Transcript Exhibit(s)

Docket #(s): RE-00000C-94-0165

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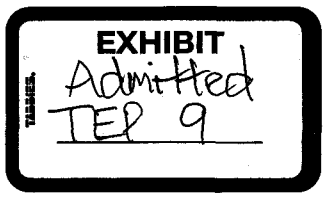

BEFORE THE ARIZONA CORPORATION COMMISSION

JIM IRVIN
Commissioner - Chairman
RENZ D. JENNINGS
Commissioner
CARL J. KUNASEK
Commissioner

IN THE MATTER OF THE COMPETITION IN THE PROVISION OF ELECTRIC SERVICES THROUGHOUT THE STATE OF ARIZONA.	) DOCKET NO. U-0000-94-165)) **DIRECT TESTIMONY OF**) **CHARLES E. BAYLESS**)

On Behalf of
TUCSON ELECTRIC POWER COMPANY

JANUARY 9, 1998

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I. INTRODUCTION AND PURPOSE

Q. Please state your name and business address.

A. Charles E. Bayless, 220 West Sixth Street, Tucson, Arizona 85702.

Q. What is your position with Tucson Electric Power Company ("Company" or "TEP")?

A. Chairman of the Board, President and Chief Executive Officer. I also hold these same positions with TEP's newly formed holding company, UniSource Energy Corporation.

Q. Please describe your educational background and your business experience as the same pertain to your position.

A. I received a Bachelor of Science Degree in Electrical Engineering from West Virginia Institute of Technology in 1968. I then received a Master of Science Degree in Electrical Engineering in 1971 and a Juris Doctor Degree in 1972 from West Virginia University. In 1977, I received a Master of Business Administration Degree from the Graduate School of Business at the University of Michigan. I am an inactive member of the West Virginia and Michigan Bars.

From 1978 to 1981, I was employed at Consumers Power in Jackson, Michigan. During that time period, I served as an attorney, the Director of Nuclear Fuel Supply and the Director of Special Corporate Projects. My responsibilities at Consumers Power in Special Projects emphasized financial transactions, including the procurement and financing of nuclear fuel leases, leveraged and single investor leases, special financial studies, pollution control revenue bonds and acceptance facility agreements.

In 1981, I joined Public Service Company of New Hampshire, a $2.6 billion utility. As Senior Vice President and Chief Financial Officer, I was responsible at various times for finance, accounting, taxes, treasury, insurance, pensions, rates, and financial planning. I had overall responsibility for approximately 200 employees. After the President of Public Service of New Hampshire resigned, I also became Chief Reorganization Officer, and oversaw the overall conduct of the Company's reorganization, including all negotiations with committees, the State, and other parties. I came to TEP in December 1989 as Chief Financial Officer and was elected President and Chief Executive Officer in July 1990 by the Board of Directors. I was elected Chairman of the Board in January 1992.

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Q. Please describe any other business experience or background as it relates to electric industry restructuring.

A. I have been a long-term advocate and an outspoken proponent of electric competition. Toward this end, I have served as an expert witness before the U.S. Congress and the Federal Energy Regulatory Commission on a vast array of issues related to the energy industry and have published numerous articles about electric competition in national and trade publications, including *Public Utilities Fortnightly* and the *Washington Post*. In addition, I was honored by my electric utility peers as a Silver Award winner in Financial World magazine's 1996 CEO of the Year Competition. According to the magazine, the award recognizes "superior leadership and business achievement" in the industry.

Q. What is the purpose of your testimony?

A. The primary purpose of my testimony is to provide policy perspective with respect to the issue of stranded cost as it relates to the nine issues set forth in the Arizona Corporation Commission's ("Commission") Procedural Orders dated December 1 and 11, 1997. I will present some historical insight into the issue of stranded cost and set forth the Company's position that stranded costs are a legally recoverable property right for which the Commission is required to allow the Company the opportunity to recover. I will discuss the Regulatory Compact ("Compact") and explain how the Compact requires the recovery of stranded costs, as well as the economic rationalization for such recovery.

II. SHOULD THE ELECTRIC COMPETITION RULES BE MODIFIED REGARDING STRANDED COSTS, IF SO HOW?

Q. Mr. Bayless, the Commission's First Amended Procedural Order dated December 11, 1997, asked that the issues discussed in the direct testimony be arranged in the order of importance to the party. From the perspective of TEP, one of the "Affected Utilities" under the Electric Competition Rules ("Rules"), what is the most important issue for the Company?

A. The most important issue to TEP, its shareholders and its creditors, is the issue of stranded cost recovery. This has been the position the Company has articulated to the Commission since long before the adoption of the Rules and the issue that the Company has maintained during these proceedings that must be resolved before electric competition can be duly

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introduced in this State. Therefore, of the nine issues set forth in the Procedural Order, the most important issue to TEP is *should the Rules be modified and if so how?*

Q. How would you answer that question?

A. To the extent the Rules do not already provide for stranded cost recovery, they should be modified to make it clear that, subject to appropriate mitigation efforts, "Affected Utilities" have the right and the opportunity to recover *all* of their stranded costs. Further, the Rules should be modified to better define and to provide the procedural and substantive requirements for the recovery of stranded costs.

Q. Would you please explain this answer?

A. Yes. But, in order to explain what must be done in the future, it is important to understand what has happened in the past from a national, Arizona and TEP specific perspective. First, from a national perspective, attached to my testimony as Exhibit A, is a short article by Frank Clemente that appeared in the July/August 1997 issue of *Electric Perspectives*. The article provides an excellent timeline regarding the decisions made in the 1970's and early 1980's regarding power plant construction. It also discusses how many of the opponents of stranded cost recovery today were proponents of the building of generation assets in the first place. It is clear from this article (as well as what I will discuss below) that the stranded generation costs we see today are not the result of bad decisions by electric utilities, but economic decisions based upon perceived long-term societal needs and goals.

Q. What happened in Arizona and to TEP during this time frame?

A. The "energy crisis" was in full swing. In Tucson, Tucson Gas and Electric ("TGE") was prohibited from making new gas connections after January 1, 1977. The peak electric demand of TGE's service territory had increased at a rate of 10 percent per year from 1966 to 1976. That level of growth implies the need to double resources in a little over seven years, which was the time it took to build a baseload plant. Given these historical facts, TGE made a conservative assumption that future load would grow at 6.5 percent per year in the future instead of the historical 10 percent load growth. That was the climate in Arizona when TEP's largest generating station was approved for siting and ultimately added to rate base by the Commission after review.

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The Arizona Academy was formed in 1962 to bring together a cross-section of leading citizens which were "representative of every shade of political, social and economic philosophy." In 1976, The Arizona Academy published its 28th Arizona Town Hall report entitled "Arizona Energy -- A Framework for Decision." The Introduction of this report states:

> "No subject today is receiving more national attention than that of energy. Each person here knows full well that the national energy crisis is magnified in Arizona, for, as Governor Raul Castro reminded us in his keynote address, "Arizona is an energy consuming state and not an energy producing state." Therefore our problems are particularly complex and the solutions even more so. It is therefore fitting and timely that this Town Hall should assign top priority to the topic of energy."

The last paragraph of the introduction says:

> "But these problems are not devoid of workable solutions. We have the ability to develop new energy sources, including nuclear, solar and other sources, to meet our needs if timely and intelligent development is instituted. Our state government must, at the same time, provide the necessary incentives, whether financial in nature or by other means, to foster such development."

In 1981, the 39th Arizona Town Hall again chose the topic of energy and this time published a report entitled "Arizona's Energy Future – Making the Transition to a New Mix." The introduction states:

> "Public utilities, for example, must by law satisfy the energy demands of their customers. Accordingly, they must estimate what that demand is likely to be sufficiently in advance to premit[sic] investment decisions to be made in the face of long lead times for construction and financing. Besides responding to changes in income and prices, energy demand in Arizona is strongly affected by migration patterns and changes in the relative mix of specific sectors of the economy.

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Thus, major energy-producing institutions must plan under conditions of much greater uncertainty and hence risk than in the past."

(Note it doesn't mention the regulatory risk of having the rules changed in the middle of the game). The participants at the time of these reports included representatives from many of the largest electricity users in Arizona as well as top government officials. The decision to build power plants was not made unilaterally by the electric utility industry– these were societal decisions.

Q. Notwithstanding these societal pressures to build additional generation, what prompted the utilities to go forward with such projects?

A. Under the Compact, the utilities were (and still are) *required* to plan for and provide generation for all current and *future* customers.

Q. What do you mean by the Compact?

A. The operations of public utilities, since shortly after their inception, have been based on the Compact. In Arizona, electric utilities were given a Certificate of Convenience and Necessity ("CC&N") and were required to build facilities to serve everyone in their respective service territories and were allowed the opportunity to earn a reasonable return on their investment. This requirement to serve is one of the main differences between the electric industry and unregulated industries. In the vast majority of cases, the construction of these assets was approved by the regulatory body having jurisdiction after hearing, and after construction, the recovery of such assets was approved by the same regulatory body after the assets were determined to be prudent. If the regulatory body found any portion of the asset to be imprudent, it was written-off, and hence, would not be a "stranded asset" today.

Q. You have stated that stranded asset recovery is legally mandated. What is your position on less than full recovery of stranded costs?

A. TEP is not prepared to accept less than full recovery of stranded costs.

Q. The Affected Utilities have been able to earn on the assets that were constructed. Why didn't that compensate TEP?

A. The Company has been able to earn, but only a regulated rate of return and only for a portion of the investments' useful lives. In unregulated industries, investors bear the full costs of investments that fail, but investors are also allowed to reap the full benefits of profitable

investments without the imposition of limited rates of return. Since regulated utility investors are provided an opportunity to recover only a regulated return on investment, historically in most jurisdictions they have been shielded from the risk of large losses. At the same time, investors are denied the opportunity for higher returns.

This clearly shows the continued existence of the Compact as earnings are limited on prudent investments to a regulated rate of return. If a utility builds a plant or a transmission line which operates at a cost far below the current market, the company is only allowed to earn a regulated return on its actual cost. The utility is never allowed to charge a market rate and hit a "home run" for investors as non-regulated entities do.

Q. Would you please elaborate on that?

A. The requirement that TEP sell certain of its products at a below-market price, in my view, constitutes an unconstitutional "taking" for a public purpose without just compensation. In the past, the Company did not, however, complain about the unconstitutional taking.

Q. Why not?

A. The answer is simple. The electric industry believed that the "opportunity to earn" portion of the Compact yielded "just compensation" for the "taking." TEP believed it received the opportunity to earn the regulatory return on all prudent investments, even if something better came along. The Company believed that it had given up the upside, the "home runs," in exchange for a promise that we would earn a regulated rate of return on all prudent investments. Today, TEP is only asking for what was promised; the opportunity to recover its assets and earn a rate of return.

Q. Doesn't the Compact then prohibit the Commission from changing the policy of regulated monopoly to competition?

A. Constitutional and legislative questions aside, the answer is clearly no, but it cannot do so without honoring its obligations created under the prior regime. I would not argue for a moment about the right of a state regulator to change the regulatory framework on a prospective basis. In fact, to achieve competition I would encourage it. However, prior to changing the future, the Commission must fulfill its obligations from the past for which billions of dollars have been invested in reliance thereon. The utilities have fulfilled their part of the bargain. The utilities built the plants and still stand ready to serve, and, in fact, are

still required to serve. The utilities now ask that the customers and regulators fulfill their part of the bargain.

Q. Some opponents of stranded cost recovery have taken the position that the utilities have known for some time now that the Compact was over. What is your response to that?

A. If the Compact was over, what prohibits a utility from turning off a customer's electricity today or refusing to provide service for their increased needs in the future? Utilities still have, and will continue to have for at least the near term, the duty to serve all customers within their certificated territory and must provide for their future needs and have the rates and charges for such service regulated by the Commission.

Q. But, Mr. Bayless, in the past utilities have been guaranteed a rate of return; wasn't that guarantee enough to compensate you for the risk of non-recovery?

A. TEP disagrees. Utilities were never guaranteed a rate of return, they were only guaranteed the "opportunity" to earn a return, as well as the opportunity to recover the cost of prudently constructed assets. Frankly, that's all TEP is saying is now required; the opportunity to earn and recover as promised.

Q. What about the economic impact of stranded cost recovery on the economy?

A. From TEP's perspective, stranded cost recovery is desirable for the long-term good of the economy. Let me give you some specific reasons.

