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The Risk Sharing Strawman

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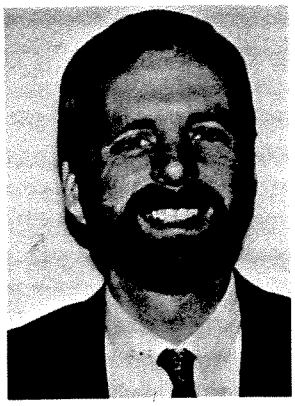
"Risk sharing" is a phrase that has become popular with regulators and used by them in a variety of regulatory proceedings. This article argues that the concept behind the phrase is fallacious and its use fogs the real issues at stake in the proceedings in which it has appeared. The real issues concern the effects on both customer and investor interest of the regulatory policy of disallowing prudently incurred costs in rate setting. An appendix to the article will give an idea of how frequently, and for what purposes, the concept has been invoked.

The business of operating and regulating energy utilities has never been more complex, for a number of reasons. First, the high and steady rate of growth typical of the electric and natural gas utility industries of past decades, a factor which hid many regulatory and operating problems and inefficiencies, seems gone for good. Second, lawmakers and regulators are increasingly concerned with economic efficiency and competition in these businesses, factors which have proven exceedingly difficult to legislate and regulate. And third, the number of new issues with which utility managements, customers, and regulators must regularly contend, including independent power production, contract carriage, and deregulation (among many others) have complicated every business and regulatory decision.

It is a shame, then, when a new regulatory concept appears which complicates the process even further without either working in customers' long-term interests or aiding the cause of economic efficiency or competition. The relatively recent appearance in the regulatory arena of the "risk sharing" concept has done just this. The concept has cluttered the case records in many jurisdictions, generated much poor testimony, and contributed, in an unproductive way, to a number of regulatory decisions and orders.



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Risk sharing, as a regulatory tool, limits the ability of regulated firms to be compensated for their costs of service. This would not be controversial if the costs in question were imprudently or improperly incurred. The reason it is controversial, and the reason why so many hold it unfair and counterproductive, stems from the fact that it is applied to *prudent and justifiable* investment and operating costs. In other words, risk sharing as a concept is used to deny compensation for costs which regulated firms have already incurred, or will incur, as a requirement of service.

The concept of risk sharing has been employed by witnesses and state commissions in a variety of different cases. These cases have dealt with topics including excess capacity, prudence, gas and fuel adjustment, and rate design. (In the Appendix to this article I provide a sampling of state regulatory cases in which the concept of risk sharing has appeared.) Its application in these types of cases is almost universally the product of loose reasoning, sloppy definitions, or inappropriate analogy. Because it is a difficult concept both to explain and refute, however, it continues to be used to support positions for which it is wholly unsuitable.

The task of exposing the risk sharing "strawman" must proceed from an examination of what the proponents of

its use in regulatory proceedings purport it to be. Then, both a careful definition of terms and an examination of the goals of the regulatory process will put its improper use in perspective.

Risk Sharing Defined: Building the Strawman

Part of the popularity of using risk sharing as a regulatory tool undoubtedly stems from (or at least is reflected in) an article in the FORTNIGHTLY by John Stutz.[1] Dr. Stutz does a good job of presenting the views of the proponents of risk sharing. This article, then, is a good place to begin in an explanation of what risk sharing is supposed to accomplish.

According to Dr. Stutz, risk sharing is a way of reflecting competitive forces in a regulated environment. The owners of a competitive, unregulated firm, he maintains, make investments based on their belief that those investments will earn an acceptable return. That belief, however, is based on an uncertain future, reflecting the basic risk inherent in the enterprise. The owners have no obligation to make the investment, and its customers have no obligation to buy the product that results from this investment.

Regulated firms operate in a different environment. The effect of regulation, according to Dr. Stutz:

> is to blur, but not to erase, the distinction between owners and customers found in a competitive market. In the case of risks, the effect is to *share, but not entirely shift,* the responsibility for such risks from the owners to the customers[2] (emphasis in original).

