ORIGINAL

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

BEFORE THE ARIZONA CORPORATION COMMISSION*

IN THE MATTER OF THE GENERIC PROCEEDINGS CONCERNING ELECTRIC RESTRUCTURING ISSUES.	DOCKET NO. E-00000A-02-0051 **RESPONSE OF PG&E NATIONAL ENERGY GROUP TO QUESTIONS FROM COMMISSIONERS MUNDELL, SPITZER AND IRWIN**

By her Procedural Order of January 22 2002, the Commission's Chief Administrative Law Judge ordered that responses to letters from each of the Commissioners asking a series of questions regarding "developing issues in electric restructuring" be filed by February 25, 2002 in the above-captioned docket. Attached to this document as "Exhibit A" and incorporated herein by this reference are the responses by PG&E National Energy Group to the Commissioner's questions.

RESPECTFULLY SUBMITTED this 25th day of February, 2002.

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* The Procedural Order of February 8, 2002 consolidates Docket Nos. E-01345A-01-0822, E-00000A-01-0630, E-01933A-02-0069 and E-01933A-98-0471 into this generic Docket. Accordingly, we have consolidated all of these proceedings under this single docket number.

ORIGINAL and 10 **COPIES** filed
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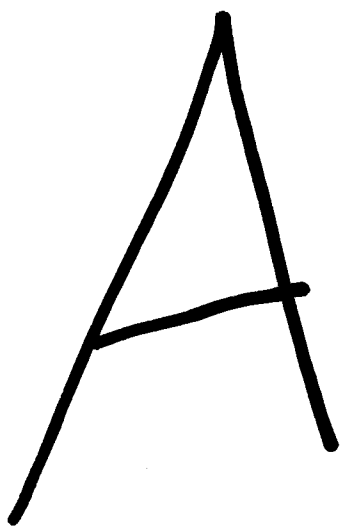

RESPONSES OF HARQUAHALA GENERATING COMPANY, LLC
(PG&E NATIONAL ENERGY GROUP)
TO COMMISSIONER MUNDELL JANUARY 14, 2002 QUESTIONS

Note: Several of the questions solicit responses based upon experience in the retail market. Since Harquahala and its parent corporation do not function, with certain limited exceptions, in this market, we have left responses to these questions to others that have the requisite experience and knowledge.

I. Identification of Retail Electric Products and Services for Which Competition Could Bring Benefits.

A. 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:

1. generation, including baseload, intermediate and peaking power, green power, distributed generation; firm and non-firm power; long and short-term contracts; backup and coordination services:

Answer: Our Harquahala Generating project in Arizona is designed to operate year after year at a capacity factor of approximately 96%. In other words, it is designed as a baseload facility. Our environmental permits, however, allow us to start and stop the plant periodically, within defined ranges, thus allowing the plant to operate in an intermediate and even peaking mode on both long and short-term bases. The project will competitively procure backup power and control area services either from an incumbent or another merchant. In addition, we participate in renewable power projects in other markets and, if it appears that there is a viable market in Arizona, we are willing to do so here.

2. distribution services, including ownership, construction, maintenance and repair of the physical lines; metering ownership, installation, reading and data analysis; and the process of planning for an negotiating with distributed generators:

3. aggregation services, such as load profiling, load planning; customer services; data analysis; billing, generation planning; power supply acquisition; demand side management, energy efficiency and other services relating to matching supply and demand.

Answer: Harquahala Generating Company is not an Electric Service Provider ("ESP") with a "CC&N." Hence, in order for us to provide any of these retail services, i.e., distribution or aggregation services, in Arizona, we would need to partner with an ESP. In

Texas, for example, we have such a partner(s) and provide several of these services.

B. For each good or service for which competition is possible, what are the possible benefits of competition for each good and service?

1. What are the potential price benefits?

Answer: As regards competitive generation, a key price benefit is the fact that these plants are built at the risk of our shareholders and not at the risk of Arizona ratepayers. For example, in the case of our Harquahala Generating project, there is no mechanism for assigning costs to Arizona retail or wholesale customers. If Harquahala were to experience a cost overrun on the project or require a capital addition, the project is at risk for those costs. In contrast, APS has requested Commission approval of a cost-based contract for its Red Hawk 1 and 2 facility, which will soon be in service.

A second price benefit results from the direct price competition of multiple plants competing to serve load in Arizona. The size of this benefit will vary throughout the years depending on the demand/supply balance of the market. Currently, supply outstrips demand, making it an advantageous market for buyers.

A third price benefit results from the constant pressure competition brings to improve the efficiency of power plant operation and fuel procurement.

2. Do the potential price benefits differ in the short-term and long-term?

Answer: There are price benefits under both time horizons. These benefits depend on market conditions, technology advancement, and degree of competition. For example, long-term price benefits could be great since competition unleashes incentives for innovation and technological improvements.

4. What are the potential non-price benefits?

Answer: Competition assures that new generation projects will be creatively designed and operated particularly with respect to environmental performance and community relations.

5. Are there any other potential benefits (e.g., environmental, energy security, etc.)?

Answer: Yes. For example, the emissions from the Harquahala Generating project are a fraction of the existing incumbent-owned gas, oil and coal plants.

II. Determination of the Feasibility of Competition and the project was one of the first in the State to employ zero wastewater discharge technology.

A. Are the product and geographic markets for the good or service conducive to effective competition or manipulation by a single entity? For example:

1. Are there economies of scale which make it most efficient for the service to be provided by a single company?

Answer: For distribution, there are those circumstances where economies of scale exist. However, with regards to competitive generation, economies of scale are not a cost factor. This is the case because minimum efficiencies require a certain size generation capacity but there are only marginal per kwh cost efficiencies achieved by increasing a plant above that size.

2. Are there economies of scope which make it most efficient for the service to be provided in a bundle with certain other services?

