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Arizona Corporation Commission

BEFORE THE ARIZONA CORPORATION COMMISSION DOCKETED

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William A. Mundell  
Commissioner-chairman

FEB 25 2002

Jim Irvin  
Commissioner

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Mark Spitzer  
Commissioner

In the Matter of: Electric Competition Rules Docket No. RE  
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APS Request for A Variance Do

E-00000A-02-0051  
E-01345A-01-0822  
E-00000A-01-0630  
E-01933A-02-0069  
E-01933A-98-0471

The Arizona Clean Energy Industries Alliance, ACEIA, is an alliance of local and national companies active in manufacturing, marketing, installing, and servicing solar and other renewable energy products and services. We want to invest in Arizona because we believe that Arizona's growth, business climate, abundant sunshine, and proximity to both foreign and growing regional renewable energy markets create real business opportunities. Accordingly ACEIA desires an electricity market structure that truly integrates solar and renewable energy into energy decisions while protecting customer choice creating a level of economic certainty critical for this industry to expand.

The ACEIA is joined in these comments by the Renewable Energy Leadership Group (RELG), a not-for-profit entity incorporated in 1999. The RELG mission supports the adoption of renewable energy on a regional basis in the United States through effective public policy and provides scientific information and data to support development of such policies. The RELG provided comments at the request of Commission Staff during hearings on the Environmental Portfolio Standard and participates in the Working Group meetings that are developing recommendations on Portfolio Standard technology standards and guidelines.

**Background:**

Recent regional energy problems and growing environmental concerns related to energy generation should have taught Arizonans important energy lessons. There is continuing publicity about where our energy comes from, how much it costs to make it available and the environmental problems related to its production, and how vulnerable we are to supply interruptions. A single energy event in the greater Phoenix area in July 2001 illustrates how close we came to an electrical grid unable to meet energy demands even after the massive increase in our natural gas-fired generation capacity. The September 11, 2001 terrorism acts increased our overall concerns about energy security and specific issues such as locating many of the approved, new natural gas-fired plants on the same site as the Palo Verde nuclear reactor generation complex.

From these problems many in Arizona are developing a growing appreciation that we have all of the elements needed to build a more sustainable energy infrastructure. Arizona is particularly well positioned to be the world leader in solar energy development particularly as distributed power, helping the state sustain long-term economic growth with a cleaner environment. Arizona started down this road in May of 2001 when the Corporation Commission adopted the strongest pro-solar mandate of any state or country.

It is this context that ACEIA responds to the letter docketed by Commissioner Mundell on January 14, 2002. In his letter the Chairman stated that "... it is necessary to determine if changed circumstances require the Commission to take another look at electric restructuring in Arizona." He attached a set of questions to the letter aimed at providing information to assist the Commission's review of competition issues and on

January 30, 2002 issued supplemental questions. On January 22, 2002, Commissioner Spitzer docketed questions regarding environmental aspects of retail electric competition in Arizona.

ACEIA responses are only to those questions that it has a direct interest and expertise in and has grouped some of the questions to prevent duplication in our response. ACEIA appreciates the opportunity to provide information to the Commission on these critical issues.

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Arizona Clean Energy Industries Alliance  
Responses to Commissioners' Questions on Electric Competition  
February 25, 2002

Responses to Commissioner Mundell's Questions:

Question I. A. I B. What are the possible goods and services traditionally provided by the electric utility for which retail competition is possible? You may address the following categories of goods and services: ... green power, ... distributed generation. What are the possible benefits of competition for these services ... price and non-price benefits,?

Properly structured competitive markets facilitate the growth of green power and are therefore an option for increasing the use of renewable energy by electric utilities. (ACEIA knows of no energy efficiency or demand side management program conducted as part of a utility customer choice program.) Arizona Public Service, Tucson Electric and Salt River Project all have green pricing programs and the concept is also used in regulated markets in states contiguous to Arizona.