He holds that the distinguishing features of regulation include the obligation to invest and the opportunity to earn a fair return. But he also believes that risk sharing should be used as a way of disciplining a regulated firm's management's actions, just as risk disciplines the actions of management decisions in an unregulated environment. In this way, risk sharing offers a partial substitute for the "efficiency commonly ascribed to the unregulated sector."

Another key component to Dr. Stutz's argument is that regulation involves a compromise between the interests of utility customers and investors, both at the commission level and on the larger legal and political level. Because the process of setting the "fair" rate of return is not one of mathematical precision, regulators balance the customers' interests of adequate service against the investors' desire of a maximum return. Dr. Stutz points to this balancing of interests as evidence of the fact that risk sharing as a regulatory policy is currently, and will continue to be, practiced.

Thus, two assertions lie behind the popular view of risk sharing. These are:

1) Risk sharing helps promote economic efficiency in regulated utilities by exposing them to some of the same pressures that govern unregulated businesses.
2) Risk sharing is another way of stating that a balance must be struck between the interests of the customers and investors of regulated utilities.

These are attractive assertions; but they are wrong nevertheless.

Tearing the Strawman Down

The major problem with risk sharing proposals is that they are so fetching on their face. The idea that such a mechanism can both infuse more competition into the regulatory model, while at the same time providing a balancing of interests seems almost too good to be true. But it *is* too good to be true, and the fundamental reasons for this mirage of reasonableness, this *deceptio visus,* are two:

1) Regulation is a substitute for a market which works poorly if left on its own. The reason for abandoning competition and regulating in the first place is that for industries characterized by the tendency toward natural monopoly, unfettered competition is wasteful and inefficient. If what we have is an industry truly typified by the decreasing cost, natural monopoly model (or any other natural monopoly model), the introduction of competitive market pressure represents a movement away from, and not toward, economic efficiency.[3]
2) The idea of "balancing" interests between investors and customers by shifting "risk" around, so that each party has an equal or equivalent amount, ignores two basic points. *First,* no common definition or concept of risk exists for both investors and customers. Investor "risk" and customer "risk" are two entirely different concepts. *Second,* the supposed shifting of risk is not a zero sum game. Increasing investor risk does not equate to decreasing customer risk, or vice versa. Thus, the concepts of investor and customer risk fail to obey what risk sharing proponents would hold to be a public utility version of the second law of thermodynamics: that risk (like matter) can neither be created nor destroyed but only transferred from one state to another.

I will explain these two points more fully in turn.

1. We Regulate for a Reason

The first major error of the risk sharing concept turns on the notion of economic efficiency. It is almost universally recognized that there is some technical characteristic of gas and electric utility service which makes

direct, unrestrained competition fail on cost and efficiency grounds. John Stuart Mill recognized this characteristic 140 years ago, stating:

> It is obvious, for example, how great an economy of labour would be obtained if London were supplied by a single gas or water company instead of the existing plurality. . . . Were there only one establishment, it could make lower charges, consistently with obtaining the rate of profit now realised.[4]

Modern economists recognize the same characteristic. Professor Bonbright stated:

> It is the general consensus of economists that the primary, even though not the sole, distinguishing feature of a public utility enterprise is to be found in a technology of production and transmission which almost inevitably leads to a complete or partial monopoly of the market for the service.[5]

The premise behind all reasoned attempts at utility regulation is that these markets will either be typified by monopolistic pricing or wasteful competition. The remedy is to remove the market influence by granting a monopoly franchise that is compelled to produce the most economically efficient output for a price that is close to cost. The regulators step in where competition fails.

The current push toward deregulation in the energy industries is not a contradiction of this premise. The current deregulation initiatives in the energy industries, including wellhead price deregulation and pipeline open access culminating in, among other things, the Public Utility Regulatory Policies Act and Federal Energy Regulatory Commission Order No. 500, target *only* those specific aspects of each industry where there is strong evidence that the natural monopoly tendency is absent. Competition in local distribution of natural gas and electricity, involving parallel distribution systems, is obviously wasteful. But there is no reason necessarily to conclude, with current technology, that the generation of electricity, or the merchant function in natural gas, is typified by a natural monopoly.