Answer: Harquahala is looking at multiple options with regard to selling the output from the facility. Since those entities with the greatest purchasing needs are currently the local distribution utilities, Harquahala is working to provide power to the LDC's at competitive prices for them to bundle into their retail service. Harquahala is also interested in partnering with an ESP. However, ESPs are having difficulty competing in the current retail price structure, i.e., "price to beat." This has occurred in other states. One response is to auction off default service customers and assigning them to new ESPs. Thus, while direct access sales is an option, it requires us to select an ESP partner with a very focused market objective.

B. Are or will there be a sufficient number of competitors in each potentially competitive market?

1. Is the product or service one which viable competitors will actually be interested in providing?

Answer: Arizona is in a construction boom as far as the provision of new generation capacity. In addition to our plant, construction is underway at Red Hawk, Mesquite, Arlington, Gila Bend, Kyrene, and Sundance. Furthermore, merchants generators often have plants in adjacent states that cam serve this market, for example, our LaPaloma plant in Bakersfield, California. Of course, the incumbent utilities or their affiliates will compete to retain their markets.

2. Is the cost of aggregating customers sufficiently small, relative to likely revenues, that new suppliers will find it profitable to enter?

Answer: The cost can be significant depending on the rules applicable to aggregation. In order to encourage aggregation, it is important to allow entities the freedom and flexibility to offer innovative products and services and to be able to package and sell those services in a streamlined manner. Only by doing this will aggregators be able to offer the prices savings necessary to entice customers to switch. This flexibility is particularly important to create a market for new market participants such as renewable energy sources.

3. Are there technical, legal, or other barriers to entry in the markets? For Example:

   a. Are there legal or technical barriers to the construction of the different types of generation plants by non-utilities?

      Answer: Our experience in Arizona is limited to our Harquahala plant and all barriers were successfully addressed in the development process. The primary barrier to generation for non-utilities is simply the lack of opportunity for non-utility generators to sell the output from their facilities. For example, if an incumbent utility self-builds to address generation needs rather than purchasing competitively, opportunities for non-utility generators are greatly diminished. For example, although Tucson Electric Power Company ("TEP") agreed to a competitive bidding requirement in its Settlement, it now prefers to build its own generation capacity at Springerville and the TEP testimony indicates TEP will purchase exclusively from its own plant for its incremental needs.

   b. Is the cost of obtaining licenses, resources, knowledge and employees sufficiently small, relative to the expected revenues, such that new entrants will find the market attractive?

      Answer: In general, as to competitive generation, the answer is in the affirmative. The cost of development (obtaining licenses, etc) in Arizona is relatively small compared to the overall cost of the project. For the Harquahala project, we were able to bring experience to bear that we have acquired over several decades of permitting and operations across the U.S.

C. Is it necessary for the product or service to be provided by a single regulated company to assure reliability and safety, or can multiple companies that provide the service subject to reliability and safety rules?

Answer: For distribution-related functions, the answer is yes. With regards to competitive generation, long-term experience demonstrates that multiple companies can provide generation service reliably and safely. Indeed, this is happening and has happened for a number of years in many domestic and international power markets.

D. For customers, is the cost associated with learning how to shop and actually shopping sufficiently small, relative to the expected benefit, that customers will want to shop?

III. Relationship of the Current Regulatory Regime to Competition.

A. For each potentially competitive product or service, how does current state and federal regulation foster or inhibit (a) retail competition and (b) wholesale competition?

Answer: As far as wholesale competition, the ACC's requirement for competitive bidding encourages such competition and can promote standard offer retail competition. It is abundantly clear that several merchant generation facilities, including the Harquahala Generating project, have been/or are being built plant in anticipation of selling power in a competitive wholesale market that, if sufficiently robust, can lead to a viable, competitive retail market.

B. How can the Commission protect Arizona customers from the risks of competition while promoting competition?

Answer: One of the primary "risks" cited by critics of a competitive market is the price volatility of generation purchased by a utility distribution company for standard offer. However, the Commission can minimize this risk by encouraging its jurisdictional utility distribution companies to establish fixed price terms for contracts, including competitively bid contracts. Ideally, the utility distribution company would contract for a portfolio of contracts (baseload, intermediate, peaking) in which a wide variety of contracts of various duration would exist (one month, one year, ten year, etc.). By doing so, the utilities will create a portfolio of options that will allow it to manage and moderate price and volumetric risk. In order to obtain the best price for customers, it is important to provide those suppliers with the confidence that once entities have competed in the bid process and a winning bidder(s) is selected, that selection will stand. Second-guessing market decisions by regulatory bodies erodes the confidence of the market. Market participants must be confident that aggressive bids will be rewarded. In most instances, contracts can be negotiated and signed well ahead of the beginning of retail rate agreement, possibly during the retail rate case. Thus, pricing ramifications can be known prior to a decision in a retail rate case. A perfect opportunity to implement such advanced planning is the upcoming APS retail rate case to be filed in summer 2003 with new retail rates to be effective a year later. A price adjustment or deferral mechanism can be

established to facilitate rate adjustment for contracts beginning or renewed during the rate agreement. When circumstances periodically arise, as they do today, in which favorable power prices are available, it is a good opportunity for the Commission to encourage this sort of competitive bid process in which utilities will make both medium- and long-term purchases. This sort of anticipatory planning can ensure the desired balance of market benefit versus price risk.

C. How have the interim rate reductions for customers receiving standard service affected the ability or desire of generation suppliers to compete in Arizona retail markets?

Answer: The rate reductions have not had any effect on the Harquahala Generating Company's incentive and desire to successfully supply the Commission's jurisdictional utilities affected by the rate reduction agreements. Harquahala does not own a retail energy services company. Thus, as noted previously, we are unable to provide direct access service to retail customers unless we form a partnership with an ESP that has a CC&N covering Arizona. If either APS or TEP contracted for short or long-term power in the upcoming competitive procurement cycle from either of our power plants in the region (Harquahala or LaPaloma), we do not expect any resulting pressure to increase retail rates. In fact, some contracts could contribute to the ability to lower retail rates. Indeed, generation market realities today in Arizona are very favorable for retail and whole customers.