In Pennsylvania, a state often highlighted as a state where competition has been a success, customer choice under competition is stimulating new renewable energy generation. The default price structure (shopping credits) set by the competition rules resulted in 1% of the customers (approximately 80,000) totally switching to green power sold by green power marketers. This market created Community Energy, an energy development firm, that is installing about 30 megawatts of wind power under long-term contracts with the green power marketers.

The Arizona situation is much different. The pricing offered by Arizona utilities under the competition rules are too low to cause real competition and an opportunity for green power marketing to grow. Under the green pricing programs offered by Arizona utilities, the funds they obtain from an estimated 4,000 customer subscribers go to help finance projects often cost shared by federal government demonstration programs and utility system benefit charge funded research and development as well as environmental portfolio efforts. The number of subscribers represent a small fraction of the 1,400,000 retail Arizona customers served and even less as a percentage of megawatt hours sold as the subscribers commit to only a fraction of their total electricity requirement. Accordingly, green pricing as now practiced in Arizona is not resulting in significant market penetration consistent with environmental and economic objectives.

In poll after poll, the vast majority of Americans prefer their electricity to come from clean renewable resources. However, participation in green marketing efforts indicates that the percentage actually willing to pay more in order to realize the goal is dramatically less.

This raises the policy issue: Why should the few consumers in a customer choice program be asked to bear the burden of the initial price premiums necessary to provide what is essentially a public good and overall economic efficiency? The benefits of renewable energy and distributed generation are at least initially, non-price and directly tied to public good. They include national security, diversity of resources, protection against price increases, global warming and other environmental imperatives, an alternative to central station construction, assisting a new industry, and identification with a new high technology future.

A recent National Renewable Energy Laboratory Report "Forecasting the Growth of Green Power Markets in the United States" confirms that green power markets by themselves are problematic and full of uncertainties and must be supplemented with other programs such as integrated resource planning and portfolio standards.

The researchers authoring the study concluded after reviewing the market penetration of other technologies, the current status of green markets and then modeling low and high growth scenarios that the "uncertainties inherent in our forecasts suggest that customer-driven markets for renewable energy are unlikely to adequately replace the need for more fundamental renewable energy policy measures if accelerated rates of renewable energy development are determined to be in the public interest"

Therefore, the ACEIA recommends that the Commissioners emphasize two objectives as they consider changing the electric utility competition rules:

Provide a structure to the utilities that will cause more effective and competitive green pricing programs, and Enhance and strengthen the Environmental Portfolio Standard (EPS) Rule by extending the portfolio percentage increase beyond 2007 so that investors in these new technologies can make commitments to support Arizona's energy future.

Question III. F. How does current Commission regulation promote or deter the ability of (1) renewables, (2) distributed generation,? Question IV B. 8. Does the transmission and distribution system facilitate or deter—a. the development of renewable energy technologies? B. the development of distributed generation

... (1) renewables

After five years of study and input from all sectors of Arizona's economy, the Corporation Commission voted 3-0 in May 2001 to adopt an Environmental Portfolio Standard. Although the EPS Rule was initially part of the restructuring rulemaking, it now stands on its own merit due to the potential of the resource in Arizona and the environmental benefits. The EPS Rule applies to all load-serving entities - companies that sell retail electricity in Arizona. It recognizes Arizona's largest natural resource by emphasizing electricity from solar technologies. Non-solar renewable technologies such as landfill gas generators, wind generators and biomass generators are also included in the Rule.

In voting for the Rule the Commissioners made it clear that the Commission understands the linkage between investment in energy and economic prosperity and that the Rule balances the need for sound environmental policy with sensitivity to energy users' concerns. Based on the implementation efforts to date, ACEIA advocates that this Rule be applied to all Arizona utilities and is supporting legislation to bring the Salt River Project into the EPS. Doing so would double the amount of solar to be installed in the state thus creating the largest local solar market in the world.

Tucson Electric's (TEP) implementation of the Environmental Portfolio Standard is a showcase of successful implementation. After quickly constructing a land fill gas facility and selling the excess credits to other utilities as allowed by the Rule, the utility proceeded to develop a strong solar program. It offers both residential and commercial rooftop systems as well as construction of a large, grid-connected system at TEP's Springerville energy park.