1. The first reason the nation's economy will be better off with full recovery of stranded costs is that society will continue to benefit from some of the most productive generation resources. New generation is not being built that can operate as cheaply on the margin as many existing utility plants (that have large stranded costs); these plants should continue to be the prevailing source of electricity supply until new generation is needed. Without recovery, these plants may be shut down.

   Let me give you an example. From a regulatory point of view, one must ask the question of what is best for society, for the public good. The proper question to keep in mind throughout the debate is not, "What is best for new entrants or customers?" but, "What is best for society?"

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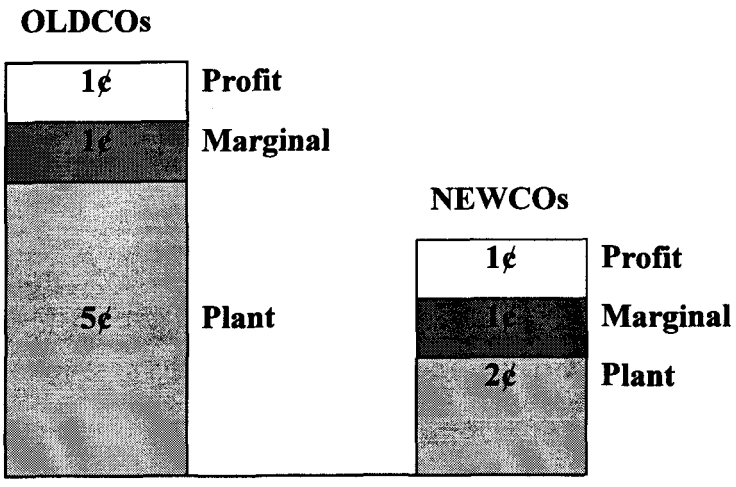
Let's consider a system with only old participants (OLDCOs) which have plant (sunk) cost of 5¢/kWh and operating (marginal) cost of 1¢/kWh and new entrants (NEWCOs) with plant (marginal) cost of 2¢/kWh and operating (marginal) costs of 1¢/kWh. (See Figure 1)

Figure 1



The NEWCOs offer power to customers at 4¢/kWh. The customer, seeing that its power costs are 7¢/kWh from the OLDCO, immediately starts clamoring for open access.

Let's step back now from that individual transaction where there are two winners (NEWCO and the customer) and one loser (OLDCO) and look at all of the transactions from the viewpoint of society as a whole. For OLDCO to provide the service, a total of 1¢/kWh of society's scarce assets will be used up (fuel and labor), for NEWCO since all of their costs are incremental, a total of 3¢/kWh of society's scarce assets will be used up (the cost of the new plant plus fuel and labor). Society is thus better off by allowing OLDCO to furnish the electricity.

Another way to reach the same conclusion is to consider that if NEWCO is allowed to supply the electricity, without stranded cost recovery, the customers are better off by 3¢/kWh and NEWCO shareowners are better off. But the utility shareowners are worse off by 5¢/kWh, a net loss to society of 2¢/kWh. Thus, the current battle is not over what is best for society, society is clearly better off by letting OLDCO provide the electricity.

The battle is between OLDCO shareowners and NEWCO shareowners. If the building of new low cost generation were best for society, the Commission would be ordering utilities to build new plants. The Commission doesn't, because in the end building new generation costs society more. The benefit from competition is from the improved efficiency and the innovation it will bring and for this reason alone competition should be adopted. The benefits are not from allowing new plants to replace old plants.

By allowing OLDCO to charge a stranded asset charge, NEWCO will then produce only when its marginal costs are lower than OLDCOs marginal costs, which is the desired result for society (but not necessarily for NEWCO). Over time as the OLDCO charges wind down, NEWCO will then have an easier and easier time competing.

Society is better off when the electricity is produced using the least additional amount of resources. Public utility consumers should make decisions based upon what is good for society, not what is good for any one constituency. Arguments will be made that competition is good for society so the Commission should permit competitors. I couldn't agree more. However, competition can be encouraged in a manner where society bears a huge cost of constructing unneeded new plants, while at the same time abandoning old plants with a lower marginal cost, or we can encourage competition in a manner which has the lowest economic cost and favors the most rational allocation of resources. TEP prefers the latter.

2. Second, most all of the new generation relies on one fuel source, natural gas, which creates a large price risk. The diverse array of current (stranded) generation provides a hedge against fuel price shocks in the future.
3. Third, it has been shown that activities that raise rivals' costs are, in fact, predatory in certain circumstances[1]. The three conditions necessary for predation are consumer damage, predator benefit, and competitor damage[2].

[1] Steven Salop, Introduction, in Strategy, Predation, and Antitrust Analysis (Steven Salop ed. 1981.)
[2] Ann P. Bartel and Lacy Glenn Thomas. "Predation Through Regulation: The Wage and Profit Effects of the Occupational Safety and Health Administration and the Environmental Protection Agency," Journal of Law and Economics, October 1987.

- Consumer damage is likely to occur *without* stranded cost recovery. The productivity decrease and potential risk I describe in earlier points will impose additional social costs. Also a huge cost burden will be shifted from those customers who don't pay for stranded costs to other classes of customers and/or shareholders. This has already happened to some degree with municipalization, discounting to large customers and self-generation.
- With regard to the second condition – predator benefit – new providers of generation have not been subject to regulation and the associated cost burdens, and historical commitments imposed by the Compact on incumbent utilities. If incumbent utilities are not allowed to recover stranded costs, new providers will be sufficiently advantaged from the effects of regulation on their competitors to experience increased profits.
- Competitor damage is what this hearing is all about. Incumbent utilities face huge stranded costs since the rules have changed in the middle of the game.

4. The fourth reason is an issue of fairness. A failure to ensure the recovery of regulatory approved costs in the transition to competition will leave investors with a very large part of their property expropriated by changing the rules in the middle of the game.
5. Fifth, people should be able to rely on government's rulings and promises. If any government makes a contract, either express or implied, and people rely on that contract, and then if a law change renders specific performance impossible, the government should be responsible for transitional cost recovery. This reneging of regulatory commitments and promises undermines the sanctity of contractual promises which leads to higher required rates of return to compensate investors for the added regulatory risk and this leads to more costly, but less capital-intensive projects.

Q. Doesn't stranded cost recovery distort competition?

A. Many have the mistaken idea that society will benefit if customers are allowed to buy their power in a competitive market without paying for sunk costs (sunk costs are non-salvageable costs which cannot be affected by present or future decisions to supply more or less, to run or not to run, or to expand). This notion is wrong because these sunk costs will just be . . .

transferred to other customer classes or shareholders. Price reductions (or in this case cost shifts) are not the same as productivity gains.

Q. How can the transition to competition take place without distorting the market?

A. In order to avoid the distortion of competition and thus achieve enhanced efficiency, there are at least three important factors that need to be met.

First, stranded cost recovery should facilitate proper market-based incentives which will lead to lower cost (on an incremental basis) generating units running before higher cost units. To ensure correct price signals, suppliers of energy should compete against each other based on marginal costs, not regulated, bundled rates which may include both sunk costs and marginal costs in the rate.

Second, new entrants and self-generators permitted to access utility transmission and distribution systems or who take back-up service should pay a share of stranded costs. A level playing field must exist between incumbent suppliers, new entrants and self-generators with no unfair advantage given to any supplier due to asymmetrical effects of regulation. Many customers are already comparing utility retail rates that embody sunk costs from past regulatory commitments to retail rates of alternative suppliers that are free from such burdens.

Third, regulatory costs that regulated incumbent utilities incur need to be eliminated or shared by or applied to all suppliers. Examples of such costs include or result from:

- serving as the provider of last resort,
- promoting and paying for conservation and demand-side management,
- paying for environmental programs that competitors don't have to pay for,
- supporting low income customers,
- promoting/subsidizing uneconomic generation, and
- incurring costs from regulatory litigation and review.

For the foregoing reasons, TEP believes that the Rules should be modified to embody these principals.

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III. WHAT COSTS SHOULD BE INCLUDED AS PART OF STRANDED COSTS AND HOW SHOULD THESE COSTS BE CALCULATED?

Q. Mr. Bayless, what costs should be included as "stranded costs" and how should the definition be modified?

A. The threshold task is to define what falls within the ambit of "stranded costs" and how those costs are determined. In TEP's opinion, stranded costs should not be viewed simply in terms of categories of costs, but rather as revenue requirements that a utility has lost the opportunity to collect as a result of existing customers obtaining power from alternative sources. TEP believes the following to be an appropriate definition of Stranded Cost:

> An aggregation of costs (the prudence of which has already been established) incurred for, or in anticipation of, the provision of service under a regulatory framework, that are likely unrecoverable in a competitive market for power with prices based on marginal cost.

The above definition is similar to that appearing in R14-2-1601.8 of the Rules; however, several key distinctions are noteworthy.

First, the definition currently in the Rules refers to "the value of all the prudent jurisdictional assets and obligations. . ." It is unclear whether such definition would result in a reconsideration of the prudence of past investment decisions. TEP strongly believes that the consideration of Stranded Cost should not include ex-post prudence reviews of costs that are already being recovered in the utilities' rates. The fact that recovery is already being allowed is sufficient evidence of prudence as a result of prior Commission prudency determinations. TEP has already been required by the Commission to write off $754 million (see Exhibit B), including $428 million of the cost of its Springerville and Irvington generating facilities. It is not necessary to revisit prudence issues simply because some costs currently being recovered in rates might, in the future, be included in a stranded cost charge.

A second concern of TEP with respect to the Commission's approved definition of stranded cost is that it tends to focus on the difference in *values* of assets and obligations under traditional regulation as compared with their values after the introduction of competition. It is unclear what specific assets and obligations are included and whether the definition is limited to balance sheet accounts. Stranded costs are not limited to generation

assets. For example, the investment in skilled utility employees is a potentially stranded asset. Also utilities have considerable investments in regulatory assets that exist solely based on the action of regulators and that may become strandable under a competitive regime. In addition, generation-related operating expenses *(i.e.,* fuel expenses, including mine reclamation costs) may be considered a potentially stranded cost. Further, some stranded costs may not be presently reflected in a utility's financial statements. This is the case with TEP where certain substantial costs are not captured in its financial statements, including $94 million relating to the Springerville excess capacity deferrals and $19 million for employees' post-employment benefits.

Q. How do you propose calculating stranded costs?

A. TEP believes that the most appropriate method of defining stranded costs would be to calculate the difference between future revenues under traditional regulation and a competitive regime. This method eliminates the need for an asset-by-asset determination, and more accurately recognizes that utilities have made multiple investment decisions under the Compact with the expectation of revenue streams from customers to cover the costs of such investments (including an opportunity to earn a reasonable rate of return).

TEP supports the "Net Revenues Lost" method proposed by the Stranded Cost Working Group Report ("Report") which calculates stranded assets as the net present value of future annual differences in revenues under a continuation of regulation, versus the amounts likely to be realized after the introduction of competition, using an appropriate discount rate. In general, the resulting amount reflects the difference between the utility's embedded generation costs and the market's marginal costs for supplying power, plus the utility's regulatory assets, both recorded and unrecorded. Such a method effectively recognizes both above-market and below-market assets.

Q. Have you considered other stranded cost quantification methodologies?

A. The only feasible approach (other than the Net Lost Revenues approach) outlined in the Report of the Stranded Cost Working Group ("Report") is auction and divestiture. TEP proposes that auction and divestiture remain an option throughout the recovery period no matter what methodology is finally decided upon. If the auction determined market price exceeds the unamortized book value of the generation asset, TEP will credit the difference to

other stranded costs (*e.g.,* regulatory assets). If unamortized book value is greater than actual market value, TEP will recognize this difference as a regulatory asset to be included in stranded costs and amortize this amount over the remainder of the recovery period.

The replacement cost valuation approach is not good for society or TEP. It would undervalue TEP's stranded assets given current market prices which reflect the existing excess capacity environment. Much of TEP's generation can be operated more cheaply than gas-fired combined cycle, combustion turbines on a marginal cost basis – especially in the event of an increase in gas prices.

Finally, the Stock Market Valuation proposal is infeasible given TEP's debt covenants. For example, TEP is currently prohibited from paying dividends, so it would be difficult if not impossible to "pay" all of the stranded cost recovery charges to a designated class of shareholders.

Q. The single most significant variable affecting the quantification of stranded costs is the market clearing price for power. What do you propose using as the market price in your calculation of stranded costs?