D. Do Commission policies or legal requirements ensuring that utilities recover investments from ratepayers affect the prospects for competition in any market for which competition otherwise would be possible?

Answer: Stranded cost recovery is an essential element of any transition to a competitive market. However, depending on the mechanism, stranded cost recovery can have an impact on the robustness of short-term retail competition. In Arizona, it was widely understood that the Commission's stranded cost recovery programs would, by its nature, delay the development of a robust retail competitive market. For example, in the case of APS, both the accelerated amortization of regulatory assets and the low level of the generation credit established in the APS Settlement are contributing factors to the inability of ESPs to offer significant savings to customers. This situation has contributed to withdrawal of several potential ESP's from the Arizona retail direct access market.

E. Does continuing utility control of depreciated generation assets affect the ability of competing suppliers to enter retail markets?

Answer: It may, depending on how that control is exercised.

F. How does current Commission regulation promote or deter the ability of (1) renewables, (2) distributed generation, and (3) energy efficiency and demand side management to compete with traditional generation resources?

Answer: See responses below to Commissioner Spitzer's questions.

G. What are the risks of moving to a regime of retail competition for each product or service and what are the methods for managing those risks?

Answer: In terms of generation, the current market conditions in Arizona are such that there is sufficient generation coming on-line to meet supply. This competition will encourage the competitive purchase of generation for which consumers will be the ultimate beneficiaries.

H. If the current regime is not conducive to retail competition for a particular product or service, what actions should the Commission take to promote its success in the future? Specifically:

1. Should the Commission require existing utilities to procure particular products or services from unaffiliated competitors?

   Answer: The Commission already requires incumbent utilities to procure at least 50% of their needs for standard offer from the competitive market. We have relied on this requirement in making an investment of over half a billion dollars in the Arizona market and we urge the Commission to fully implement it.

2. Are utilities taking steps that will make competitions more difficult down the road (e.g., retail marketing, internal restructuring, entering into agreement to avoid customer self generation)? If so, identify those steps and how the Commission should respond.

3. Are utilities entering into long-term contracts with existing customers? If so, how do they affect prospects for future competition? Should the Commission allow them?

4. Should the Commission consider instituting competition for billing and metering services even if retail generation competition is premature?

IV. Retail Generation Competition.

A. Regarding each identifiable generation product :

1. Identify with particularity any defects in the wholesale market structure affecting Arizona.

   Answer: A lack of a functioning regional transmission organization (RTO) is the primary defect.

2. Are there an adequate number of competitors to sell in Arizona to make the product sufficiently competitive? How many sellers are there?

   Answer: There are a sufficient number of market participants to create adequate competition for standard offer retail customers. Indeed, the market is sufficiently attractive that it is quite possible that generators from outside of Arizona will bid. It is also very likely the Arizona utilities will receive bids from projects not yet under construction. This was the case for all of the more than 50 bids received in Colorado in 1999 (twelve were selected and are now in various stages of construction.)

3. How have mergers and consolidations in the industry affected the competitiveness of the product in the region at the wholesale and retail levels?

4. Are competitors building new generation able to price their generation at rates competitive with existing generation?

   Answer: Yes. In this market, for obvious reasons, the generation easiest to compete against is the older, less efficient and higher cost generation. The efficiency of the Harquahala Generating project could easily double that of these older gas/oil plants. However, under the current structure, some of these plants are protected from having to compete on a head-to-head basis with new generators during those peak hours of the year when the urban load pocket is in effect. Over time, transmission enhancements should remove this condition. Again, the best way to determine whether or not new generation is able to compete is to provide for competitive bidding to serve standard offer load.

5. How has the Independent System Administrator affected the success of (a) retail competition and (b) wholesale competition?

B. Regarding the transmission and distribution infrastructure necessary to support competition for each identifiable generation product:

   1. Are there transmission constraints inside or outside Arizona that currently impede the ability of competitors to reach Arizona customers during any seasons of the year or times of the day?

      Answer: Yes. There are transmission constraints leaving the Palo Verde hub and there are constraints entering the metro Phoenix

load pocket. We are focused on these interfaces insofar as our Harquahala Generating plant interconnects directly to the new Hassayampa switchyard. The construction of the switchyard and new transmission line capacity means that Harquahala is well positioned to provide power to those entities serving the metro Phoenix market.

2. What plans are in place to relieve transmission constraints?

Answer: Both APS and SRP are siting and announcing transmission lines from Palo Verde into metro Phoenix. Also, the Central Arizona Transmission System study is examining additional transmission lines. The recently approved Estrella line and its associated upgrades are essential to moving power from the Palo Verde hub in the time frames that new generation construction will be complete.

3. How long will it take to relieve any existing transmission constraints and what factors are affecting and will affect prospects for relief?

Answer: Arizona is one of the nation's most rapidly growing states and can expect to continue to face transmission constraint issues. These issues can be complicated. For example, increased transmission capacity will provide a means to lower the environmental impacts associated with replacing older, more polluting generation located within metro Phoenix. However, the Estrella 500 kv line and its associated upgrades, the recently announced SRP southeast line and the just announced APS Table Mesa line will make a significant contribution to moving the power from plants now under construction at the Palo Verde hub.

4. Are the owners of constrained transmission facilities, or holders of transmission rights, able to use their control to affect market prices?

5. Are these transmission owners currently doing things that will allow them to exert more or less control in the future? If so, please detail.