TEP's program can best be described as one that is production based rather than one that simply buys modules to fit a one-at-a-time need. It has led to the development of a strong business relationship between TEP and a photovoltaic manufacturer that may lead to additional PV manufacturing in Arizona. The two businesses are working closely together so that the manufacturer's product meets the TEP requirements and as the manufacturer expands production it is also able to supply TEP with the product in accordance with the TEP schedules. Moreover, as manufacturing expands, cost savings will be passed to TEP thereby meeting a primary goal of the EPS Rule.

The major drawback thus far is that not all the utilities are as aggressive as TEP and are acting instead as reluctant parties to the EPS. The result is slower movement and a mixed message to the renewable industry anxious to establish Arizona markets. Arizona Public Service has yet to announce a program comparable to TEP's. Its progress to date has been primarily aimed at developing credits resulting from 1997-2001 installations funded by systems benefit charges, solar partners and federal cost sharing.

In addition to solar and landfill gas opportunities, other renewable energy technology industries are investigating the Arizona market created by the EPS. An utility/industry working group has been formed to develop a detailed wind map of Arizona in order to determine the optimum sites. Biomass energy developers are actively seeking support from the utilities for their projects as well.

It is also important to note the distinction between the Arizona Portfolio Standard and active programs or those being developed in other states. The Arizona standard uses the market to develop progress and meet the goals by having affected utilities collect Surcharge funds and be responsible to the ACC for use of the public investment. Wisely used, these funds can result in a capital asset for the utility that will produce power for thirty years in a way that drastically reduces the utilities risk. Other states use a system benefits charge (SBC) approach under which the utilities collect the funds and simply pass them along for administration by a centralized state authority. These programs under a state bureaucracy vary somewhat but they are generally geared to individual buy-down efforts without consideration for long-term sustainable market development.

Regionally, Nevada has passed legislation establishing a portfolio standard similar to the Arizona Commission Rule for its regulated utilities. California has also introduced portfolio standard legislation in addition to the SBC program described above, and New Mexico has a portfolio standard in the planning stage.

Based on the TEP progress, the pending programs from the other utilities, and the interest and commitment by the renewable energy industry, ACEIA believes that it is imperative that the Corporation Commission retains its Environmental Portfolio Standard notwithstanding actions it may take on the overall issue of electricity restructuring. To do otherwise would be disastrous to the progress and promise of the work by the Commissioners and the State investment to date.

#### ....(2) distributed generation

Solar as a distributed generation technology provides electricity in a fundamentally different way. These are small-scale power producing systems located close to the point of use. The systems can be and often are owned and operated by businesses and individuals. They can be residential systems, small commercial applications up to 25 kW, or large building or industrial projects in the hundreds of kW. In addition to solar and other renewable energy sources, distributed generation includes such advanced technologies as fuel cells and microturbines. If the user has excess power, it is fed back into the central power grid.

The benefits of distributed generation include reducing peak demand charges, reducing overall energy use, providing a hedge against grid reliability problems, ensuring power quality and reducing emissions. For utilities, distributed generation can augment overall system reliability, avoid large investments in transmission system upgrades, reduce transmission losses, be matched to demand growth and open markets in remote or environmentally constrained areas like Maricopa County.

The energy roadmap adopted by the Western Governors in August 2001 recognizes the potential of distributed generation when it asks states to eliminate barriers to its widespread use. The Governors' statement reads, "Utilities have frequently blocked the installation of such technologies through cumbersome business practices or complex and inconsistent requirements for connecting such generation to the transmission grid." ACEIA recommends the Corporation Commission proceed with the distributed energy Rulemaking effort that has been on hold since 2000. ACEIA recommends that such plans should provide for.

Rate reform that reflects time and day usage and sends accurate price signals to consumers that encourages energy conservation and investment in distributed systems including solar hot water.

Interconnection costs, terms and conditions that are reasonable and not unduly discriminatory. Many states already have fair regulations and TEP and the Salt River Project (SRP) have signed a draft interconnection methodology developed by the Solar Energy Power Alliance.