A. Any method of attempting to quantify stranded costs is necessarily speculative and highly uncertain because it requires identification of all relevant resources (both recorded and unrecorded) and offsets, customer demand and predictions of the market clearing price for power over long periods of time. As an example, factors affecting the market clearing price for power (clearly the most critical variable in quantifying stranded cost) include: customer demand, market structure, generation and transmission capacity availability, generation fuel mix and costs, interest rates and inflation, developments in technology and new laws and regulations. However, given all these uncertainties, TEP proposes using the Dow Jones Palo Verde Index ("PVI") as a market price estimate.

Q. Why do you propose using the PVI? Isn't the PVI a wholesale market index?

A. The Company believes that the PVI price is the best estimate we have of the market price for electricity in Arizona. Because of the excess capacity in this part of the country, capacity values have been driven close to zero and the PVI value primarily represents average fuel and variable O&M costs. Also, it is easily verifiable.

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Q. Shouldn't the market price used in calculating stranded costs include long-run capacity cost?

A. Yes, to the extent that such costs are recovered in the competitive market. Further, as excess capacity is depleted and the market for capacity becomes tighter, the PVI price will more fully reflect capacity costs.

Q. Wouldn't something similar to the California Power Exchange ("PX") price serve as a better spot market index since it will include all of the utility-owned generation and will serve retail markets?

A. The Company believes that the PVI and the PX prices will be similar (net of transmission and transaction costs). If the net market price is higher in one region, the market will equilibrate.

IV. SHOULD THERE BE A LIMITATION ON THE TIME FRAME OVER WHICH STRANDED COSTS ARE CALCULATED?

Q. Should there be a limitation on the time frame over which stranded costs are calculated?

A. TEP supports the Report's recommendation that costs should reflect the expected remaining cost recovery periods associated with the respective assets which includes service lives implicit in current book depreciation rates, contract periods for fuel and recovery periods for applicable regulatory assets and liabilities.

Q. Over what time period does TEP propose calculating stranded costs?

A. A significant portion of the investments implicit in stranded costs are very long-term. TEP's generating assets, for example, have life expectancies in excess of thirty years. Historically, costs associated with these assets have been specifically incurred to serve customers over an extended period of time with a reasonable expectation of a fair opportunity for full recovery. Proper quantification of stranded costs should reflect the remaining life expectancy of these underlying assets and deferred costs.

V. SHOULD THERE BE A LIMITATION ON THE RECOVERY TIME FRAME FOR STRANDED COSTS?

Q. Should there be a limitation on the stranded cost recovery time?

A. The interest of the utilities, their shareholders and consumers all need to be balanced in determining the time frame for stranded cost recovery. All parties will prefer as short a recovery time frame as possible. However, several factors, including (i) generation price

increases, caps or reductions, (ii) the inclusion of securitization as a potential recovery method, and (iii) the magnitude of stranded cost, also have a significant impact on the recovery time frame. TEP believes that the recovery time frame should be based on some reasonable balance of such considerations. Accordingly, TEP strongly supports the option of securitizing a portion of stranded costs, the time frame for repayment from consumers of the securitized stranded cost should be 10 - 15 years. TEP also proposes that non-securitized stranded cost recovery be completed by the end of 2004.

VI. HOW AND WHO SHOULD PAY FOR STRANDED COSTS AND WHO, IF ANYONE, SHOULD BE EXCLUDED FROM PAYING FOR STRANDED COSTS?

Q. How do you propose recovering stranded costs from consumers?

A. TEP proposes two recovery mechanisms to be used in tandem. First, TEP wants to securitize a portion of its uneconomic assets in order to accelerate recovery of stranded costs. The second recovery mechanism is a Competitive Transition Charge ("CTC").

Q. Please discuss your position on securitization of stranded cost?

A. TEP wants the right to securitize up to 75% of its stranded costs. Securitization creates savings that are achieved by substituting the utility's debt and equity capital with lower cost securitized debt capital. This cost savings benefits customers.

Q. Please discuss the second recovery mechanism.

A. To recover the unsecuritized portion of stranded costs, TEP proposes a non-bypassable CTC paid by *all* consumers. TEP will bill customers at rates which include the CTC. The CTC will be computed as the difference between the generation-related portion of TEP's rates and the PVI price. Customers who choose a different Energy Service Provider ("ESP") will still be responsible for paying the kWh charge they agreed to pay their ESP.

Q. Does your position change if securitization is not allowed?

A. Yes, if securitization is not allowed, TEP will not be able to recover its stranded costs over as short a time period and will therefore seek a recovery period as long as needed to recover TEP's stranded costs using the CTC recovery mechanism.

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VII. SHOULD THERE BE A TRUE-UP MECHANISM AND, IF SO, HOW WOULD IT OPERATE?

Q. Do you support a true-up mechanism?

A. Yes, given the uncertainty surrounding the future market price for electricity, fuel, and capital, it is obvious that a stranded cost value cannot be calculated with certainty at the time of transition to competition.

While TEP recognizes that regulators may desire to implement a procedure for the periodic evaluation and true-up of stranded cost charges as a safeguard against over-recovery, such a procedure should be designed to minimize, to the extent possible, the regulatory and administrative burden associated with that procedure. To that end, the Company suggests that the structure of a true-up mechanism should resemble that of the former fuel adjustment clause in which a band was set based on forecasted prices and a true-up would occur only to the extent that revenues exceed the band ceiling or floor. For example, if the market price forecast error exceeds a predetermined threshold limit an adjustment to the recovery mechanism would be implemented.

Q. How often do you think the stranded cost recovery mechanism should be "trued-up"?

A. The Company suggests that recalibration of the CTC occur at any time the band ceiling or floor is exceeded.

VIII. SHOULD THERE BE PRICE CAPS OR A RATE FREEZE IMPOSED AS PART OF THE DEVELOPMENT OF A STRANDED COST RECOVERY PROGRAM AND IF SO, HOW SHOULD IT BE CALCULATED?

Q. Under TEP's proposal, will there be price caps or a rate freeze imposed?

A. The Company's proposal requires rates to be fixed at some level to recover stranded costs via the CTC through 2004 and securitization of up to 75% of stranded costs with repayment over 10 - 15 years. If TEP is allowed to securitize, this approach will likely allow for full recovery of stranded costs and accommodate a rate freeze.

...

...

...

...

IX. WHAT FACTORS SHOULD BE CONSIDERED FOR "MITIGATION" OF STRANDED COSTS?

Q. How do you propose mitigating stranded costs?

A. Under the Rules, utilities are expected to take steps to minimize stranded cost exposure. TEP agrees that utilities should be required to exercise reasonable measures to mitigate stranded costs. The challenge is in defining what would be considered "reasonable" for any given company. Those actions taken by particular companies that might constitute reasonable mitigation will depend on their specific circumstances and relevant market conditions. Accordingly, mitigation efforts should be evaluated on a case-by-case basis.

The Rules suggest the expansion of wholesale or retail markets as a way to mitigate Stranded Costs. Such activity is not likely to significantly mitigate stranded costs because the Company proposes that market clearing prices be used to determine stranded costs. As a result, the value of the wholesale market is fully reflected in the computation of stranded costs.

The Rules also identify the offering of a wider scope of services for profit as another means to mitigate stranded costs. It is unclear whether this suggested action is intended to include only jurisdictional-related activities or is broader in its intended range of contemplated business pursuits, covering any business activity the utility and/or its affiliates may choose to engage in. TEP believes that profits from activities that are unrelated to the provision of electricity in Arizona (which were funded with shareholder dollars) that do not require use of the assets that were acquired to serve electric customers in Arizona, and that are at risk to the utility's shareholders (but not ratepayers), should not be considered as a source of funds to offset stranded costs.

Other approaches to mitigating stranded costs may include asset sales, renegotiating uneconomic contracts (as TEP has already done in recent years by renegotiating certain fuel supply agreements), pursuing economic development projects and continually attempting to lower marginal costs (as TEP has done through corporate re-engineering, its voluntary severance plan and similar cost-reduction efforts). It should also be noted that mitigation efforts themselves may lead to additional costs that need to be recovered from customers.

. . .

What constitutes appropriate mitigation for any utility should include consideration of all relevant facts and circumstances.

TEP also supports a sharing of mitigation benefits between consumers and shareholders in order to provide utilities with the proper incentive to mitigate. This can be easily accomplished by determining an allocation of the savings between the parties up front.

X. WHEN SHOULD "AFFECTED UTILITIES" BE REQUIRED TO MAKE A STRANDED COST FILING PURSUANT TO A.A.C. R14-2-1607?

Q. When should the Affected Utilities be required to make a stranded cost filing?

A. As I stated at the beginning of my testimony, the issue of stranded cost must be fully resolved prior to the introduction of competition in Arizona. This hearing to determine generic issues is crucial to a determination of what changes to the Rules are necessary, as well as what policy guidelines the Commission will issue. Therefore, the Company proposes that Affected Utilities be required to submit stranded cost filings with the Commission within 120 days of the issuance of a Decision in this generic proceeding. If the Decision requires the adoption of amendments to the Rules, the filing should be within 120 days of effectiveness of such amendments.

Q. What is the basis for the 120 days?

A. TEP believes this is the minimum amount of time necessary to put together such a filing as it will be somewhat analogous to a rate case filing. A rate case filing historically takes 120-180 days to prepare.

Q. Does this conclude your testimony?

A. Yes.

POWER PLANTS

THE STRANDED GENERATION

Critics of stranded cost recovery conveniently ignore the fact that the decisions made in the 1970s about power plant construction were not made unilaterally by the electric utility industry. They were societal decisions. Moreover, the resulting plants, far from being ugly remnants of bad industry decisions, have largely fulfilled the expectation society had for them when they were originally conceived.

BY FRANK CLEMENTE

PICTURE OMITTED

As one generation fades from the scene and a new one assumes leadership, a certain dimness occurs as to why specific public policies came to be adopted. This lack of understanding is especially likely in the area of energy policy, where only a complex blend of technical, economic, social, psychological, and political phenomena can explain how we got here (the 1990s) from there (the 1970s).

Of course, the gap between now and then is quite natural, and one can forgive a new generation's innocence and help them bridge that gap. The task of education is made more difficult, however, by institutions and individuals who exploit the gap by rewriting history to suit their own purposes.

Take, for instance, the case of the Heritage Foundation, a public policy think tank based in Washington, DC, which is pushing for rapid deregulation of electric utilities and is a vocal critic of stranded cost recovery. Just this year the Foundation stated, "[S]tranded cost recovery is difficult to justify.... [Though] monopolistic utilities...argue that they have made investments in good faith...little substantive evidence can be offered by these utilities...."

Yet in 1978 the Heritage Foundation was decrying the cancellation of power plants, arguing that "without nuclear power we will be unable to maintain the level of economic growth necessary to insure that all Americans will have an opportunity to fulfill the promise of the American Dream."

Or, at the individual level, take the case of Irwin M. Stelzer, a well-known electric utility economist. In 1975, as president of National Economic Research Associates, he questioned the cancellation of coal and nuclear plants, warning that the demand for electricity could accelerate at "a rate of up to 8.4 percent per year." By 1994, however, after technical, political, and regulatory sea changes (and a move to another DC-based think tank, the American Enterprise Institute), Stelzer decided the argument for stranded cost recovery was "not entirely convincing."

Such revisionist statements invite a careful examination of the hard reality of energy choices made during the most turbulent period of U.S. energy history—the 1970s. As indicated in the timeline running across the bottom of these pages, a series of developments, both domestic and foreign, combined to complicate the nation's energy outlook tremendously.

Nevertheless, the obligation to serve imposed on them as part of the regulatory compact required utilities to plan to meet future load, regardless of growing uncertainty about future fuel supplies and future electricity demand. At some point the die had to be thrown. And in fact, though some contemporary analysts scoff at "the obligation to serve" as a utility fantasy, the country at large and industry in particular not only believed in utilities' obligation to serve but also relied on it to secure future energy supplies by requiring the construction of new nuclear and coal-fired power plants:

■ *Failure to exploit nuclear to the fullest may result in electric power shortages in the decades immediately ahead.*—Commerce Energy Advisory Panel, chaired by Malcolm E. Pruitt, vice president, Dow Chemical, 1974

Frank Clemente is a professor of sociology at Penn State University and a former director of the University's Environmental Policy Center. His research on the socioeconomic aspects of electric energy issues has been funded by the Ford Foundation, National Science Foundation, Rockerfeller Foundation, and U.S. Department of Energy, among others.