Answer: This is an area in which the Commission should take a more active role. We are a new entrant and are just now requesting various services from incumbents and attempting to arrange transmission. Accordingly, we recently requested control area services from APS. Unfortunately, APS declined to offer us control area services even though they told us they plan to provide them to their Red Hawk facility located 25 miles from Harquahala. Its important for the Commission to understand that, in the absence of an RTO where there is separation between those entities responsible for operation of the transmission system and those entities responsible for operating and making decisions about generation, the incumbent transmission owners enjoy a very

significant degree of control. When this control is exercised to stifle competition, as is currently the case, only Commission intervention can prevent further destruction of the market.

6. Will the transmission system be adequate prospectively (e.g., in the next, 5, 10, 15, 20 years) to deliver power from new generation plants?

7. Is the natural gas pipelines infrastructure adequate to support all proposed new gas fired generation plants? How many plants can it support?

8. Does the transmission and distribution system facilitate or deter:

   a. the development of renewable energy technologies?

   b. The development of distributed generation?

   c. The development of demand-side management and energy efficiency?

C. Regarding competitive bidding:

1. Identify with particularity any adverse consequences that would result from Commission approval of a substantial variance to the electric competition rules that require competitive bidding for 50% of the electric supply for standard offer customers, starting in 2003. Specifically:

   a. How would retail customers be affected?

   Answer: Retail prices would be expected to be higher than otherwise due to a lack of competition. Again, there is significant new generation capacity proposed and under construction in Arizona. New wholesale generation market entrants will compete to provide the power necessary to serve the competitive bidding requirement. This competition will result in downward pressure on prices. An example of a situation such as this is the recently completed auction that New Jersey's utilities held to serve its basic generation service. In New Jersey a robust wholesale market resulted in substantially lowered prices that are being reflected in the retail market.

   b. How would retail generation competition be affected?

   Answer: If the 50% bidding requirement were not fulfilled, then those customers taking standard offer retail generation services would not be receiving the full benefits of the potential for a competitive wholesale market that

exists in Arizona. For example, APS has proposed bidding approximately 270 Mw instead of the over 3,000 Mw currently required. This limited amount of competitive bidding will not allow APS's standard offer customers to reap the benefits of the new, efficient generation that is now coming on-line.

c. How would wholesale generation competition be affected?

Answer: Wholesale competition will thrive when there are multiple opportunities for generators to sell their output. If the amount of power to be procured via competitive bidding is scaled back, then wholesale competition would be impaired. The significant purchasers of power on the wholesale market are the utility distribution companies, but it is those that are seeking to close the market to competition from merchant generation.

2. Are sufficient competitors available for an effective bidding process for 50% of standard offer service? A higher or lower percentage?

Answer: Yes. If APS and TEP chose to bid 50% of their need as under current Commission rules, this would total approximately 4,300 Mw. We would note that in the APS variance request and the testimony supporting that request, APS has adopted a very literal interpretation of the Commission's 50% bidding requirement. The testimony strongly implies that if Arizona cannot fully implement a 50% competitive requirement by January 1, 2003, the bidding requirement should be entirely abandoned. However, if APS and TEP issued requests for proposal for power delivered to their territories beginning January 1, 2003, merchant plant owners would respond and would achieve this delivery deadline by using existing assets, those scheduled to come on-line, and supplemental power purchases from the wholesale market.

This is exactly what happened in Colorado. In 1999, Colorado Public Service Company sought and received 52 bids for generation and ultimately signed 12 contracts. Not a single project had broken ground when the contracts were signed. In other words, neither the utility nor the Colorado Commission required any of the generating facilities actually to be in construction prior to signing a 10-year purchase power contract yet all indications are that the ambitious deadlines for delivery of power will all be met. In the case of the National Energy Group, in April 2002 we will place on line a 111 Mw facility in suburban Denver - one of the 12 contracts awarded competitively. Not a single one of the 12 contracts (totaling 2,000 Mw) was awarded to an incumbent utility.

Thus, when we read APS' very "literal" reading of the bidding requirements, we immediately thought of the situation in Colorado. In Arizona, if the utilities and the Commission insist on a literal interpretation and want power flowing at 12:01 am on January 1, 2003, it can be done. However, if the utilities and Commission wish to propose a more attenuated schedule, the schedule should be stated in a Plan of Administration that is the result of input from all interested parties. We would be pleased to offer constructive comments on any such Plan.

3. Can retail competition develop if current rules are modified to allow a utility to procure all its generation for standard service from an affiliated company?

Answer: We believe that the rules, as written, provide for the greatest opportunity for competitive suppliers of generation in Arizona, which in turn will provide for the greatest possibility that non-standard offer retail generation competition will ultimately take hold. Retail competition could exist in a sole source, affiliated company procurement scenario, but the cost benefits to retail consumers will be significantly reduced.

4. How would retail competition be affected by other deviations to the competitive bid rules? Be specific about changes in the rules and their consequences.

Answer: Arizona's retail customers presently enjoy the right to choose. We do not see any reason to take this choice away.

5. Instead of entertaining individual requests for substantial variances to the competitive bid requirements, should the Commission proceed on a generic basis to modify the rules for competitive bidding?

Answer: We recommend the Commission implement existing rules and the carefully negotiated settlements, not change this structure. However, if such a change is desired, we recommend the Commission proceed on a basis that creates a consistent set of rules for competitive bidding applicable to jurisdictional utilities.

6. If the Commission would change the 50% bidding requirement for standard offer service, are there other specific measures the Commission can take to promote retail competition?

Answer: Although inferior to a truly competitive market, we believe that the process of having each utility filing a Plan of Administration, public review of this Plan and Commission approval could be an effective method for affording a range of program alternatives. In the upcoming APS rate case, the Commission can

evaluate the standard offer and unbundled tariffs and determine if they appropriately reflect the cost of each service or whether competitive elements could be introduced to better minimize prices.

D. Regarding the pricing of power supply contract rates:

1. Identify any advantages that would result if the Commission approved a long-term supply contract for standard offer customers that was based solely on cost-based rates. (Your answer should define "long term" as compared with "short term" contract).