Risk sharing, as a regulatory policy, is supposed to provide a little bit of competition on a regulated model. But this is illogical. If the segment of the industry under scrutiny cannot operate efficiently under a competitive regime, infusing competitive pressures cannot aid economic efficiency. And if the segment under scrutiny *can* operate competitively, then comprehensive cost-based regulation should be eschewed altogether.

2. *"Terminological inexactitude"*[6]

The second major error of the risk sharing concept stems from poorly defined terms and concepts. The proponents of risk sharing make the erroneous presumption that the concept of risk applies equally as well to utility customers as it does to utility investors. The error of this presumption is clear when the concepts of risk are examined; first for a regulated utility's customers, and then for that regulated utility's investors.

The two important goals of good utility service that customers can reasonably be expected to care anything about are low price and high quality. For regulated utilities, quality means reliability. Customers desire the lowest price they can get with the assurance that the service will be available when they want it. To the extent that there is uncertainty about either of these two characteristics of utility service, the customers face risks which they should logically seek to minimize. These risks are reflected in the fact that customers may at any time not receive the lowest price possible, or they may not receive uninterrupted service.

The difficulty inherent in seeking the lowest price and the greatest reliability (or, alternatively, minimizing the risk of high price or unreliability) is due to the fact that these are competing goals. Reliability is costly. Because customers' usage at any future time is uncertain, and because the physical reliability of machines is uncertain, regulators, acting on behalf of customers, must strike a balance.

Traditional regulation, however, has always carried with it certain risks that the goals of low price and high reliability will not be met as planned.[7] Neither regulators nor utility managers are prescient. Planned capacity may turn out not to be needed. Costs may rise unexpectedly. But regulators earn their pay by striking some balance between the twin risks of high price and poor quality (or low reliability).

While customers have two goals, low price and reliability, utility investors basically have one: a fair return on their invested capital. To investors, the term "fair return" means a return that is commensurate with the risks inherent in their investments. While customer risk is tied to somewhat less tangible notions of low price and high reliability, the concept of risk as it applies to the capital of investors has received decades of academic and practical study in the financial and economic literature.

The well-defined types of risk which an investor may expose his or her capital include business risk, financial risk, systematic risk, unsystematic risk, beta risk, and default risk, among others. All of these risks deal with the probability that actual future returns will be above or below expected returns. This prospective variability of returns around an expected return lies at the heart of the investors' concept of risk.

Inherent in the private provision of utility service is that investors cannot be forced to produce the capital to provide either ongoing or growing service. Investors

must be induced, by a fair return, to make their capital available. Once invested, however, the investors' capital can be essentially held hostage by regulators. At any particular time, regulators can either allow or deny (by design, mistake, or inaction) the return that utility investors fairly expect. If the fair return is denied, prices for customers may be lower now than they otherwise would have been. The damage to investor interests will be observed, however, and any new capital will only be raised at a risk-adjusted premium, thereby making service more expensive in the future.[8]

Customer risk and investor risk, therefore, have very little to do with each other. Customers bear the risks of high prices and low reliability. Investors bear risks related to the variability of their expected returns. Furthermore, an increase in customer risk does not imply a decrease in investor risk, or vice versa. A new generating plant coming on-line can decrease the risk of an outage for customers without altering investor's risks. Poor utility management or poor utility regulation can increase customer risk and investor risk at the same time.

Proponents of risk sharing talk of an "equal sharing" of risk between customers and investors.[9] But there are many factors which can affect investor return expectations which have nothing directly to do with the customers' price or reliability of service. Similarly, there are many factors which can affect the customers' price or reliability which have nothing directly to do with investor return expectations. In fact, there is really nothing to be shared at all.

Tearing down the risk sharing strawman is an important exercise, but by itself it begs another important question: If risk sharing is an illogical concept, what is it that all of these witnesses and commissions have been doing?