THE TURBULENT DECADE

1970

U.S. Congress
Passes Clean Air Act, requiring new coal plants to reduce emissions. Utilities turn to conforming coal from the Great Plains at increased cost.

Ceylon
Nationalizes property of Shell and Esso.

1971

Venezuela
Bill to nationalize oil assets signed by President Caldera, who states that, "considering the shortage of energy in North America, they need us more than we need them."

Iran
Shah Pahlevi warns that if ongoing negotiations with Western oil firms fail, "the question of cutting off the flow of oil" to the West "will definitely be considered."

Nixon
"If we are to meet growing demands for electricity in the years ahead, we cannot ignore the need for many new power plants...[to] be completed on time so as to avoid power shortages."

■ *Our conversations with major industrial users of energy suggest that uncertainties about oil supplies and the prospective unavailability of gas...may result in massive switching from the fuels to electricity. The only assured sources of energy are coal and nuclear power.* —Irwin M. Stelzer, National Economic Research Associates, 1975

■ *Unsure of gas supplies...industries searching for a readily available fuel are steadily turning to electricity.—Industry Week,* 1976

■ *We believe nuclear energy, like coal, is a great resource for the future.—Iron and Steel Maker,* 1977

■ *Time is running out.... [S]upplies of oil and gas may become inadequate.... [N]uclear generation of electricity must continue to expand.*—Committee for Economic Development (whose trustees included officers from Dupont, Bethlehem Steel, General Motors, Owens-Corning, and Ford Motor Company, among others), 1977

In short, the construction of electric generating capacity in the 1970s and early 1980s responded to a societal decision to use a combination of nuclear and coal power plants to attain energy independence and enhance economic growth.

PICTURE OMITTED

1972

James Schlesinger, Director, Atomic Energy Commission
"The further development of gas in sizeable amounts seems out of the question."

Bureau of Natural Gas
"The emergence of a natural gas shortage during the past two years marks a historic turning point—the end of natural gas industry growth.... [Our] forecast to 1990 indicates the rate of development of natural gas supplies...will be inadequate to meet current projections of future demand."

Ecuador
Cancels drilling concessions of U.S. oil companies in the Gulf of Guazaquil.

Iraq & Syria
Seize assets of IPC, owned by a consortium of U.S., British, Dutch, and French firms. The Soviet newspaper *Isvestia* describes the seizure as "a great victory for the Arab peoples...struggling against the forces of imperialism."

Republican Party Platform
"We will accelerate research on harnessing thermonuclear energy.... We recognize the serious problem of assuring adequate electric generating capacity."

Democratic Party Platform
"The Democratic Party would... [p]romote greater research and development...of nuclear power possibilities...."

As oil and natural gas supplies became increasingly uncertain, the nation focused on its certain domestic fuels—coal and uranium.

Moreover, it is clear that the decision, when viewed in the context of time, was generally the correct one. Across the United States, coal-fired and nuclear power plants planned in the 1970s have since then displaced billions of barrels of oil and trillions of cubic feet of natural gas, provided fuel diversity, and assured the most reliable supply of electricity in the world—exactly what the public, business, Congress, and three U.S. presidents who held office in the 1970s all hoped for as construction decisions were made.

Yet, ironically, many of the businesses and groups that publicly encouraged the construction of these facilities are now loudly opposing the recovery of investments made on the basis of their advice and urgings.

Why Nuclear?

Of the 251 nuclear plants ever ordered in the United States, 107, or 43 percent, were ordered in 1972, '73, or '74. These generating facilities were not ordered in a vacuum. Rather, they were proposed and built in a sociopolitical environment where they were viewed as necessary to meet societal needs of energy independence, economic growth, and national security. That each of these plants was certified and approved in an open public process by every relevant state and local regulatory agency further demonstrates that the plants were perceived locally to meet such needs. The Illinois Commerce Commission's finding regarding Commonwealth Edison's Braidwood Nuclear Station is typical: "The Commission, having considered the entire record...finds that...public convenience and necessity require the construction, operation, and maintenance of the Braidwood Station."

Overall, these nuclear plants, along with new coal plants, were encouraged, proposed, and approved at a time when other major fuel sources for electricity generation grew more uncertain with each passing crisis or dire prediction, many from the highest levels of the land. As expressed by President Jimmy Carter in an April 1977 address to the nation, the common perception throughout most of the 1970s was that "the oil and natural gas

"THE MAJOR ALTERNATIVE TO FOSSIL FUEL ENERGY FOR THE REMAINDER OF THIS CENTURY IS NUCLEAR ENERGY.... NUCLEAR ENERGY WILL PROVIDE MORE THAN ONE-QUARTER OF THIS COUNTRY'S ELECTRICAL PRODUCTION BY 1985 AND OVER HALF BY THE YEAR 2000."—*NIXON'S ENERGY MESSAGE TO CONGRESS, APRIL 1973*

Wally McNamee / Folio

1973

Donald MacDonald, Energy Minister of Canada
Reports to House of Commons that the price of natural gas will double by 1980 and the price of fuel oil will double by 1990. Warns that Canada cannot be relied on to solve the U.S. energy crisis.

Saudi Arabia
King Faisal warns oil to United States may be cut off because of America's "complete support of Zionism against the Arabs."

Libya
Nationalizes 51 percent of all foreign firms, including Libyan subsidiaries of Exxon, Mobil, Texaco, Standard Oil, Atlantic Richfield, and W.R Grace.

Peru
Standard Oil of California seized in tax dispute.

Egypt
President Anwar Sadat says Libyan nationalization is "the beginning of a battle against American interests in the whole Arab region."

Iraq
Nationalizes assets of Mobil and Exxon.

OPEC
Arab oil-producing states—countries that account for 80 percent of non-communist oil reserves—embargo all petroleum exports to the United States.

C.J. Gauthier, Chairman of Northern Illinois Gas
"We expect the monthly bill of the average residential customer to double...by 1985.... Nuclear energy *simply has to provide a greater* share of the energy requirements in the years ahead."

ENERGY AND SECURITY

A link between adequate energy supplies and national security was taken as a given in the 1970s. From "Project Independence" of Presidents Nixon and Ford to the "Moral Equivalent of War" of President Carter, the need to maintain our freedom was a central reason for the call for the United States to develop domestic energy resources. As President Carter explained in his April 18, 1977, address to the nation, without energy independence, "We will constantly live in fear of embargoes. We could endanger our freedom as a sovereign nation....Inflation will soar; production will go down; people will lose their jobs.... [W]e will face an economic, social, and political crisis which will threaten our free institutions."

Small wonder that the Secretary of Defense said a short time later, "The present deficiency of assured energy resources is the single greatest threat...to our security."

One of the greatest nightmares of the Cold War was that the Soviet Union would attain nuclear superiority over the United States, not only in terms of its military arsenal but also in terms of its possible control over an emerging nuclear-powered global economy. Throughout the 1970s, the USSR was extremely active in developing nuclear generating capacity and penetrating the world market for commercial nuclear power. In 1971, for example, the Soviets attempted to capture part of the enriched uranium market by selling fuel 15 percent below the U.S. price. Throughout the decade they sold fuel and nuclear power plants on both sides of the Iron Curtain, creating major concern in the United States. And as late as 1978 the USSR offered to replace a plant the Philippines had ordered from Westinghouse with a Soviet plant and to help that country develop its own uranium sources.

It was in this context that President Carter proclaimed that, "with the exception of preventing war," achieving energy independence "is the greatest challenge that our country will face during our lifetime...."

Twenty years later, such dire warnings seem hyperbolic. For, to an ever-increasing number of U.S. adults, the dread and tension of the Cold War is just an abstraction. A 40-year-old policymaker today was only 4 at the time of the Cuban missile crisis, only 7 when Nikita Kruschev said, "We will bury you," and only 16 when the Soviet newspaper *Isvestia* called the Iraqi and Syrian seizures of U.S. oil assets "a great victory for the Arab peoples... struggling against the forces of imperialism."

Clearly, with the dissolution of the Soviet Union, the perceived threat from Ronald Reagan's "Dark Empire" had receded, making Cold War policy decisions seem overly defensive, if not paranoid. Yet, there is no question that Soviet nuclear activity challenged U.S. world leadership and influenced U.S. energy policy decisions far more than any utility system planner's calculations did. The decision to build large generating facilities for the 1980s was a societal decision based on a huge complex of variables related to the recognized need to maintain U.S. independence and our position as the leader of the free world.

1974

National Academy of Engineering
"A review of all the facilities necessary to supply our oil and gas needs between 1974 and 1985 indicates that the capital requirements would be on the order of $200 billion."

Energy Policy Study Group, MIT
"There is little basis upon which to predict any specific oil price over the next ten years.... These political matters cannot be forecast with any degree of accuracy."

Zaire
Takes over all petroleum product distribution, including assets of Texaco and Mobil.

Saudi Arabia
Oil Minister al-Yamani warns oil consuming nations that embargo counteractions would lead to an international economic "disaster."

Kuwait
Oil Minister Atiki: "Why should we be responsible for helping America solve her economic problems?"

Mexico
Minister de la Pena declares, "Mexico rejects any suggestion that she may play a role in weakening the common front of oil-exporting nations."

Federal Energy Administration
"The outlook for increased gas supplies is not promising."

Federal Power Commission
Reports that the chronic gas shortage has deteriorated in the last 12 months and could become a "severe crisis" in five years.

that we rely on for 75 percent of our energy are simply running out...." Moreover, there was equally widespread agreement that both oil and gas prices would dramatically escalate over the next several years.

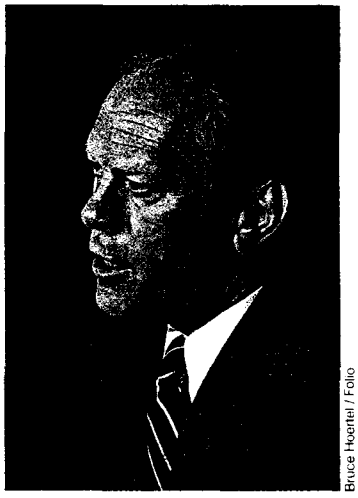
And this at a time when the nation was highly dependent on fuel oil and natural gas for electricity generation. In 1972 oil accounted for 16 percent and gas 21 percent of total U.S. electricity generation. Certain regions were even more reliant on the two fuels. New England (ME, MA, NH, VT, RI, and CT) depended on oil to generate 65 percent of its electricity, the West South Central region (AK, LA, OK, and TX) depended on gas to generate 91 percent, and the Pacific region (WA, OR, and CA) depended on oil for 50 percent and gas for 36 percent.

The fragility of the Western World's oil supplies was dramatically exposed in October 1973 when the Arab oil embargo of 1973-74 commenced. At the time, the Arab cartel controlled 80 percent of the oil reserves of the noncommunist world. Although the United States as a whole imported only about 10 percent of its oil from the Middle East in the early 1970s, virtually all projections at that time indicated that by 1985 the country would be importing a major portion of its oil from that region. Moreover, oil supplies from other countries were increasingly uncertain as well. Thus, an entire sequence of foreign events and pronouncements about oil during the first half of the 1970s was viewed as a real and growing threat to U.S. economic prosperity and national security. (See the sidebar, "Energy and Security.")

The outlook for natural gas was even worse. During the 1970s, virtually every analyst agreed that natural gas was running out. As shown in the timeline, their prognostications culminated in 1978 in the passage of the Power Plant and Industrial Fuel Use Act, which forbade new power plants using gas as a primary boiler fuel and required all existing gas-fired plants to convert to an alternative fuel by 1990.

Needless to say, this prohibition created major problems for utility planners everywhere, but the problem was especially acute for a number of states strongly dependent on natural gas for generation. Oklahoma, for example, relied on natural gas for 99 percent of its electricity generation in 1974. Texas

"GREATER UTILIZATION MUST BE MADE OF NUCLEAR ENERGY IN ORDER TO ACHIEVE ENERGY INDEPENDENCE AND MAINTAIN A STRONG ECONOMY. IT IS...VITAL THAT WE CONTINUE OUR WORLD LEADERSHIP AS A RELIABLE *SUPPLIER OF NUCLEAR TECHNOLOGY....*"—*FORD'S ENERGY MESSAGE TO CONGRESS, FEBRUARY 1976*



Bruce Hoertel / Folio

1975

William Simon, Secretary of the Treasury
"We have set a goal to increase the output from nuclear plants tenfold by the 1980s."

President Nixon
"The first task is to rapidly increase energy supplies...[by] accelerating the introduction of nuclear power...to achieve energy self-sufficiency."