Answer: It is important for standard offer service to properly incorporate the elements associated with providing that service, including the costs of risk management, since that is the bench-mark by which ESP's compete. For example, the costs associated with providing standard offer service should reflect all of the commodity and non-commodity costs and risks that the standard offer supplier must assume. The tariffs for standard offer service should include all of the commodity, load managing, and customer care costs associated with providing default service. Examples of these costs include: (a) the cost of the wholesale energy necessary to supply the default service load; (b) the cost of ancillary services including load shape risk; (c) the cost of shaping load (e.g., schedulers and operators); (d) default risk; (e) volumetric risk (variations in load due to customer additions and attrition during the contract period); (f) distribution line losses; (g) compliance with any standards, such as a renewable portfolio standard; and (h) all other costs of providing standard offer service. Again, it is important that these elements are included in the standard offer rate as opposed to being buried in the transmission or distribution rate. If these associated costs are allowed to be buried, then direct access customers will pay for these services twice. Also, It is important to encourage incumbent utilities to enter into contracts of various lengths, e.g., spot purchases, six-month, two-year, five-year, 12-year, etc. Encouraging this sort of flexibility and staggering of contract terms will provide a market hedge against various types of risk and consequent price volatility, including volumetric risk, fuel price risk, etc.

2. What if the contracts are based solely on market-based rates?

3. Describe how FERC's new approach for analyzing the ability of sellers with market rate authority to exercise market power affects generation companies selling into Arizona.

4. Does the Commission have the ability to assure that approval of a long-term contract would protect ratepayers receiving standard offer services as well as foster competition?

Answer: Yes. The best assurance comes from a well-conceived and designed bidding program that is implemented without subsequent second-guessing. The Commission has the ability to confidentially evaluate the terms of any proposed long-term contract between one of its jurisdictional utilities and a merchant generator. If the Commission ultimately does not believe the contract adequately protects ratepayers it can disallow the contract from being incorporated in retail rates. However, we believe that the best results will be achieved if the Commission works to ensure that a fair, well-designed bidding program is implemented and that both the bidder and the purchasing utility are confident that those bids that are selected will ultimately gain approval by the Commission.

V. Industry Events External to Arizona.

A. Describe in detail developments you believe will occur in both the wholesale and retail competitive electric generation markets nationally and in Arizona over the next 12 months, 24 months, 36 months, 48 months and 60 months.

Answer: We anticipate that the merchant power plants currently under construction - Arlington 1, Mesquite, Gila River, Sundance and Harquahala – will be completed and provide a significant potential for wholesale and retail competition in Arizona.

B. Is there anything the Commission should do to continue to avoid California's retail electric competition experience? Please be specific.

C. Does the Enron bankruptcy have any lesson for retail electric competition in Arizona?

D. How will FERC's RTO initiative affect the realization of effective retail generation competition in Arizona?

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? Please detail.

VI. System Security.

A. Are there compelling reasons to be concerned about security for electric generation facilities since the Sept 11, 2001 tragedy? Please include discussion of interconnection at a central location such as Palo Verde/Hassayampa.

B. Does transferring ownership of generation facilities out from traditional Commission jurisdiction have any potential negative security consequences?

C. What if ownership after transfer results in a foreign corporation eventually controlling Arizona's generation?

D. Does such a transfer to a non-Arizona entity potentially impact security issues for Arizona?

E. Are there any positive security aspects to transferring electric generation out from Commission traditional regulation to a foreign corporation?

F. Provide specific examples to support you answers.

VII. Vision.

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.

Answer: We support competitive bidding of standard offer retail service as the cornerstone of retail electricity competition in Arizona. The Commission can measure the success of this program by the Mw and Mwh competitively procured annually and the price(s) associated with them. Both the competitive volumes and competitive prices can be compared to total volumes and prices before the program began as well as prices for existing generation and prices in other markets (both with and without bidding). The Commission has an important market-monitoring role. In that role the Commission should respond negatively to the request by APS to allow Pinnacle West to become its full requirements provider. Granting the request would place Pinnacle West in a conflict of interest. It needs to be an honest broker for APS generation, but it cannot do so and at the same time be a promoter of its owned generation (e.g., Red Hawk).

We hope the Commission will allow Arizona's retail customers to remain eligible for direct access service, especially since stranded cost recovery charges will expire in the next few years for some utilities. We do not see any pressing reason to take away the existing right to choose, even if it is rarely exercised in today's market. The possibility that retail customers in large numbers might one day choose alternative providers is a powerful incentive for both the incumbent utilities and competitive suppliers to moderate prices, and experience in other deregulated market shows that the switch to alternative retail market providers takes time but does occur.

RESPONSES OF HARQUAHALA GENERATING COMPANY, LLC
(PG&E NATIONAL ENERGY GROUP)
TO COMMISSIONER SPITZER JANUARY 22, 2002 QUESTIONS

1. In a vertically integrated utility model, what incentives (regulatory, financial and ratemaking) exist for the expanded use of renewable energies?

2. In a competitive electric market model, what incentives exist for the expanded use of renewable energies?

Answer: There are a number of mechanisms to encourage the use of renewable energy, including: (1) a renewable portfolio standard (RPS) or generation performance standard; (2) instituting a system benefits charge to collect money to be disbursed as, for example, grants to either developers or consumers of renewable energy; and (3) providing incentives in terms low-interest loans and tax credits for the development or consumption of renewable resources.

Other states have chosen to take some or all of these paths:

- Sixteen states have some form of a System Benefits Charge in place. Some such as Massachusetts and Connecticut have significant funds set-aside. All are intended to encourage renewable energy development.
- Fourteen states have some form of RPS in place. Some are significant in percentage requirements such as Maine, while others, such as New Jersey are more moderate or, in the case of Hawaii, are just targets. Other states, such as Massachusetts are still finalizing the rules, which will dictate how the standard applies.
- Fourteen programs exist to aggregate customers to purchase renewable power, nationally, although, only two have been mandated, New York and Maryland. There are increasing numbers of crossover states, which are implementing competitive incentives like an RPS or renewable goals, (Wisconsin is such a state) in advance of competition.
- The number of tax exemptions, loan funds and other state incentives for renewable power development is enormous. Many are geared toward small business or residential interests, but there are still numerous opportunities for medium sized renewable projects.