Net metering service to on site electric consumers with a maximum generation capacity of 100 kilowatts or less that is fueled by renewable energy resources with payments for excess energy supplied to the grid at retail rates normally imposed at the time the excess energy is supplied.

Reasonable transmission service fees to intermittent generators in a manner that does not penalize such generators, direction or indirectly for inherent intermittent generation and are beyond the control of such generators.

Finally, ACEIA believes that the Commission's lack of access to utility planning information under competition is a serious problem and limits the Commission's ability to carry out a planning oversight function. Integrated resource planning is limited because such information is critical for proper assessment of long-range, statewide generation capacity and transmission planning.

Question V.E. Do you anticipate changes in federal utility statutes to affect the jurisdiction of the Commission and its ability to foster retail competition in Arizona?

ACEIA believes that energy policy will be driven by states and regions in the near term, federal energy being shaped in Washington will impact our decisions in the long term. Many of the provisions are favorable to renewable energy, distributed generation and energy efficiency.

In August 2001 the U. S. House of Representatives passed the Securing Americas Future Energy Act. H. R. 4. The Act does not directly address the issues involved in electric supply and restructuring. It does authorize funding for the U. S. Department of Energy to carry out a wide range of activities in renewable energy and energy efficiency including expanding the current renewable energy production incentive as well as authorizing tax credits for solar energy and investment tax credits for wind, biomass and landfill gas facilities. It requires the Interior Department to inventory the energy production potential of all federal public lands with respect to renewable energy production and requires the Dept. to study and implement means to reduce energy use by the Department focusing on the use of alternative energy sources. The Senate begins debate in early March on S. 1766 the Senate Energy Policy Act of 2002. This legislation does contain several provisions that impact Arizona energy policy and the treatment of renewables and distributed generation. The key provisions and their impact are

Section 209. Access to Transmission by Intermittent Generators. Removes a major barrier to the use of renewable sources of electricity generation by requiring transmitting utilities to provide service for intermittent generators, such as wind, at rates and terms that do not penalize the generator for scheduling deviations by use of imbalance penalties.

This provision will help to mitigate penalties related to deviations from scheduled electricity generation from facilities such as wind, and should help to facilitate wind resources in western states.

Section 242. This section requires simplified standards and contracts for distributed generation facilities of 250 kW or less. It also requires utilities to develop a resource diversification plan that includes renewable resources.

This provision addresses several of the major barriers to the development of distributed generating resources, including renewable resources such as PV.

Section 245. This section requires Net Metering for residential customer-sited solar, wind, or fuel cell generating facility of 10 kW or less, and commercial customer-sited solar, wind, landfill gas, combined heat and power, or fuel cell generating facility of 500 kW or less.

This section further requires that customer generation in excess of that customer's needs be carried forward to future months, but makes no provision for the utility to compensate monetarily that customer for such excess generation.

Section 251 requires the FTC to establish rules requiring each utility provide a statement to customers disclosing service, price, fuel mix, and emission information for the product being offered.

Such a requirement will provide uniform information throughout the country, and will improve the disclosure requirements of Arizona so that consumers will have the information they need to better evaluate resource options.

Section 261 extends the Renewable Energy Production Incentive (for municipals, coops, and tribes) through October 1, 2013.

This helps improve the economics of renewable energy development through the public power industry.

Section 262 requires DOE to evaluate existing and undertake new assessments of the solar, wind, biomass, ocean, geothermal, and hydroelectric energy resources taking into account changes in market conditions, available technologies, and other relevant factors. The end result of this annual process will be an inventory of the amount and characteristics of renewable resources throughout the country.

This information will be helpful to all energy stakeholders in evaluating electric resource options and potential through regulatory, legislative, and other forums, and in developing informed clean energy policies.

Section 263 establishes a federal renewable purchase requirement. It requires that 3% in 2003 and 2004, 5% in 2005 through 2009, and 7.5% in 2010 and thereafter of the electricity consumed by the federal government be renewable energy. Of these renewable amounts, 10% is to come from renewable energy generated by tribes.