U.S. Geological Survey
Revises reserve estimates downward. National Academy of Sciences estimates no more that 25 years of reserves.

OPEC
OPEC ministers agree to retain prices at current level for the remainder of the year and to increase them gradually in 1976 and 1977.

National Research Council of National Academy of Sciences
Predicts the United States will run out of oil and natural gas in 25 years.

President Ford
"A massive program must be initiated to increase energy supply...to achieve the independence we want by 1985.... I am proposing a number of actions to energize our nuclear power program."—*State of the Union Address*

National Society of Professional Engineers
"The best hope for the reduction in the spiraling costs of electricity can be and has been realized by the increased use of nuclear power."

1976

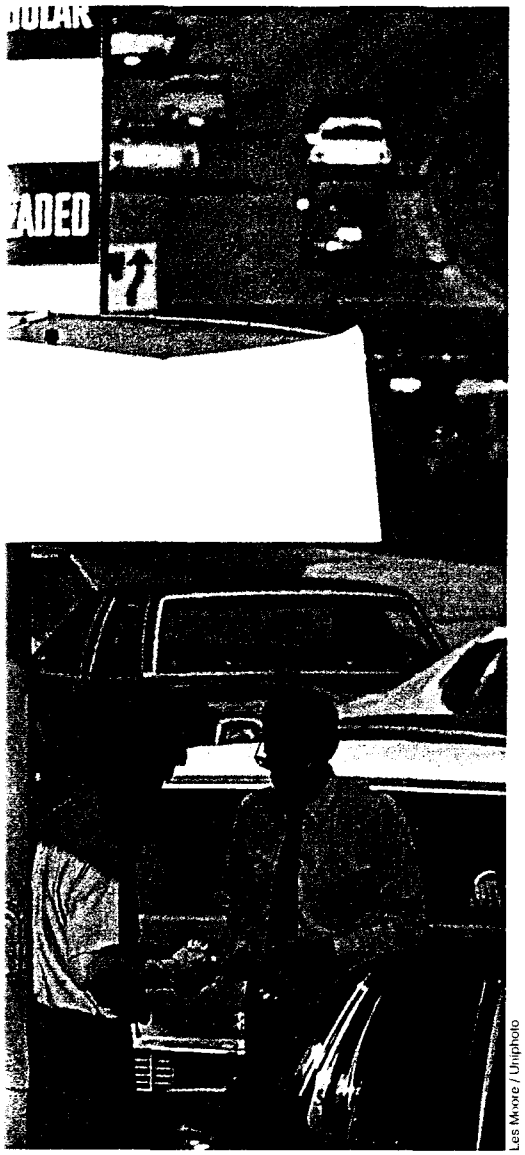
LBJ School of Public Affairs, University of Texas
"Texan natural gas companies believe prices are going to rise significantly in the coming years.... The impact such changes will have on the electric power industry is clear: alternative boiler fuels must be sought and planned generating capacity for the foreseeable future will have to rely upon a mixture of coal (or lignite) and nuclear power."

Harrison Brown, California Institute of Technology
"We are clearly pushing against the upper limit of our domestic extractable [soft] hydrocarbon resources.... [R]eserves are destined to continue their downward path."

Senator Adlai Stevenson
"By no coincidence the quadrupling of oil prices in 1973 was followed by the worst inflation in this century and the worst recession since the Great Depression.... Energy-induced inflation may have cost consumers $150 billion in purchasing power during 1974 and 1975."

U.S. Congress
Emergency Gas Act passes. Curtailment plans make it extremely difficult for utilities to obtain gas to produce electricity.

Bonneville Power Authority
Continuing drought in Washington, Oregon, and Idaho. Bonneville Power announces that another year of drought could result in a 50-percent drop in electricity supply.



Les Moore / Uniphoto

A line in the road. In 1973 and 1979, turmoil in the Middle East created fuel shortages, escalating prices, and a united front for U.S. energy independence.

generated 93 of its electricity with gas; Louisiana, 87 percent; and Kansas, 78 percent. Arkansas depended on gas for 43 percent of its generation, and the remainder was generated with oil.

With gas eliminated and oil supplies increasingly questionable, the options regarding new capacity were dwindling rapidly. By the second half of the 1970s, following energy upheavals, embargoes, price increases, shortages, curtailments, and brownouts, it was apparent to a wide range of observers that the United States had two basic options to meet electricity demand in the 1980s and '90s:

From the federal government. "[W]e must [get]...America's power plants off oil. And, for the immediate future that implies coal—which has environmental problems—and nuclear—which has other problems. But we will have to choose between them."—James Schlesinger, President Carter's Energy Advisor, 1977

"OUR DECISIONS ABOUT ENERGY WILL TEST THE CHARACTER OF THE AMERICAN PEOPLE.... THIS DIFFICULT EFFORT WILL BE THE MORAL EQUIVALENT OF WAR.... OUR ENERGY PROBLEM IS WORSE TONIGHT THAN IT WAS IN 1973."—*CARTER'S ADDRESS TO THE NATION, APRIL 1977*

Bruce Hoertel / Folio

1977

United Mine Workers
Coal miners strike—national emergency is declared.

James R. Schleslinger, Secretary of Energy
"Nuclear is an essential ingredient in the energy mix. We are removing the uncertainties and obstacles to licensing...."

1978

Senator Harrison Williams
"In regard to national energy security, most energy experts agree that we are in a far more precarious position today than we were in at the time of the oil embargo of 1973.... [O]ur imports of all petroleum products have increased to over 50 percent of the total supply in recent months.

U.S. Congress
Power Plant and Industrial Fuel Use Act passes. Forbids new gas boilers. Restricts use of gas in existing facilities and eliminates gas use as a boiler fuel after 1990.

1979

Three Mile Island
Nuclear incident at Three Mile Island power plant occurs.

Iran
War between Iraq and Iran. Iran oil exports to United States cease, precipitating 1980 recession.

From the press. "To generate increased amounts of electricity, this country now has only two choices: It can either burn more coal or build more uranium-fueled nuclear reactors."—*Washington Post,* editorial, 1977

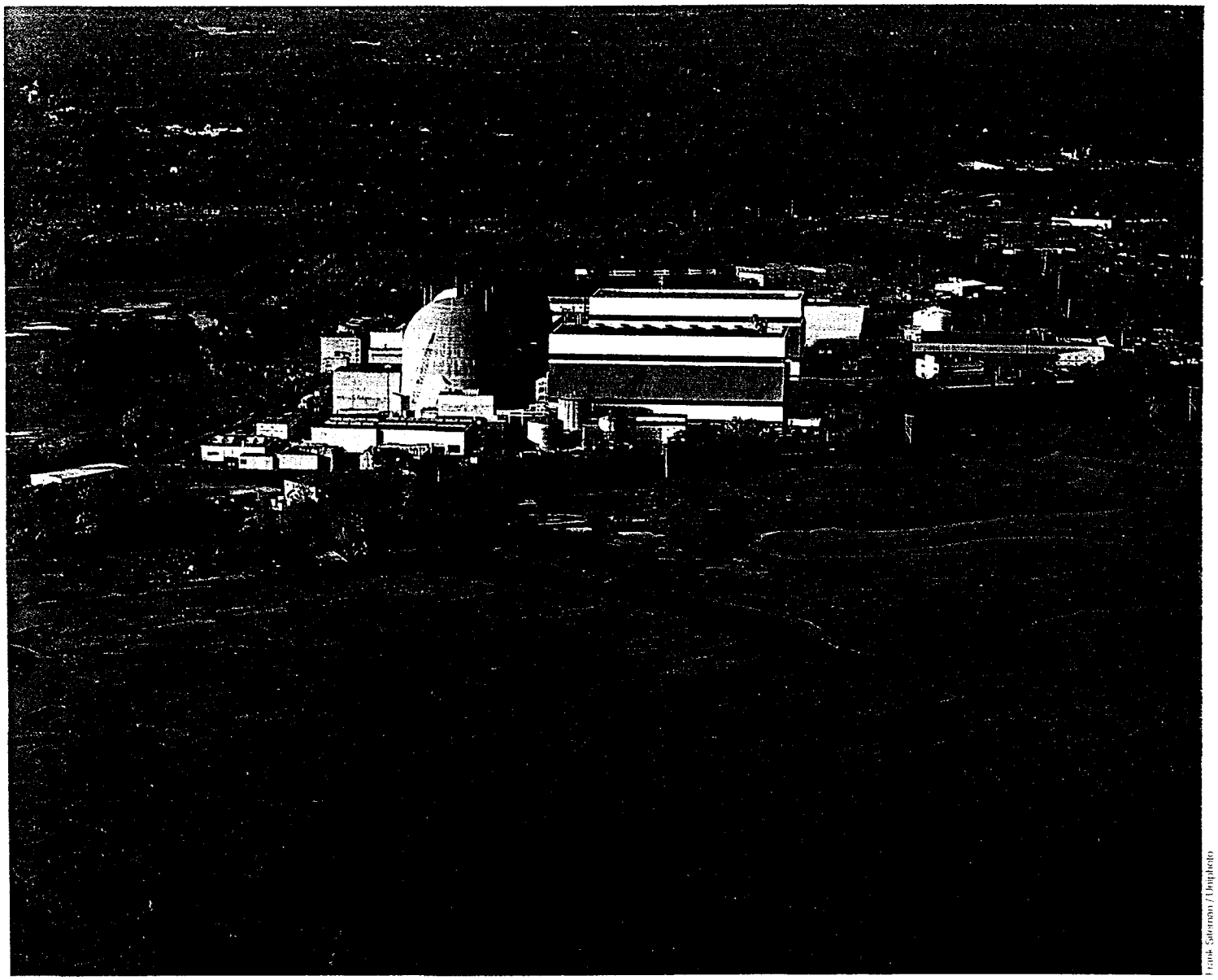
From business. "[C]ompanies are at least partially avoiding the question of what fuel to favor by using electricity, leaving it to their utility to thread its way through decisions on coal, oil, gas, or nuclear generating power."—*Conference Board Record,* 1978

From the Academy. "[F]or both economic and regulatory reasons, utility plants will be moving rapidly to the use of either coal or nuclear energy."—Ford Foundation/Resources for the Future

From 1970 to 1979, nuclear's share of generation jumped 10 points, while gas and oil's share dropped 15 points.

Widespread Support

Given this background it is clear that many opponents of stranded cost recovery are poor students of history. Consider this rewrite offered last year by the Citizens for a Sound Economy: "Customers should no longer be forced to compensate imprudent investments in nuclear power plants when cheap power was and always has been abundantly available for bulk purchase at the time of construction." Or, this one by Representative Thomas DeLay, speaking at the Heritage Foundation in April of this year: "I believe it is important to debunk the myths surrounding the notion that utilities are somehow 'owed' the costs of all their invest-



Frank Siteman / Unigraphic

ments.... I believe it is essential to protect families and small businesses from becoming the economic scapegoats for billions of dollars in questionable investment decisions."

In truth, the historical context in which those decisions of the 1970s were made is more accurately described this way:

- a generation-old standard of "universal service" in an industry whose obligation to serve was an accepted part of a larger regulatory compact,
- a recent history of 7.5 percent annual growth in electricity demand during the 1960s,
- the memory of the social and economic upheaval associated with the Northeast blackout of 1965, which was estimated to cost over $350 million,
- uncertain forecasts of future demand tempered with the knowledge that the population was projected to grow, new jobs would be added to the economy, and certain industries (like glass, for example) appeared to be shifting from fossil fuels to electricity,
- an uncertain supply of oil, curtailment and finally the outlawing of natural gas as a new boiler fuel, the obvious maturity of the nation's hydroelectric resources, and the increasingly recognized environmental and transportation difficulties associated with coal,
- a sociopolitical environment extremely supportive of developing domestic energy supplies to assert U.S. independence from the oil cartel, to maintain national security vis-a-vis the USSR, and to continue as the leader of the world's nuclear economy.

Utility planners were not alone in their interpretation of the actions required in such an environment. The decision to utilize nuclear generating plants to meet the nation's energy needs was a societal decision with deep support from all sectors of the country, political, economic, scientific, and the public at large.

Throughout the 1970s, the nuclear option enjoyed strong bipartisan support in both the White House and Congress. In fact, in nuclear plant referenda held during the presidential election of 1976, voters expressed more support for nuclear power plant construction than they did for either candidate. (See Table 1.)