It is important that as the Commission or others work to promote the use of renewable power, that a balance be struck between encouraging the development of new sources, while taking full advantage of those renewable resources that currently exist. Therefore, if the proposed method of encouraging renewable power use and development is through a renewable portfolio standard, then good public environmental policy argues for the inclusion of an existing renewable power standard. Some states have recognized this by phasing in the requirement of new renewable resources required to meet a RPS requirement.

However, many studies have indicated that in the long term, a robust, highly competitive market that promotes price competition and customer choice will strongly encourage the development of renewable energy resources. As one study noted:

> While electric utilities have traditionally made decisions about what supply resources to develop, customer choice brings with it the possibility that end-use customers might willingly directly their electricity purchases towards renewable energy. Green power marketing – defined here as the marketing and sale of renewable-energy based electricity products to end-use customers – empowers customers to voluntarily purchase electricity generated from sources that are less damaging to the environment.

R. Wiser, M. Bolinger, et al., Forecasting Growth of Green Power Markets in the United States (October 2001) (citations omitted), Chapter 1, p. 1.

To support this conclusion, the authors of the above-referenced study examine experience with the marketing of other so-called "green" consumer products, services and behaviors including bottled water, organic foods, socially responsible investing and compact fluorescent light bulbs. According to the study:

> The general pattern of market development among these green products and activities has almost without exception been one of steady but restrained growth in early years followed by acceleration. Thus it is perhaps too early to conclude that these markets are beginning to move out of the product development phase and into the growth phase of the product diffusion "S" curve, recent market action at least hints at the beginnings of such a transition.
>
> While none of these industry case studies offers a perfect analogy to green power, they do provide a sense of what is possible over a longer period of time than the few years that green power has been offered to consumers. Perhaps the most relevant implication for our 10-year forecast of green power penetration is that it often takes a long time for markets to develop. When long distance telephone service was deregulated, AT&T did not lose half of its market share in just a few years; it happened gradually at a pace of a few percent each year over 15 years. Similarly, bottled water reached 8% market penetration, socially responsible investing 13%, and recycling 25%, each over an extended time period. This pattern implies that any forecast of green power penetration should start out low and grow steadily over a period of time, one that will most likely exceed our 10-year forecast horizon.

Ibid., see generally pp. 33-43.

It should be noted that these and numerous other studies that endorse a competitive retail market as a means to promote green power makes several different assumptions regarding the nature of that market. In other words, while there is apparent consensus among the experts that price competition and the ability of customers to easily switch service providers is key to promoting profitable green markets in the long term, there is a divergence of opinion on what additional public policies and measures need to be adopted to nurture green power markets in a competitive structure. For example, many in the business of generating green power are leery of government-sponsored or mandated public information programs, particularly programs that appear to favor one form of renewable energy over other forms. Other green power advocates want government to play a much more active promotional role. As a result of its national experience, PG&E National Energy Group has specific suggestions and positions in this area that we would be glad to share with the Commission.

3. In a vertically integrated utility model, what disincentives (regulatory, financial and ratemaking) exist for the expanded use of renewable energies?

Answer: The incentives or disincentives a vertically integrated utility has to provide renewable power are dependent on the regulatory parameters in which the utility operates. Some of the same mechanisms that are available to encourage renewable power in a competitive market are available to encourage renewable power under a vertically integrated utility model, such as the implementation of a renewable portfolio standard or a generation performance standard. Other mechanisms are also available to encourage renewable development, including requiring utilities to offer ratepayers a green pricing option, i.e., ratepayers have a choice of taking the plain vanilla service the utility provides or they have an option to pay a premium to take service under a green pricing option. However, under a vertically-integrated utility model, until the state, whether legislatively or through the Commission, decides that it is in the public interest for ratepayers to have access to renewable power, it is unlikely that a significant supply of renewable power will develop. This is because utility regulation and utility ratemaking are devised to meet public policy objectives deemed to be necessary by regulators and legislators. The Commission has taken a number of steps in this direction. However, the best means to encourage consumers to purchase renewable power is a competitive retail market with a true choice as far as retail providers.

4. In a competitive electric market utility model, what disincentives exist for the expanded use of renewable energies?

Answer: Often the lack of a market for the output of renewable generation and the lack of recognition of the benefits of renewable energy are disincentives. With regard to the market, unless there is full and fair competition at the retail level, then a competitive renewable generator is limited as to power sales. Also, unless the incumbent utility is motivated to purchase the electricity generated either as part of its standard offer purchases or to support some sort of program requirement, purchases simply will not occur. Also, currently, there are some transmission-related issues at the wholesale level, including interconnection and

imbalance requirements, which must be addressed for intermittent generation sources such as renewable power sources to have real access to the market. Lack of recognition of the benefits renewable resources provide also puts them at a disadvantage. If a public policy objective is to be less dependent on fossil fuels or to improve air quality, renewable resources should receive a benefit for contributing to those goals. Ways to ensure that the contribution renewable energy makes is recognized is through the implementation of a generation performance standard, a continuous and enhancement of the Commission's existing renewable portfolio requirement, or a system benefits charge. Another way to communicate and reward the contribution of renewable energy is through state air quality programs. For example, these programs can be modified to provide non-emitting renewable resources with emissions credits that can be sold either directly or through the State's emissions bank.

5. During Arizona's period of reliance on the vertically integrated utility model, what renewable energy programs were enacted in Arizona?

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

7. Under the vertically integrated utility model, what incentives exist to build newer plants that are less damaging to the environment to replace older, dirtier plants?

