guidelines, but not required minimums, and will be used as a basis for evaluation of the EPS. No penalties will be imposed for failure to meet the targets.

- 2000 – at least 50% solar electric/no more than 20% solar hot water/no more than 30% other "environmentally friendly" resources or research and development ("R&D") on solar electric resources, but with no more than 20% on R&D
- 2001 - at least 55% solar electric/no more than 20% solar hot water/no more than 25% other "environmentally friendly" resources or R&D on solar electric resources, but with no more than 15% on R&D
- 2002 - at least 60% solar electric/no more than 20% solar hot water/no more than 20% other "environmentally friendly" resources or R&D on solar electric resources, but with no more than 10% on R&D
- 2003 – at least 65% solar electric/no more than 20% solar hot water/no more than 15% other "environmentally friendly" resources or R&D on solar electric resources, but with no more than 5% on R&D
- 2004 through 2012 – at least 70% solar electric/no more than 20% solar hot water/ no more than 10% other 'environmentally friendly" resources or R&D on solar electric, but not more than 5% R&D.[3]

The ability to leverage available funding to meet program goals may be influenced by the types of program components that are supported. The following program components have a role in the program:

[3] This is dependent upon the Commission's 2003 review of the EPS program.

- Customer-side renewable credits – This component will be designed to encourage the establishment of a viable, liquid, transparent wholesale market for qualifying green energy and to encourage the offering of "green content" products to distribution customers.
- New near-commercial renewable generation – This component will provide subsidies that decline over time for new sustainable or renewable generating plants that produce energy to be sold into the market.
- Emerging technologies support – This component will provide support for sustainable or renewable technologies which show promise but which are not commonly deployed in commercial-scale operation.

G. Method of recovery. Affected Utilities will be permitted to recover the above committed amounts through a Systems Benefit Charge ("SBC") or similar mechanism. This will require no increase in the present SBC for APS until 2004. TEP's SBC will not increase prior to July 1, 2005. However, pursuant to Decision No._____ (November __, 1999), all TEP EPS expenditures after 2004 may be recovered through its revised SBC mechanism beginning July 1, 2005 or as determined by the Commission as part of the TEP July 1, 2004 rate filing.

Other Affected Utilities subject to the EPS will be permitted to recover their costs of compliance through either a SBC or through their present purchased power adjustment mechanisms, as determined by the Commission.

Recovery methods will ensure that direct access customers do not pay for both standard offer renewable costs and direct access renewable costs, if mandatory programs are adopted for competitive ESPs in the future.

H. Prior approval of expenditures. For the year 2000, Affected Utilities shall submit proposed EPS expenditure plans ("EPS Plans") by January 4, 2000, which plans will be either approved or modified by the Commission's Utilities Division Director ("Director") on or before March 1, 2000. Interested parties will have 20 days to provide comments to the Director. Thereafter (beginning no later than October 1, 2000, and continuing each year on such date until further order of the Commission), Affected Utilities shall submit EPS Plans for the following year's expenditures. The EPS Plan will be approved or modified by the Commission's Utilities Division Director on or before December 1st of the year in which the EPS Plan was submitted. Interested parties will have 20 days to provide comments to the director. Changes to the annual EPS Plan could be made with the Director's approval.

I. Reporting requirements. Each Affected Utility will prepare semi-annual reports concerning expenditures made or committed, results achieved or anticipated, problems encountered, and other relevant information about their annual EPS Plans. For Affected Utilities, such reports shall be submitted to the Commission's Utilities Division Director, within sixty (60) days following each July 1 and

December 31 in a format to be determined by the Director. The Commission will share any information in such reports.

J. "Percent of sales" guidelines for EPS. EPS phase-in percentages are as shown in the table below. These percentages are targets or guidelines, but not required minimums, and will be used as a basis for evaluation of the EPS. No penalties will be imposed for failure to meet the targets.

Portfolio Percentage for All Sales	
Year	Percentage
2000-2001	0.25%
2002	0.40%
2003	0.55%
2004	0.70%
2005	0.85%
2006	1.00
2007-2012	1.1%

In evaluating the extent to which targets are met, ESPs shall be eligible for a number of extra credit multipliers that may be used to meet the solar portfolio standards as follows:

1. Early installation extra credit multiplier: For new solar electric systems installed and operating prior to December 31, 2003, ESPs 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 plans 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.