Risk Sharing's True Colors: Cost Sharing

As I stated at the beginning of this article, the concept of risk sharing has been used most often as a way of limiting the ability of regulated firms to be compensated for their prudent costs of service. Risk sharing's proponents most often seek to insulate customers from certain specific costs. These costs are mainly associated with new electric generation capacity additions.[10] It is this customer insulation from cost which lies at the heart of the concept, not risk. The concept's correct appellation is thus not risk sharing, but cost sharing.

Risk sharing opponents have called it many things. A prominent utility lawyer in New York has called it "an extraordinarily cleverly crafted piece of deception." A noted Harvard University economist has called it a "wealth transfer." All who oppose it try to point out that there is something more than an amorphous concept of "risk" at stake in proceedings where risk sharing has appeared. At stake most often are millions of dollars of prudently incurred utility costs which may not be collected by the investors who incurred them.

The label "cost sharing," on the other hand, does not conceal a strawman. It is a clearly identifiable concept, the merits of which can be argued without the confusing illogic which accompanies the term "risk sharing." If prudent costs are to be borne by utility investors (cost sharing), then the rationale should be stated in terms of customer interests, management incentives, policy goals, investor punishment, politics, or anything else which forms a reasonable basis for discussion. But not risk sharing, please!

Endnotes

[1]John Stutz, "Risk Sharing in a Regulated Industry," PUBLIC UTILITIES FORTNIGHTLY, April 3, 1986. The fact that this was an influential article can be seen in the Appendix to this article by the number of times consultants from Stutz's firm, Energy Systems Research Group, invoked the concept of risk sharing in recent testimony.

[2]Stutz, p. 31.

[3]This does not condemn the introduction of competitive market pressures in those segments of an industry which *do not* exhibit natural monopoly characteristics. This distinction is vital, both for my point in this article and for the evolving deregulation initiatives.

[4]John Stuart Mill, *Principles of Political Economy*, Vol. 1 (New York: D. Appleton & Co., 1908), pp. 189-90 (reprint).

[5]James C. Bonbright, *Principles of Public Utility Rates* (New York: Columbia University Press, 1961), p. 10.

[6]Winston Churchill, speech to the House of Commons, 1906. An alternate title to this section could be Benjamin Disraeli's: "I hate definitions."

[7]It is important to note that I am saying that customers face a risk with respect to the price *level*, not the price *variance*. The price level is obviously important to customers. The price variance is not. I am aware of no evidence that utility customers hold variable prices to be harmful. In fact, it can be proven that under certain conditions, customers prefer variable prices. If, however, price stability *is* important to customers, it is clearly of secondary importance to the question of the price level itself.

[8]There has been recent published academic work on the nature of regulatory decisions on the actions and expectations of utility investors. See Michael Gort and Richard A. Wall, "Foresight and Public Utility Regulation," *Journal of Political Economy*, February 1988, pp. 177-88.

[9]See the Appendix to this article for references to this type of terminology by the proponents of risk sharing.

[10]Of course, risk sharing has been employed as a concept for a number of different purposes. The growing use of the concept as a catchall for all sorts of cost transfer situations is obviously alarming to those who ascribe to it no logical content in the first place.

Appendix

A Sampling of Risk Sharing Cases*

EXCESS CAPACITY

1. Arizona Public Service Co. (APS)
   Docket No. U-1345-85-156
   Before the Arizona Corporation Commission
   Filed May 24, 1985
   Order Issued July 24, 1986 (Phase I)

Witness Steven Bernow, senior research scientist with Energy Systems Research Group (ESRG), for Arizona Residential Utility Consumer Office, analyzed excess capacity of Palo Verde nuclear power plant. He favors equal risk sharing between customers and investors for prudently incurred costs to reduce effect of uneconomical excess capacity.

Rebuttal testimony of witness William H. Hieronymus, of Putnam, Hayes and Bartlett, for APS, opposes Bernow's proposal for risk sharing. Explains prudence test applies to decisions while excess capacity test concerns outcomes. Argues that other witnesses ignore traditional investment prudence standard when proposing risk sharing and value-based pricing.