   Answer: Harquahala Generating Company is not aware of any past, present or future efforts or plans by the incumbent Arizona utilities specifically to replace older, dirtier plants. Indeed, since most of the capital costs of these plants have already been recouped through the rate base, the owners of these plants have every incentive to keep them on-line.

8. Under the competitive electric market model, what incentives exist to build newer plants that are less damaging to environment to replace older, dirtier plants?

   Answer: Under the competitive model, the siting and permitting process naturally results in proposed plants conforming to today's environmental requirements as compared to the existing vintage plants that have not been required to meet current environmental requirements.

The primary incentive to build less damaging plants is the need for efficiency. This results in the use of the most modern technology. Today's combined cycle natural gas plants are often twice as efficient as older gas/oil plants. Hence, these plants use less fuel to produce a kilowatt-hour, use less water per kwh and use fuels, the production of which is less environmentally damaging.

In New England, for example, where a relatively robust wholesale markets exists and where there are opportunities for suppliers to sell output from these facilities, significant new generation has come on-line that has improved the emissions profile of the New England generating portfolio.

9. Under the vertically integrated utility model, what disincentives (regulatory, financial; and ratemaking) exist to build newer plants that are less damaging to the environment to replace older, dirtier plants?

10. Under the competitive electric market model, what disincentives exist to build newer plants that are less damaging to the environment to replace older, dirtier plants?

Answer: Competitive generation suppliers will only build new, more efficient power plants in those areas where a competitive wholesale market exists and where there is opportunity to sell the output of that power to either load serving entities or alternative energy suppliers. Competitive generation suppliers analyze markets to determine not only if the power is needed, but if they will have fair, non-discriminatory access to the transmission system; if a functioning regional transmission organization (or the promise of one) exists; if there is a commitment on the part of the state to encourage the incumbent utilities to take advantage of the competitive generation market; or if there are alternative load serving entities or customers to which a generator can sell power.

11. During Arizona's period or reliance on the vertically integrated utility model, tat emphasis did the Commission place on pollution control measures in Certificates of Environmental Compatibility?

a) What is the most stringent pollution control measure placed on a CEC during Arizona's reliance on the vertically integrated utility model?

Answer: It is difficult to objectively and accurately answer this question without information which is not currently available to us. We have been unable, for example, to review all of the conditions in all of the Certificates of Environmental Compatibility ("CECs") issued since 1971 to determine what were the most stringent conditions contained in those CECs. The Corporation Commission filing system for the first fifteen years of CEC issuance makes obtaining such information virtually impossible. This problem is compounded by the fact that in 1971, when the CEC authorizing legislation was enacted, the federal Clean Air Act had only been in effect for a few months and was yet to be implemented in Arizona. The federal Clean Water Act, federal Resource Conservation and Recovery Act, federal Safe Drinking Water Act, federal Toxic Substances Control Act, Arizona Groundwater Management Act, Arizona Environmental Quality Act and numerous other federal and state environmental laws and regulations had yet to be adopted or even conceptualized. The significance of this is the fact that CECs are typically obtained prior to issuance of the permits, licenses and authorizations required by these environmental laws. Thus, pollution control measures specified in a CEC may turn out to be more or less stringent than the pollution control measures subsequently required to comply with, for example, an air quality permit issued subsequent to CEC issuance.

It is possible to state generically that CECs issued prior to adoption of the competitive market model contained less stringent requirements on average,

were much less specific, more related to aesthetic rather than specific environmental impacts, and much more narrowly drawn. Specific samples of issues not typically addressed in pre-competitive market CECs are discussed in specific detail below in our answer to question No. 12.

12. Since Arizona's adoption of a competitive electric market model, what emphasis has the Commission placed on pollution control measures in Certificates of Environmental Compatibility?

a) What is the most stringent pollution control measure place on a CEC since Arizona's adoption of a de-regulated utility model?

b) What is the likelihood that that measure would have been placed on a similar CEC in a vertically integrated utility model?

Answer: CEC's issued after the adoption of the competitive electric market model differed from earlier CECs in the following specific areas:

- The CECs had much greater specificity as far as environmental impact mitigation measures or the adoption of mandatory mitigation procedures that require a commitment to more specific mitigation measures. For example, landscaping and screening measures are either the subject of much more detailed specifications in the CEC or are to be implemented by an oversight committee that is independent of the power plant operator.
- Imposition of specific control technology requirements that are more stringent than those imposed under applicable regulatory law. For example, the imposition of so-called "dry cooling technology" to minimize water usage, the requirement to install low NO_x burners on generation units that are not the subject of the CEC and a periodic review of pollution control technology to determine the feasibility of retrofitting the plant with new technology.
- Restrictions on water usage and the sources from which water can be taken (effluent, surface water preferred over ground water) regardless of the power plant operator's property rights to a particular water source or entitlements to any particular amount of water.
- Compensatory environmental mitigation, *i.e.*, the imposition of mitigation requirements that do not directly mitigate the environmental impact of the power plant or transmission line, but that promote improvements in the media of concern. For example, power plant operators have been required to fund conversions to alternative fuels by school busses or studies of commuter rail systems.
- Socio-economic mitigation. For example, requirements that power plant operators contribute to fire districts, law enforcement agencies or school districts to offset the costs of increased services because of the plant's operation, employees, employee families, etc.

These additional, more stringent and more extensive conditions in CECs are directly traceable to the advent of a competitive market and, more specifically,

the need of merchant plant companies to build power plants to compete in that market.

13. During Arizona's period of reliance on the vertically integrated utility model, what amount of excess generation capacity existed in Arizona?

14. Since Arizona's adoption of a competitive electric market model, what amount of excess generating capacity existed in Arizona?