Arizona has significant federal facilities, particularly DOD.

Section 265. Renewable Portfolio Standard. This section establishes a requirement that utilities with capacities of roughly 100 MW or more derive a portion of the resource portfolio from new (post 1/1/02) renewable electric resources through a credit system. The portion is to be determined by DOE for 2003 and 2004 (but shall be less than 2.5%), shall be 2.5% in 2005 and grow by 0.5% each year thereafter through 2020 (when it will reach 10%). It establishes a system of tradable credits (one kWh of renewable electricity equals one credit, two credits if located on tribal land) that have a three-year life. A maximum penalty of 3¢ for each credit of shortfall may be assessed.

A uniform nationwide RPS will be helpful for renewable development in the West.

Section 266. DOI to develop guidelines for a pilot program for the development of compatible renewable energy on Federal lands.

This provision will help to inform policy-makers about the renewable resource potential and practicality on federal lands, and provide valuable information to renewable resource developers.

Title IV deals exclusively with Indian Energy issues and programs. Several key elements include establishment of a comprehensive Indian energy program at the DOE (including an Office of Indian Energy Policy and Programs) to assist tribes in meeting their energy needs and expanding opportunities to develop energy resources on tribal lands; provides a means for an Indian tribe to lease directly land and rights-of-way for energy facilities, without case-by-case review by Interior; requires Interior to undertake a review and make recommendations regarding tribal opportunities under the Indian Mineral Development Act; requires DOE to report on energy consumption and renewable energy development potential on Indian land, including identification of development barriers; authorizes the BPA and WAPA to provide technical assistance to Indian tribes seeking to use high-voltage transmission lines for the delivery of electrical power; and requires DOE to conduct a feasibility study of developing a demonstration project that would use wind energy generated by Indian tribes and hydropower generated by the Army Corps of Engineers on the Missouri River to supply firming power to WAPA.

Renewable resources (esp. solar) are abundant on tribal land in Arizona. This title however is not tied directly to renewables, but provides a DOE focus on tribal energy resource development. Section 901 provides increased funding for low-income energy assistance and energy efficiency programs.

Section 902 provides definitive funding for state energy programs of \$100 million in 2003 and 2004, and \$125 million in 2005.

This section helps to specify the previously vague federal support for state energy offices, but the goals contained therein are still essentially voluntary.

Section 904 authorizes DOE to provide \$10 million of grant funding annually to private, non-profit community development organizations for energy efficiency and renewable energy projects in low-income urban and rural communities.

Community development corporations are public/private partnerships that are growing in popularity for meeting the needs of under-served communities. This grant funding will be helpful in supporting these organizations.

Section 911 requires the federal government to reduce its energy consumption per square foot by 20% by 2011 in comparison with 2000.

Section 927 restores the energy standard to SEER 13 for central air conditioning and central heat pumps.

Section 1211 authorizes funding for DOE energy efficiency research and development (\$700 million in FY 2003 to \$983 million in FY 2006, and sets targets for efficiency improvements.

Section 1221. Authorizes funding from \$500 million in FY 2003 to \$733 million in FY 2006 for DOE wind power, photovoltaics, solar thermal, biomass and biofuel, geothermal, hydrogen, hydropower, and electric energy systems and storage programs, and sets targets for cost, efficiency, and other improvements.

S. 1333 the Renewable Energy and Energy Efficiency Act of 2001 is much shorter and focuses on establishment of a nationwide System Benefits Charge, a renewable portfolio standard, net metering, and disclosure requirements.

System Benefits Charge: set at 2 mills/kWh to provide matching funds in support of State renewable, energy efficiency, low income, and R&D programs.

Renewable Energy Generation Standard: 2.5% in 2002, 3.0% in 2003 growing 1%/year to 20% by 2020. Includes proposed credit trading system. Penalty equal to no more than three times the estimated national average market value of credit shortfall.