Business leaders also encouraged the construction of such facilities. In a 1974 survey of top executives randomly sampled from *Forbes*' and Standard and Poor's executive lists, researchers at the University of Georgia found that "an overwhelming majority of the executives who responded to the survey believes that the solution to the energy problem lies with nuclear power. Over 82 percent of the respondents chose 'accelerate nuclear power plant construction'...."

That same year, the Technical Advisory Board of the U.S. Department of Commerce strongly recommended the construction of additional nuclear plants, given the uncertainties surrounding future fossil fuel supplies. Board members included executives from major businesses, including Dow Chemical, Borg-Warner, Burlington Northern, Dravco, General Motors, and U.S. Steel.

TABLE 1

POPULAR VOTES IN 1976 ELECTION

States with Nuclear Referenda	For Nuclear Plants	For Carter	For Ford
Arizona	70%	40%	56%
California	67%	48%	49%
Colorado	61%	43%	54%
Montana	65%	45%	53%
Ohio	68%	49%	49%
Oregon	58%	47%	47%
Washington	67%	46%	50%

OPEN LETTER TO PRESIDENT FORD, DECEMBER 27, 1974

"We believe that the world faces the most serious economic threat since the Great Depression.... [The energy crisis] has undermined the world's financial structure to the point of threatening collapse and a world wide depression...."

"America must move rapidly to increase domestic supply.... [The nation needs] major programs of research: on nuclear energy (both breeder reactors and fusion)...[and on] streamlining of procedures for...siting energy (including nuclear energy facilities)."

Signed by the following and 80 others:

Alcoa Chairman, John Harper

Allied Chemical Chairman, John T. Connor

American Can Chairman, Robert S. Hatfield

Anaconda CEO, John Place

B.F. Goodrich CEO, O.P. Thomas

Brunswick Chairman, John Hannigan

Dart Industries Chairman, Justin Dart

Dayton-Hudson Chairman, Bruce Dayton

Del Monte Corporation Chairman, A.W. Eames

FMC Corporation Chairman, Robert H. Malott

General Foods Chairman, James Ferguson

General Mills' James McFarland

Goodyear Tire & Rubber CEO, Charles J. Pilliod

GTE Chairman, Leslie H. Warner

Hewlett Packard Chairman, David Packard

Koppers CEO, Fletcher L. Byrom

May Department Stores CEO, Stanley J. Goodman

Raytheon Chairman, Charles Adams

RCA Chairman, Robert Sarnoff

Standard Brands President, Henry Weigl

ON CAPACITY INVESTMENTS—NOW AND THEN

Heritage Foundation, 1997

"[S]tranded cost recovery is difficult to justify.... [M]onopolistic utilities...argue that they have made investments in good faith...[but]little substantive evidence can be offered by these utilities to show such an explicit compact or contract existed.... There is no reason to believe the public would have accepted voluntarily restricted choice, mediocre service, and high electricity prices...."

Heritage Foundation, 1978

"To the extent that the growth of electrical generation capacity is curtailed, the growth of [employment] opportunities is also curtailed...."

"[I]n the near-term, without nuclear power, we will be unable to maintain the level of economic growth necessary to insure that all Americans will have an opportunity to fulfill the promise of the American Dream."

Irwin Stelzer, 1994

"Utilities generally argue that the to-be-stranded investments were made pursuant to their obligation to serve[,...] pursuant to a set of rules which should not be changed ex post facto; that regulators had approved [the investments] as prudent...."

"The argument that regulatory rules should not be changed, especially after billions have been invested pursuant to these rules, has considerable appeal, but it is in the end not entirely compelling...[and] complaints about change in regulatory policy are not entirely convincing...."

Irwin Stelzer, 1975

"[N]uclear now stacks up competitively against fossil fuel plants and is the most economical way to provide electricity in most cases. It also has the advantage of reducing the nation's dependence on imported oil, thereby freeing us from having our foreign policy dictated to us...."

"[I]t is still in our estimation economically preferable to construct a nuclear plant.... Our conversations with major industrial users of energy suggest that uncertainties about oil [and gas] supplies...may result in massive switching from the fuels to electricity. The only assured sources of energy are coal and nuclear power."

Across the country, at mid-decade the business community perceived the national energy crisis to be a severe threat that required urgent public and private sector action. Witness, for example, the open letter to President Ford and Congress published in the New York *Times* on December 27, 1974, in which 100 business and societal leaders urged the development of a "strong energy program." (See the sidebar "An Open Letter to President Ford" on page 39.)

And the societal consensus remained firm as the decade unfolded. For instance, in 1977, the Committee for Economic Development, which described itself as "an organization of two hundred trustees who are mostly business executives and educators," offered this refrain in its *Key Elements of a National Energy Strategy*: "Nuclear generation of electricity must continue to expand.... Only by continuing to exercise leadership in the use of nuclear power can the United States hope to influence the development of a world nuclear economy."

Changing Tunes

Among that Committee's trustees in 1977 were officer-level executives from several manufacturing firms—including Bethlehem Steel, E.I. du Pont Nemours, Ford Motor Company, General Motors Corporation, and LTV Steel—that are now members of the Electricity Consumers Resource Council (ELCON), which represents large industrial electricity consumers in the current public policy debate about restructuring the industry and is one of the most vociferous critics of stranded cost recovery.

Through ELCON, 20 years later those same firms claim that, "in order to defend the extravagant costs of new nuclear plant, utilities willingly committed to above-market purchased power contracts, DSM programs, and other government 'mandates' to muster regulatory support for rate-basing the plants....[M]any of the costs that burden [these] high-cost utilities were incurred due to bad business decisions...."

At least two other members of ELCON, Praxair and Allied-Signal, seem to share in this epidemic of institutional amnesia. The first actually testified in 1974 in support of a proposed Louisiana Power and Light nuclear plant and, that same year at Project Independence hearings, said that "[i]nformed, enlightened Government action taken now and in the future...can allow nuclear energy to materially assist in approaching energy independence." Likewise, John T. Conner, then chair of Allied Chemical, signed the December 1974 open letter published in the *Times*. The following year, he repeats the common wisdom of the day: "There is no real alternative to rapid development of our existing energy resources, especially coal and nuclear...."

How quickly they forget. And, unfortunately, ELCON's members are not alone in their forgetfulness. As shown in the sidebar at left, the Heritage Foundation and Irwin Stelzer suffer from the same malady.

It is a sad commentary on the institutional integrity of our society that many of the same individuals, organizations, and businesses that urged the construction of additional nuclear plants in the 1970s revile utilities two decades later for following their advice and urgings. Now that technology, legislation, and the international climate have all changed, the opponents of stranded cost recovery would punish utilities that heeded society's cry for assistance in achieving national security, energy independence, and economic prosperity. ◆

TUCSON ELECTRIC POWER COMPANY
SUMMARY OF LOSSES SINCE 1988
(IN MILLIONS OF DOLLARS)

			1996	1995	1994	1993	1992	1991	1990	1989
1	MSR/Springerville Unit 1 Allowance	(a)	$33	$33	$32	$31	$30	$30	-	-
2	Rate Synchronization and Excess Capacity Deferral	(b)	-	-	-	$14	-	-	-	-
3	1991 and 1989 Rate Order Disallowances and Adjustments		-	-	-	-	-	(c) $240	(d) $250	(e) $61
		$754	$33	$33	$32	$45	$30	$270	$250	$61

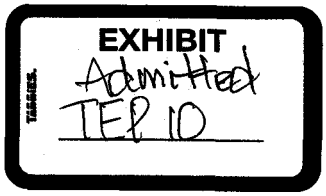
(a) Interest Imputed on Losses Recorded at Present Value

(b) The 1994 Rate Order disallowed recovery of $14 million of previously capitalized Springerville Unit 2 rate synchronization costs.

(c) Per the 1991 Rate Order, the ACC disallowed costs of $175 million of Springerville Unit 2 and $75 million of Irvington unit 3. Offsetting such amounts in 1991 was a gain of approximately $11 million resulting from a recalculation of the present value of the Company's regulatory liability for the MSR option gain.

(d) Approximately $178 million related to the Century Purchased Power Adjustment and the remaining $72 million related to the MSR Option Gain Adjustment.

(e) $31 million associated with Gallo Wash and $30 million in Deferred Fuel.



DIRECT TESTIMONY OF CHARLES E. BAYLESS

SUMMARY

My direct testimony provides TEP's policy perspective with respect to the issue of stranded costs as it relates to the nine issues set forth in the Arizona Corporation Commission's ("Commission") Procedural Orders dated December 1 and 11, 1997. The testimony presents some historical insight into the stranded generation issue and sets forth the Company's position that stranded costs are a legally recoverable property right for which the Commission is required to allow the Company the opportunity to recover. I discuss the Regulatory Compact ("Compact") and explain how the Compact leads to the recovery of stranded cost, as well as the economic rationalization for such recovery.

The most important issue to TEP, its shareholders and its creditors, is the issue of stranded cost recovery. The Electric Competition Rules ("Rules") should be modified to make it clear that subject to appropriate mitigation efforts, "Affected Utilities" shall have the opportunity and right to recover *all* of their stranded costs. Further, the Rules should be modified regarding the definition of stranded costs and should provide the procedural and substantive requirements for the recovery of such.

My testimony presents an overview from a national, Arizona and TEP specific perspective regarding decisions made in the 1970's and 1980's as they relate to the stranded costs that we see today. In my testimony, and through Exhibit A attached thereto, I take the position that these stranded costs are not the result of bad decisions by the electric utilities, but economic decisions based upon perceived long-term societal needs and goals.

Also under the Compact, the utilities are required to plan for and provide generation for all current and future customers in their service territory. Under the Compact the utility has a regulated rate of return, which denies any opportunity for large gains. Given this history and the Compact, TEP is not willing to accept anything less than full recovery of stranded costs.

In my testimony, I discuss that stranded cost recovery is desirable for the long-term good of the economy and how the transition can take place without distorting the market.

TEP believes that the most appropriate method of defining stranded costs would be to calculate the difference between future revenues under traditional regulation and a competitive regime. TEP supports the "Net Revenues Lost" method proposed by the Stranded Cost Working

Group Report ("Report"). Other methods have been considered and the only feasible approach, other than the Net Lost Revenues approach, is auction and divestiture.

TEP proposes using the Dow Jones Palo Verde Index as the best estimate of the market price for electricity in Arizona.

TEP believes that proper quantification of stranded costs should reflect the remaining life expectancy of underlying assets and deferred costs.

TEP proposes a non-bypassable Competitive Transition Charge ("CTC") that everyone pays. To recover stranded costs, TEP should be allowed to securitize 75% of its stranded costs with repayment over 10 - 15 years. TEP's proposal requires rates to be fixed at some level to recover the remaining non-securitized stranded costs through the CTC. If TEP is allowed to securitize, this approach will likely allow for full recovery of stranded costs and accommodate a rate freeze through the period 2004.

A true-up mechanism is needed given the uncertainty surrounding the future market price for electricity. The structure of a true-up mechanism should resemble that of the former fuel adjustment clause in which a band was set based on forecasted prices. The recalibration of the CTC should occur any time the band ceiling or floor is exceeded.

Mitigation of stranded costs should be evaluated on a case-by-case basis. Other approaches may include asset sales, renegotiating uneconomic contracts, pursuing economic development projects and continually attempting to lower marginal costs.

The Company proposes that Affected Utilities be required to submit stranded cost filings with the Commission within 120 days of the issuance of a Decision in this generic proceeding.

BEFORE THE ARIZONA CORPORATION COMMISSION

JIM IRVIN
Commissioner - Chairman
RENZ D. JENNINGS
Commissioner
CARL J. KUNASEK
Commissioner

IN THE MATTER OF THE COMPETITION IN THE PROVISION OF ELECTRIC SERVICES THROUGHOUT THE STATE OF ARIZONA.	) DOCKET NO. RE-00000C-94-0165)) **REBUTTAL TESTIMONY OF**) **CHARLES E. BAYLESS**)

On Behalf of
TUCSON ELECTRIC POWER COMPANY

FEBRUARY 4, 1998

TABLE OF CONTENTS

I. INTRODUCTION AND PURPOSE

Q. Please state your name and business address.

A. Charles E. Bayless, 220 West Sixth Street, Tucson, Arizona 85701.

Q. Are you the same Charles E. Bayless that filed direct testimony in this proceeding?

A. Yes.

Q. What is the purpose of your rebuttal testimony in this proceeding?

A. I will present Tucson Electric Power Company's ("TEP" or "Company") view concerning several major issues that have been addressed by other parties participating in this generic hearing on stranded costs.