RESPONSES OF HARQUAHALA GENERATING COMPANY, LLC
(PG&E NATIONAL ENERGY GROUP)
TO COMMISSIONER IRVIN FEBRUARY 7, 2002 QUESTIONS

1. If the majority of market participants intend to market electricity only to industrial, large commercial and load serving ESP entities, should retail markets be limited by load size to allow those entities with true bargaining power negotiate Direct Access?

   Answer: Arizona has already granted the "right to choose" to all retail customers and we do not see any reason to withdraw that right. The lack of development in retail access is not due to a lack of bargaining power by purchasing entities, but is primarily due to the lack of significant savings from exercising choice. This is a flaw in the market that can be remedied both by the advent of wholesale competition and increased sophistication among retail consumers. Although the level of potential retail customer savings from switching is expected to fluctuate through time, experience in other deregulated consumer markets demonstrates that the overall price direction is downward. Moreover, retail market participation is traditionally very limited in the early years because cost savings are frequently marginal and cost communication to consumers is flawed. However, as wholesale competition becomes more vigorous, price signals are better communicated and retail power purchasers become more sophisticated, the retail market will become increasingly more robust.

2. What will be a UDCs primary functions in a competitive market?

3. Is it important to first establish functional wholesale markets before creating robust retail markets in electric generation? If so, why?

   Answer: Absolutely. A functioning wholesale market is critical to retail competition. However, from experience in other markets, the notion that the state should close retail markets that are already open in order to more firmly establish wholesale competition is not the route we recommend. The establishment of a functional wholesale market is well underway in Arizona. Significant new supply is under construction to support wholesale competition. Indeed, the state's incumbent transmission owners have filed a request with FERC for West Connect to be found in conformance with its RTO requirements.

   If the Commission closes retail markets and wholesale competition continues to develop successfully, it would require another significant effort to re-open those markets. Issues that were fully addressed in the prior restructuring would be re-litigated and further delay retail competition.

4. When price caps are lifted for the majority of Arizona consumers, what assurances do we have volatility in the market (for both natural gas and electricity) will not result in unstable or inflated rates? Will the generation price of electricity fluctuate with the price of natural gas?

Answer: If the incumbent Arizona utilities competitively bid as required, they will have the opportunity to receive attractive offers for power deliveries for long-term periods (e.g., 10-, 15- or even 20-years). Furthermore, if the incumbents request fixed or partially fixed prices, then they will receive offers that meet the desired specifications. This is exactly what has happened in other wholesale markets that have been allowed to flourish. Once the incumbents make their contract selections from the bids received, the Commission will have the opportunity to review all contract terms far in advance of any deliveries under these contracts. We discourage the Commission from second-guessing the contract selections and we encourage the Commission to implement a solid bidding program so that the results have a sound basis.

An example of conduct we believe is desirable is the response to the APS challenge. APS will file its next rate case in summer 2003. If APS implements the Commission's bidding requirement, it could present the Commission with many selected contracts and reflect the contracts in its overall rate request before the Commission. Other contracts executed before and during the rate agreement, can be factored in via the adjustment mechanism created for that purpose.

If, however, the utilities are allowed to circumvent the rules and settlements or can otherwise undermine the bidding program, a number of undesirable consequences will result. If the incumbent Arizona utilities delay program implementation, they will lose the opportunity to make purchases during a period in which wholesale power prices are very attractive. To mitigate customers from volatility of electric and natural gas prices, utilities should create a portfolio of options that allow them to manage risk on a going-forward basis. By procuring power from the competitive market under a variety of terms of conditions, the utility will be able to create a natural hedge for its standard offer retail generation customers.

5. Should there be a provision added to R14-2-1606(B) which would allow/limit a UDC to for wholesale power in three or five year intervals? What would be a proper length for contracts?

Answer: No. The duration of wholesale contracts should not be prescribed in a rule. The UDC should have the flexibility to establish proper duration of wholesale power contracts in order to create a well-balanced portfolio, but the mix of contract lengths necessary for a well-balanced portfolio cannot be predicted in advance in a rule.

6. What are the real benefits to residential customers and small business in retail competition other than consumer choice? Will IPPs market their power directly to retail customers, or are their efforts mainly focused on selling power to wholesale customers?

Answer: In the case of Harquahala Generating Company, we do not have an ESP affiliate and, therefore, can only sell our power at wholesale unless we partner with an ESP. Therefore, we prefer to sell directly to UDCs on an arms-

length or competitive bidding basis and consider selling directly to retail customers as a second option. Under this second option, we would need to partner with an ESP that has a CC&N in Arizona.

7. Currently, is residential choice a real option? If not now, when?

8. What provisions, if any, are necessary to effectuate a gradual replacement of those existing plants in Arizona which are older, more polluting and less efficient than the newer combined cycle plants currently being built?

Answer: Many of these older plants are located inside the transmission constrained metro-Phoenix load pocket. If more transmission into Phoenix existed today, most of these units could be retired upon completion of construction of the new plants at Palo Verde. Therefore, provisions or incentives to eventually increase the import capability into metro Phoenix are necessary to hasten the retirement of these older, less efficient and polluting units. These same incentives will act to accelerate retirement of less efficient, more polluting plants in areas of the State with more pristine air. A functioning RTO would help facilitate this process.

9. What are the long-term effects of divestiture for APS? How does the Commission guard against a PG&E situation, where the distribution company declares bankruptcy after profits have flowed to its parent holding company?

Answer: It is difficult to speculate on the long-term effects of divestiture on APS since this will be determined, in part, by the decisions made by APS as it enters the competitive market place. However, it should be recognized that the PG&E situation in California did not result from unfair or improper business practices, but rather from a regulatory failure and political short sightedness that prevented the utility from passing on high procurement costs and being forced to sell to retail customers at a loss. The transactions between the utility and the parent holding company all occurred prior to this regulatory breakdown and within the strict rules and regulations created and enforced by the California Public Utilities Commission to regulate the relationship between the parent and the utility. The transactions, in some cases, were even required under the CPUC rules.