Net metering: for renewables only; capped at 100kW; excess generation carries forward to net future months, but is reset to zero at the end of each calendar year without compensation.

Disclosure: includes fuel mix and emission data.

Question VII. Please provide your vision for how viable competitive wholesale and retail electric markets will or will not develop in Arizona. Please be specific regarding dates, the development process, and measures for determining at various stages how successful the process has been.

The ACEIA vision starts with the existing technical experience and expertise of Arizona utilities and the Environmental Portfolio Standard. Using these two important inputs, our vision relies on the ACC helping the utilities understand that renewables and distributed generation present an opportunity not an obligation. Over the next two to five years as a result of the Corporation Commissions new rules for distributed generation and its decision to maintain and even expand the (EPS) following the 2004 review, the utility planning function would be altered. Long term generation and transmission planning would be modified by the opportunities presented by distributed generation particularly in environmentally restricted zones such as Maricopa County. We believe that distributed generation opportunities will arise in new housing, commercial buildings and in public projects as the Light Rail systems, and the environmental imperative required by the Growing Smarter legislation. Utility management could restructure their organizations so that distributed generation and solar and clean energy projects are integrated into the day-to-day operational sectors instead of assigned to special organizational units. A concerted consumer education campaign, funded by the utility, would result in overwhelming consumer demand for solar energy roofs.

Over this period of time, utilities would work with the state university sector to enhance green building capabilities in architectural schools and clean technology business models in business schools. Given these changes, at the end of five years distributed generation and solar/ clean technologies would meet the 3% incremental annual increase in demand in electricity expected from economic growth and do so in a cost-effective manner. All special green pricing efforts would be abandoned or folded into a blended pricing structure. A solar and distributed generation industrial infrastructure would provide 5,000 new jobs and contribute to economic growth and an enhanced quality of life. Solar electricity would power a significant percentage of the 20,000 remote homes on Native American lands and solar would be a major state export to all of Latin America. At the end of the tenth year Arizona would lead the nation in meeting the environmental goals created by the global warming and clean air challenges.

#### Responses to Commissioner Spitzer's Questions

Questions 1 – 6. In a vertically integrated utility model, what incentives (regulatory, financial and ratemaking) exist for the expanded use of renewable energies? In a competitive electric market model, what incentives exist for the expanded use of renewable energies? In a vertically integrated utility model, what disincentives (regulatory, financial and ratemaking) exist for the expanded use of renewable energies? In a competitive electric market model, what disincentives exist for the expanded use of renewable energies? During Arizona's period of reliance of the vertically integrated utility model, what renewable energy

programs were enacted in Arizona? Since Arizona's adoption of a competitive electric market model, what renewable energy programs have been enacted in Arizona?

--Vertically integrated utility model.

Regulatory oversight through integrated resource planning, company research and development projects cost shared by the federal government and consumers, and state and local directed efforts were the key drivers for expanding the use of renewable energy in Arizona from the mid 1980's to adoption of the Environmental Portfolio Standard. Projects developed by the U. S. Depts. of Energy, Defense, Interior, and Agriculture under the Federal Energy Management Program in Arizona also provided early markets, as did projects on Indian lands supported by federal and foundation grants.

It is estimated that during this period of time Arizona Public Service and Tucson Electric, the two largest investor owned utilities under the jurisdiction of the Commission installed approximately 7 megawatts of renewable energy power. Of this amount, 5 megawatts are attributed to Tucson Electric's recently completed landfill gas facility and 1 megawatt of solar installed by TEP at its Springerville site in response to the EPS. Tucson Electric can properly boast that by the end of 2000 they fulfilled the commitment they made to the Commission in the 1993 IRP docket. In the case of Arizona Public Service (APS), the company installed 500 kW of solar capacity between 1994 and 1999 and another 500kW in 2000-2001 falling well short of their 12MW IRP commitment. Using System Benefits Funds, APS emphasized research and development constructing the STAR facility, arguably one of the finest utility solar research facilities in the nation. Salt River Project has in place 200 kilowatts of solar and 4 megawatts of landfill gas as renewable energy additions to their generation portfolio but their program emphasizes R&D and is widely known for its expense due to the research objective.