   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 ESPs to claim an extra credit multiplier, the ESP 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 ESP's Green Pricing program.
   c. Solar electric generators located in Arizona that are included in any ESP's Net Metering or Net Billing program.
   d. Solar electric generators located in Arizona that are included in any ESP's solar leasing program.
   e. All Green Pricing, Net metering, Net Billing and Solar Leasing programs must have been reviewed and approved by the Utilities Division Director in order for the ESP to accrue extra credit multipliers from this subsection.

4. Calculation of multipliers: 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. For example, if an ESP qualifies for a 2.0 extra credit multiplier and it produces 1 solar kWh, the ESP would get credit for 3 solar kWh (1 produced plus 2 extra credit).

5. Solar credit: An ESP shall be entitled to receive a partial credit against the portfolio guidelines, if the ESP 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).

a. The credit against the portfolio guidelines shall be limited to the following percentages of the total portfolio guidelines:

1999	Maximum of 50% of the portfolio guidelines
2000	Maximum of the 50% of the portfolio guidelines
2001	Maximum of 25% of the portfolio guidelines
2002	Maximum of 25% of the portfolio guidelines
2003 and on	Maximum of 20% of the portfolio guidelines

b. 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 ESPs to meet their Arizona solar portfolio requirements will not be allowable for credits under this Section for the manufacturer/ESP to meets its portfolio requirements.

6. Availability of extra credit multipliers: Extra credit multipliers provided for in this section shall be available for all eligible technologies, including solar water hearing and generation using landfill gas.

K. ESP participation in the EPS program. ESP's are exempted from the EPS program through 2004, but could voluntarily elect to participate beginning in 2001 and would, in such latter instance, receive their pro rata share of any funds to be expended by the UDC during the relevant election year. Any ESP wishing to participate in the EPS program during any calendar year after 2000 ("Election Year") shall make an election by July 1 of the preceding calendar year. Such election shall be irrevocable for the duration of the Election Year.

L. Miscellaneous provisions

1. Coordination with other programs and legislative efforts -- The EPS program will be coordinated with similar programs as may be implemented by public power entities such as Salt River Project. Additionally, where possible, the ESP program will be coordinated with other similar programs, including low-income weatherization programs, both private and public, and will encourage the use of other available funding support.

For example, information and technical assistance will be provided to Arizona taxpayers who can take advantage of the 25% solar tax credit provided for by A.R.S. §43-1083. Eligible developers will be encouraged to apply, and if requested, assisted in applying, for funds available from the United States Department of Energy. "Green" power entrepreneurs will be encouraged to participate in the Arizona Venture Capital Conference and to seek other sources of public and private small business financing where appropriate and available.

2. Evaluation for solar water heating -- Residential solar water heating shall be load profiled by energy metering in 10% of the first 200 installations in each service territory. Profile data from the first two years of the program will be used to determine solar energy production from solar hot water heating for the remaining term of the EPS. During 2000 and 2001, residential solar water heating energy production will be based on a fixed factor of 1850 kWh per year (assuming 28% solar factor, 100% heat utilization and 75% efficiency) of the south facing aperture area in square meters of the collector. Any unit with an expected annual output of over 20,000 kWh per year will require continuous thermal energy metering.

3. Evaluation for hybrid application -- Solar energy electric production of a hybrid fueled/solar electrical generation unit will be based on the following formula using metered parameters:

$$\text{Solar electric output} = \frac{(\text{(Solar heat input, in MMBtu/h)}*\text{(Net Electrical Output, in kWh)})}{\text{(Total heat input, in MMBtu/h)}}$$

4. Ownership and procurement of environmentally friendly resources – UDC ownership of solar electric generation resources shall be exempted from the divestiture requirements of A.A.C. R14-2-1615. UDC procurement of electricity from any "Environmentally Friendly" resource shall be exempted from the requirements of A.A.C. R14-2-1606(B).

5. Warranties and standards – Additional requirements deemed to be in the customer interest will be established. For example, a manufacturer may be required to meet certain industry standards or to provide minimum product warranties as a condition of participation.