Q. How is your rebuttal testimony organized?

A. Instead of responding to each and every party that filed direct testimony, my testimony attempts to group the predominate positions taken and respond accordingly from TEP's perspective. Although I do have some specific rebuttal, the fact that TEP has not addressed a specific position taken by a particular party should not be construed as TEP's agreement or acceptance of such position.

II. GENERAL COMMENTS

Q. Would you care to make any general comments regarding the testimony that was filed by other parties to this proceeding?

A. Yes. First, I am very concerned that practically all the parties to this proceeding, in an effort to promote their own self-interests, have ignored the history of regulation in Arizona. Additionally, I believe that any stranded cost recovery program must be adaptable to all Affected Utilities, taking into consideration their respective financial conditions and other circumstances. In TEP's proposal, as outlined in my direct testimony, the Company attempted to put forth a proposal that is consistent with this philosophy.

Q. At least one party has suggested that you are advocating competition outside the state, but are attempting to slow the process in Arizona.[1] How do you respond to this criticism?

A. For those that suggest I am for competition nationally, but am attempting to slow competition within the state, my position has and continues to be very consistent. I am a strong advocate

[1] Ogelsby, page 16, lines 2-4.

of competition in the electric utility industry, but believe that key issues including stranded cost recovery, access to transmission systems, responsibility for reliability management and the role of regulation, must be adequately addressed. If these issues are not properly dealt with, continued regulation would be best for society.

I do not believe that these key issues have been effectively resolved in Arizona although we have spent much time discussing them. Holding open discussions where various parties offer their opinions will not result in solutions to the issues. It merely has provided a forum for discussion. Key issues must be resolved before we will ever be able to open the markets. As seen in California, the implementation stage is complex and time consuming.

III. GENERATION ISSUES

Q. Please discuss the historical events relating to generation that brought us where we are today.

A. Most parties have ignored relevant historical events that created the current generation situation that utilities are facing today (*i.e.*, high generation capital costs relative to current market prices). The type of units in rate base today are exactly the type of generating units that Congress wanted to see installed in the 1970's and 80's. This was obvious given the passage of the Fuel Use Act ("FUA"). In fact, the FUA specifically states that a major purpose of the legislation was "to encourage and foster the greater use of coal and other alternate fuels, in lieu of natural gas and petroleum, as a primary energy source." Utilities were encouraged to substitute capital expense for "expected" fuel savings because of the expectation that natural gas and petroleum would either be in short supply and/or too costly.[2] Several of the intervenors in this proceeding seem to be saying that since forecasts of natural gas and petroleum prices turned out to be well below expected prices, utilities should have to forego recovery of capital investment in facilities specifically designed to effect "expected" fuel savings. I submit that if gas and oil prices were currently at levels expected in the 1970's and 80's, these same parties would be telling the Commission what a wonderful job the utilities had done by investing in capital intensive base-load facilities.

[2] This is the potential moral hazard that Dr. Rose discusses on page 10 of his testimony. "A moral hazard can be created when, for example, a government agency, usually inadvertently, encourages firms or individuals to act in a manner that is not in the general public's best interest."

Q. Dr. Rose indicates at lines 17-21 on page 9 of his direct testimony, that a move to competition will offer advantages to most utilities because most of their sunk investment "has been substantially recovered." Is this statement true for TEP?

A. Absolutely not. TEP has several generating units, which account for 1,234 MW out of a total of 1,952 MW, that still have at least 15 years remaining in their useful lives. The newest units, Springerville 1 and 2, have remaining lives of 27 and 32 years respectively. These two units alone account for more than a third of TEP's installed generating capability and nearly 70 percent of TEP's net production book value.

IV. THE REGULATORY COMPACT AND STRANDED COST RECOVERY

Q. Do you have any comments regarding Dr. Rose's claim that a regulatory compact never existed?

A. It is bewildering that Dr. Rose believes there was never an implied contract between utilities and the customers they served and *are still serving*. As I mentioned in my direct testimony, utilities were (and still are) *required* to plan for and provide generation for all current and future customers. The Commission has a lengthy set of constitutional provisions, statutes and administrative rules which govern the conduct of utilities and customers in the provision and receipt of electric service. The statutes and rules obligate the utility to provide (with little exception) service to each and every customer in its geographic territory as set forth in its Certificate of Convenience and Necessity ("CC&N"). As Dr. Fessler details in his rebuttal testimony, the implications of this relationship have been clearly defined. Very simply, the utility has no choice of whether or not it provides service to a customer, nor does it have the ability to determine the charges for such service.

Utilities are required to build plants and provide service. In exchange for pervasive regulation, the Commission provides the utility the *opportunity* to recover its prudently incurred costs and earn a reasonable return on investment thereon. If competition in the electric industry had not emerged, regulators and utilities would continue this regimen as they have for almost 100 years and utilities would, in time, recover 100 percent of their prudent investment. To suggest now that the obligation to serve never existed is disingenuous at best. Stranded costs are a result of moving from a regulated to a competitive model. The Commission should keep its end of the compact, contract (or banana as Ken

Gordon alludes) and provide for the recovery of 100 percent of its stranded costs before it moves on to a new paradigm.

Q. Do you agree with Mr. Nelson's assertion that the courts in Arizona have determined that there is no regulatory compact?

A. No. Those decisions do not state that the regulatory compact does not exist. My interpretation of these minute entries, as President and CEO of TEP, is merely that the regulatory compact does not form the basis of a contract that prohibits the Commission from altering or amending the CC&N. The minute entries are completely silent as to the application of a stranded cost analysis to the regulatory compact.

Q. How do you respond to those parties that advocate less than 100 percent stranded cost recovery?

A. Various parties in this proceeding, for which TEP was required to build facilities to serve their past, present and future needs, are now advocating that the Commission should not permit 100 percent stranded cost recovery. Stranded costs are the end result of a move to competition from the regulatory model. They are not new costs, but costs currently collected in rates. When intervenors ask that TEP shareholders accept responsibility for stranded costs imposed by competition, they are effectively asking for a transfer of shareholder wealth to customers.

Q. What are the implications of less than 100 percent stranded cost recovery for TEP?

A. Since its 1992 restructuring, TEP has been able to achieve about 15 percent positive equity. Less than full recovery will precipitate more write-offs under FAS 71 and leave TEP in a very weak position. The implications of FAS 71 have been fully covered in the direct testimony of Karen G. Kissinger. Given TEP's financial condition, our shareholders cannot, and should not, absorb the write-offs that will most likely occur if the Commission adopts the recommendations of those parties that advocate less than 100 percent recovery of stranded costs. Moreover, it is interesting to note that nearly all of the parties in this proceeding have either had no opinion, or have deliberately shied away from the accounting implications under FAS 71 of less than 100 percent stranded cost recovery. The accounting implications of FAS 71 are very serious. As correctly pointed out by Ms. Hubbard at lines 19-21, page 6 of her direct testimony, no one can say with certainty what the accounting implications are

until a regulated cash inflow is determined. TEP would urge the Commission to very carefully consider any recommendations in this proceeding that would require less than 100 percent stranded cost recovery as it relates to FAS 71. If TEP does not receive full recovery of stranded costs, it has only one option and that is to take its case to the courts, which will inevitably forestall competition.

Q. Does 100 percent stranded cost recovery for the utility benefit society as a whole?

A. Yes. In presenting the OLDCO, NEWCO scenario, TEP used a simple example to clarify and articulate why society is better off by recovering stranded costs. In spite of TEP's attempt to simplify and elucidate this point, several intervenors have either twisted those arguments under different assumptions or misinterpreted them completely. Several intervenors try to compare total costs with marginal costs. From a generation suppliers' perspective, in an efficient competitive market the decision to supply or not to supply has to depend on avoidable costs. This is the same from society's perspective as well; correct decisions about supply from society's perspective should only depend on the avoidable costs of the alternatives, not their sunk costs. As I said in my direct testimony, the regulatory view should be "What is best for society?" for the public good, not "What is best for new entrants?"

Mr. Higgins states in his rebuttal testimony at page 5, lines 9-11, "It will have to write down the asset and/or restructure its financing or ownership, but it will remain in OLDCO's interest to keep operating, given its low marginal costs." Competitive markets price at long-run marginal costs (*e.g.*, the wholesale power market). Ultimately, a competitive retail electric market will operate in this manner as well. The disagreement that I have with Mr. Higgins is the treatment of sunk costs resulting from the regulatory environment.

Q. Were there other issues raised by intervenors concerning uneconomic bypass?

A. Dr. Rose tries to discount the issue of uneconomic bypass (higher cost units running before lower cost units) that I raise in my direct testimony. He quotes Kahn and Wenders in arguing that dynamic efficiency may outweigh the static welfare loss from uneconomic bypass. Both Kahn and Wenders are taken out of context and are speaking about the telecommunications

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industry, not the electric utility industry. Let me quote Baumol, Joskow and Kahn in the correct context, the context of the electric utility industry:[3]

> There have indeed been substantial improvements in short-term productivity achieved in other industries in the process of deregulation; but they provide little support for the hypothesis that there are similarly large opportunities in electric power waiting to be tapped. In telecommunications, the surge in productivity has been almost exclusively technology-driven: microwave, the computer chip, digitalization, fiber optics and so on have made possible very large increases in output per employee as well as an explosion in the variety of service offerings. In the case of the airlines and railroads, there is clear evidence that the cartelization of those industries under regulation sheltered inefficient work practices and inefficient route configurations and employment of equipment; and the greater freedom and competition introduced by deregulation has both permitted and intensified pressures for improvements in both labor and capital productivity. It is difficult to make the case that similar dramatic gains are likely in the electric sector, at least in the short-run.

Wholesale market competition has already exploited most short-run efficiencies in the generation market. In fact, as I mention later, most intervenors are arguing against using the Dow Jones Palo Verde Index ("PVI") price as the market price because it is "too low."

To argue that dynamic efficiency gains will outweigh static efficiency losses in the context of the generation market in this part of the country is just not correct. TEP does not see large additions to capacity being necessary until after the transition period that TEP has proposed for stranded cost recovery. There will be excess capacity in the Western United States for many years to come. The uneconomic bypass of this excess supply of base-load generation will not benefit society.

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[3] William J. Baumol, Paul L. Joskow and Alfred E. Kahn. "The Challenge for Federal and State Regulators: Transition from Regulation to Efficient Competition in Electric Power," Edison Electric Institute, December 9, 1994.

As I stated in my direct testimony, TEP favors competition in the retail generation market and we believe the real benefits from competition will come, but not overnight. Only in the long-run when large new capacity additions are needed and when investment decisions can be made in a truly competitive market will we benefit from new technologies and improved efficiencies.

Q. Have investors already been compensated for the risk of stranded costs as stated by several intervenors?

A. Intervenors argue that the regulated rate-of-return includes compensation for the risk of stranded costs. The risk premiums embedded in allowed rates of return on equity have historically reflected the risks associated with a regulated monopoly market structure, not the demand-side risks faced by utilities in a retail wheeling environment. These risks are completely different, and have not been incorporated in allowed rates of return on equity for utilities. The risk premium allowed by regulators would have to be substantially higher in order to compensate shareholders for the increased risk of stranded costs. The risk of stranded assets has increased in recent years, but utilities' authorized returns on equity have remained relatively unchanged. TEP's current authorized return-on-equity is 10.67 percent and a risk premium for stranded costs has never been discussed in TEP's rate proceedings.