The key incentive provided by the vertically integrated model is that there is reasonable assurance that increased investments in renewable energy can be recovered through the regulatory approval process. Other incentives center on recovering the higher capital costs associated with renewable energy projects. The include:

- Regulatory approved systems benefit charges
- Voluntary green pricing programs
- Federal and state tax incentive programs
- Federal cost shared research and development

The key disincentives are the higher capital cost of renewable energy technologies, and the higher risk associated with new technologies. Another important disincentive is that there is a strong bias for business as usual on the part of the utilities. The existing utility energy infrastructure is almost entirely large generation and transmission systems. Smaller, modular renewable energy systems are inherently different. Their economies and environmental benefits are gained by installing large numbers of smaller distributed generation closer to the source of the energy demand. To make them work in today's market requires altering in small but significant ways how electrical service utility energy business is conducted, and that appears to be difficult.

Thus far the Environmental Portfolio Standard sits between the regulated model and the competitive model. Our response to Chairman Mundell's question points out the role of green power in a properly structured competitive electricity market as well as the success to date of the Tucson Electric program under Arizona's current rules including the environmental portfolio standard.

--Competitive electric model.

Minimizing costs drives decisions in a competitive electric model if the default rates are not high enough to attract competitive suppliers offering a portfolio of energy products and services. The utilities will try to maintain competitive energy rates to sustain their business model by developing new capacity to meet increasing demand. They will do this with proprietary (not public as it should be) knowledge of the market place especially control of when older, less efficient fossil and nuclear plants are out of service or retired.

The challenge to the Commissioners, given these stark, competitive forces is to ensure that adequate system reliability and reserve margins are maintained.

This investment environment makes the capital-intensive new solar and renewable technologies in the words of one utility executive a "non-starter". Reviewing capital expenditure plans of the utilities clearly shows that natural gas based power plants have the advantage with their low capital costs, short permitting and construction time and a preferred environmental footprint. However, the future fuel costs associated with these plants is the great risk for a state like Arizona that imports all its natural gas. Also, natural gas-fired plants still pollute and consume significant amounts of water.

Within this overall unfavorable operating environment, there are specific disincentives. Those utilities that prefer to meet the portfolio standard requirements by purchasing the power from an Independent Power Producer are unwilling to make the contractual time period long enough so as to reduce the cost of the power from these high capital cost technologies attractive enough on a cents per kilowatt hour, without the long-term purchase agreement, financing is difficult or impossible.

To date, direct acquisition of solar energy systems by the utilities is not being treated from an accounting standpoint as an investment like a fossil fired generation facility. It appears that the yearly funds created by the EPS become the yearly capital budget allowing only that amount of renewable capital acquisition.

Finally, the lack of information in competitive markets is especially onerous—both to the Commission and to consumers. It appears that the Commission has less access to utility planning information under competition severely limiting its ability to conduct integrated resource planning and long range transmission planning including consideration of alternatives such as distributed generation.

From a consumer standpoint, competition should cause awareness campaigns for such special efforts as green products. In a truly competitive market, competitors carry a special cost-of-doing-business in marketing their products in order to win customers away from the utility that has served them for years. The competitive pricing provisions should provide for this capability, and in Arizona's case they do not. The (EPS) does not have provisions for aggressive consumer awareness and marketing campaign. By and large, Arizona consumers are unaware of the (EPS) and the opportunities and benefits available to them from the investment they have made through the EPS Surcharge on bills.

Electricity is an important public good. ACEIA applauds the Corporation Commission's commitment to protecting the public good and has witnessed its frustration as it attempts to broaden the concept of market efficiency to include environmental and public health demands. Unless regulated, utilities will continue to do business as usual and not consider market/environmental and public health issues. The ACC must represent Arizona citizens until costs for air pollution and rising carbon levels are built into electricity market decisions. We urge the Commission to find solutions that join these two concepts within the electricity pricing structure and also protect consumer choice for distributed power options.