For example, utility stocks have under-performed the market in recent years, but as Figure 1 demonstrates, the annual average authorized return on equity has remained relatively unchanged since 1993.[4&5]

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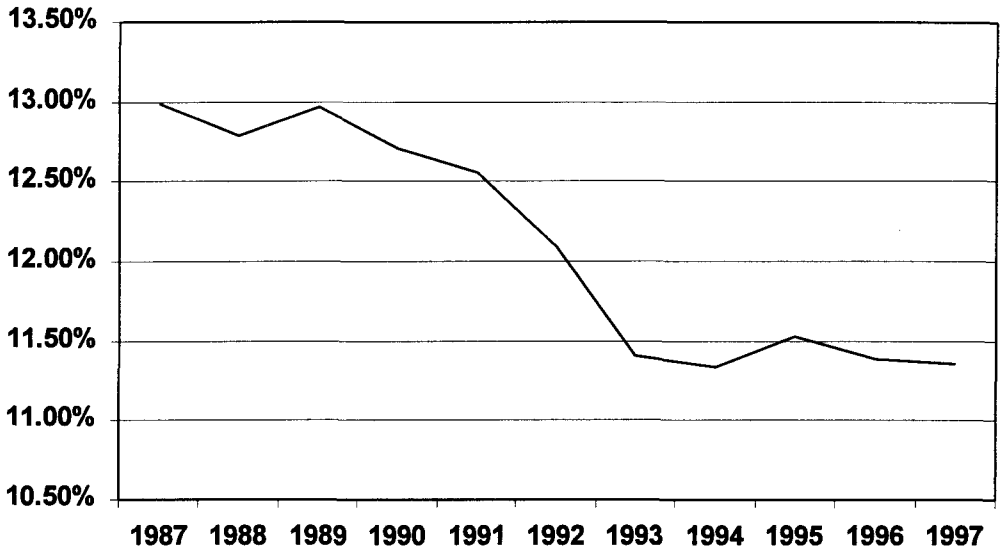
[4] Regulatory Research Associates, Inc. Major Rate Case Decisions, January 21, 1998.

[5] In Dr. Cooper's testimony, page 18, he refers to his Attachment MNC-4 which shows electric utility returns compared to the S&P 400 through 1991. The cumulative electric utility total returns have been significantly lower than the S&P 500 returns for the period 1992 to present.

Figure 1

ELECTRIC UTILITIES

AVERAGE AUTHORIZED RETURN ON EQUITY



The risk of lower earnings due to stranded costs (or the threat of stranded costs) in certain periods can only be compensated for by the opportunity to earn more than the cost of capital in other periods. This has not happened.

V. METHODOLOGY

Q. Why has TEP proposed the "revenues lost" approach?

A. I believe that the revenues lost approach provides a reasonable measure to assess the change in the position of existing regulated utilities before and after the introduction of competition. It avoids potential disputes regarding prior recovery of certain costs and allocations to customers since it uses the existing regulatory model for ratemaking to quantify stranded costs. The support for alternative calculation mechanisms and the aversion towards the revenues lost approach is most likely due to a lack of support for 100 percent stranded cost recovery and/or attempts to solve other issues such as market power.

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Q. Many intervenors propose the replacement cost approach to stranded cost quantification. Do you agree with their views?

A. It is not consistent to value TEP assets, which provide a hedge against fuel price increases, with a technology that increases fuel price risk. As I read the testimony of the customer groups, I could not help but think that they are missing something very important. Dr. Rosen calculates some of the Affected Utilities stranded costs based on replacement cost. In his analysis, he accounts for a potential market risk that I mentioned in my direct testimony, a risk all other intervenors have ignored - the price risk of increasing natural gas prices. Enron president, Jeffrey Skilling, has recently stated that Enron expects "pretty strong" natural-gas prices in 1998 as stockpiles shrink - his expectations are such that Enron has hedged its gas price exposure.[6] The Affected Utilities in this proceeding do not have a lot of natural gas price exposure. TEP, for example, has long-term fixed coal contracts that hedge against the kind of price increases Dr. Rosen used in his analysis. During the transition period that TEP proposed in its direct testimony, customers will receive the full benefits of stable generation prices. If market prices increase, the quantified stranded cost amounts decrease.

As I mentioned in previous testimony, TEP is also willing to consider the auction and divestiture quantification approach, but only if TEP is guaranteed full recovery of regulatory assets and the positive difference between book and market (in the event that book is greater than market). If Dr. Rosen is correct about the market price of electricity and if TEP's generation is divested, customers will not reap the benefits of stable generation prices that they would have during the transition recovery period that TEP proposes.

Q. Your proposal of using the PVI as a proxy for market price for power was not well received. How do you respond to the criticisms?

A. The rhetoric about how the PVI is not the true market price is nothing less than disingenuous. The PVI is the best available representation of the market price of wholesale power prices in the region. As the California Power Exchange ("PX") price develops, so will the PVI price. If the PX price (net of transaction and transmission costs) is different than the PVI price, an

[6] Loren Fox, Dow Jones News, 01-20-98.

unexploited profit opportunity will exist in the generation market and the many market participants will exploit that opportunity via arbitrage.

Q. Several other intervenors, including Dr. Rosen, support that the retail price of electricity will be significantly higher than the wholesale price. Do you agree with this position?

A. No, at least not to the degree Dr. Rosen suggests. Some believe that there will ultimately be a very small number of suppliers in the retail electric business in the future, similar to the current situation with long distance phone service (a handful of large suppliers with a larger number of upstarts moving in and out of the business.) This structure suggests a very high volume, low margin business. I believe that margins will ultimately be significantly less than the 0.77 cents per kWh that Dr. Rosen suggests.

Q. TEP has proposed securitizing a portion of its stranded costs. Please respond to the intervenors' views on securitization.

A. Dr. Rose states that securitization will transfer risk from utilities to customers. I disagree. Securitization makes good on society's commitment to allow the opportunity for stranded cost recovery with the new game rules (*i.e.*, competitive generation). Securitization creates savings that are achieved by substituting the utility's debt and equity capital with lower cost securitized debt capital. This cost savings benefits customers and will speed up the transition to competition.

Q. Please address the length of the recovery and calculation period for stranded costs.

A. Several parties have recommended that the length of the calculation period for stranded costs be limited to a very short time period. Given the magnitude of the Springerville generating assets on TEP's books, the shorter the time frame for calculation of stranded costs, the less likely it will be that TEP can recover all of its stranded costs if rates are to be capped or frozen or if the recovery period is not lengthened significantly. It appears that several of the other parties have failed to take this fact into consideration in their recommendations. Unless a sufficient recovery period is permitted, Affected Utilities, such as TEP, will not have the opportunity to recover their stranded costs.

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Q. Several parties in this proceeding believe that not all customers should be responsible for stranded costs. Do you agree with this assertion?

A. No, I do not. As I stated in my direct testimony, TEP believes that all customers should pay for stranded costs. There should be no exceptions.

VI. MITIGATION

Q. Several parties in this proceeding have claimed that if utilities are granted recovery of stranded costs there will be no incentive to mitigate those costs. Do you agree with this assertion?

A. No. In the "real world," anytime an organization can reduce its cost of doing business, value is added to the firm, its shareholders and existing and prospective customers through lower prices.

Q. Has TEP undertaken any cost mitigation efforts?

A. Yes. TEP has undertaken substantial cost reduction measures over the course of the last several years. TEP has the goal of becoming a "supplier of choice" once the market begins to become competitive and later on when full competition arrives. In order to accomplish this, TEP will need to offer a wide variety of services at the lowest possible prices. TEP will be forced to cut costs. Staff and others would like this Commission to believe that Affected Utilities would do nothing until competition arrives just because they have been given recovery of costs that became, or will become, stranded due to the introduction of competition. This proposition simply does not make any sense.

TEP also has targeted an actual equity ratio of 37.5 percent by the end of the year 2000 as a condition for approval of its holding company. If TEP does not achieve this level of equity, the Commission has the option to impose an amount less than the targeted amount for ratemaking purposes. TEP's actual equity ratio is currently 15 percent. As a result, TEP has a very strong incentive to reduce current costs and thereby improve the equity component of capitalization.

It is simply wrong to assert that utilities have no incentive to mitigate stranded costs before and after the transition to competition. To argue that utilities will have no incentive to mitigate costs is to ignore what competition is all about.

...

VII. CONCLUDING OBSERVATIONS

Q. Do you have any concluding observations regarding the testimony that was filed in this proceeding?

A. Yes. First, I believe that unless the Commission provides a clear policy direction as discussed in Messrs. Fessler and Gordon's testimonies, competition will not come to Arizona without producing potentially disastrous consequences. In this proceeding, I note that the proposal of Staff and other intervenors will require amendment of the rules to provide for less than 100 percent stranded cost recovery. The Commission has maintained that it adopted the basic framework for the rules after taking into consideration positions of the various stakeholders and after going through a rulemaking proceeding. What the Commission should be doing now is putting the "meat on the bone" and not going back to change the framework. The rules, as currently in effect, provide that Affected Utilities *shall* recover their stranded cost. Presumably, this was to provide the Affected Utilities, their shareholders, the SEC and the financial community, some degree of certainty with respect to how stranded costs would be treated in Arizona. The Commission should not change this basic framework this late in the process. To go through a contentious rulemaking proceeding after this hearing almost guarantees additional litigation and will create more confusion, uncertainty and dissent.

Second, some parties are using the issue of stranded cost recovery as the basis to seek relief on the backs of utility shareholders for societal problems. For example, the Land and Water Fund's proposal that to the extent Affected Utilities do not meet renewable goals established prior to competition under traditional regulation, that stranded costs be reduced and the amount be added to the Systems Benefits Charge. Despite the fact that the rules contain a solar portfolio standard and that the Systems Benefits Charge is specifically designed to fund renewable, environmental, DSM and other programs, Affected Utility shareholders would have another stick held over their heads under this proposal.

The Arizona School Boards Association wants an exemption for the stranded cost charge for Arizona schools. Although TEP is sympathetic to the problems of school funding in Arizona, the legislature is the appropriate forum to address this problem.

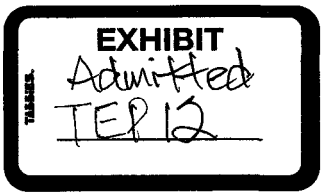
Further, any potential rate reductions associated with this process should not be funded by utility shareholders. In California, for example, the rate reduction for residential

and small commercial customers was part of the stranded cost bonds that were issued so that all customers would fund the reduction.

Let me reiterate that TEP believes that competition, implemented properly will bring benefits to society. However, based upon the testimony filed in this proceeding, it is the utility shareholders who are being asked to bear a disproportionate burden of the implementation costs. If the Commission is serious about bringing competition, it needs to get on with it in a fair and equitable manner. The regulatory compact has served as the basis of regulation for almost 100 years. The utilities, which have performed their end of the bargain, must not be abandoned now. TEP shareholders have already taken hundreds of millions of dollars in write-offs under regulation. It has charged a regulated rate, accepted only a regulated rate-of-return and has served all its customers. During the transition to competition, TEP is willing to reasonably mitigate, but is entitled to have the *opportunity* to recover 100 percent of its stranded costs.

Q. Does this conclude your testimony?

A. Yes.



REBUTTAL TESTIMONY OF CHARLES E. BAYLESS
SUMMARY

In my rebuttal testimony, I express concern that almost all of the other parties to this proceeding, to promote their own self-interests, have ignored the history of regulation in Arizona; including the regulatory compact. Any stranded cost recovery program must be adaptable to all Affected Utilities, taking into consideration their respective financial condition and other circumstances. Although I am a strong advocate of competition in the electric utility industry, I believe that key issues, including but not limited to stranded costs, access to transmission systems, responsibility for reliability management and defining the continuing role of regulatory agencies, must accompany the change from regulation to competition.

I discuss the fact that Affected Utilities should not have to forego recovery of capital investment in facilities, simply because the facilities were built when legislation was encouraging the use of coal and other alternate fuels, in lieu of natural gas and petroleum. Because TEP was required to build facilities to serve their past, present and future needs, the Commission should provide the *opportunity* for recovery of 100 percent of its stranded costs. Less than full recovery will precipitate write-offs and potentially leave TEP in a very weak financial position going into competition. Also, TEP's shareholders cannot and should not absorb the write-offs proposed by the intervenors. If TEP does not receive full recovery of stranded costs, it will be forced to take its case to the courts, thus forestalling competition.

I discuss the proposed "revenues lost" approach versus the proposed replacement cost approach to stranded cost quantification. Even though my proposal of using the Dow Jones Palo Verde Index ("PVI") was not well received, I still believe the PVI is the best available representation of the market price of power prices in the region. TEP is also willing to consider the auction and divestiture recovery, but only if TEP is guaranteed full recovery of all of its regulatory assets, as well as the positive difference between book and market value from the sale of its generation assets.

Regarding securitizing a portion of TEP's stranded costs, I believe that securitization makes good on society's commitment to allow the opportunity for cost recovery with the new game rules. Securitization creates savings that are achieved by

substituting the utility's debt and equity capital with lower cost securitized debt capital. The cost savings will benefit customers and will speed up the transition to competition.

Finally, the length of the recovery period should be sufficient to allow for recovery of stranded costs. TEP has demonstrated that it is willing to mitigate stranded costs while other parties in this proceeding claim that the Affected Utilities have no incentive to mitigate if they receive their stranded costs. This is simply wrong.