2. Arizona Public Service Co.
   Docket No. U-1345-85-367
   Before the Arizona Corporation Commission
   Filed December 18, 1985

Direct statement of S. Bernow assesses excess capacity issues on the APS system with reference to the three Palo Verde units. He recommends sharing losses equally between customers and shareholders, indicating that such risk sharing would result in large savings for customers. Suggests second step for risk sharing exclusion should provide for equal sharing of remaining losses that full rate basing would impose on customers.

Rebuttal statement of W. Hieronymus to excess capacity testimony of Bernow asserts Bernow's risk sharing plan would penalize utilities for actions not perceived to be risky when taken and that Bernow's plan offers no reward for superior investment performance. Witness George L. Fitzpatrick, president of Applied Energy Group, claims the risk sharing approach is unfair to stockholders and customers.

3. Duquesne Light Co. (DLC)
   Docket No. R-860378
   Before the Pennsylvania Public Utilities Commission
   Filed June 11, 1986
   Order Issued March 10, 1987

Richard A. Rosen of Energy Systems Research Group, for the Pennsylvania Office of Consumer Advocate (OCA), disputes DLC witness William W. Hogan's claim that risk sharing deprives utility investors of opportunity to earn a fair return. Rosen asserts that risk sharing helps customers to limit economic losses they will incur by sharing them with stockholders. Points out proposed tariff adjustment for risk sharing is only for future, and is not the same as an imprudence finding.

Hogan characterized Rosen's approach as a wealth transfer, where investors are deprived of opportunity to earn fair return on invested capital, to the benefit of customers. He asserted that the proposed risk sharing approach is not rooted in principles of equity or efficiency, and should not be adopted by commission.

4. San Diego Gas and Electric Co. (SDG&E)
   Docket No. A. 85-06-064
   Before the California Public Utilities Commission
   Filed June 28, 1985
   Decided December 20, 1985

Application for Rehearing of D85-12-104, filed by SDG&E, asserts commission has acted in excess of its authority through arbitrary disallowance of reasonably incurred expenses. Claims commission policy of risk sharing has been expanded and distorted to point of confiscation. Decision No. D85-12-104, dated December 20, 1985, adopts decrease in SDG&E electric tariffs and charges.

5. Kansas Gas and Electric Co. (KG&E)
   Docket No. 142,098-U
   Kansas SCC
   Filed November 8, 1984
   Order Issued September 27, 1985

This case addressed issues regarding Wolf Creek nuclear plant valuation methodology, depreciation reserve offset, phase-in value of property, excess capacity, and risk sharing principles. Order Denying Rehearing, November 15, 1985, reaffirms decision to adopt risk sharing principles for setting value of plant. The Order concludes that the commission is legally authorized to adopt the risk sharing approach.

6. Gulf States Utilities Co. (GSU)
   Docket No. 7195
   Before the Texas Public Utilities Commission
   Filed November 18, 1986

Witness Daniel J. Lawton, principal of Diversified Utility Consultants, asserts investment that is not used and useful should be subject to risk sharing adjustment between customers and stockholders. He states at most a 30 percent reserve margin should be allowed before adjusting excess capacity and risk sharing mechanism would cease if company's reserve margin went below allowable margin.

PRUDENCE

7. Pacific Gas and Electric Co. (PG&E)
   Docket No. I.85-05-002
   Before the California Public Utilities Commission
   Filed May 1, 1985

The Audit Report on Nuclear Fuel Purchase Contracts presents results of audit of uranium ore purchase and termination contracts of PG&E, Southern California Edison (SCE), and San Diego Gas and Electric (SDG&E). The report recommends risk sharing on part of the purchase price of the Bear Creek plant. The report also claims that sufficient doubts persist regarding Bear Creek termination agreement, which should subject SDG&E to risk sharing on half of settlement costs.

8. Southern California Edison Co. (SCE)
   Docket No. A.82-02-40
   California Public Utilities Commission
   Filed February 18, 1982
   Order Issued October 29, 1986

Decision No. D86-10-069, dated October 29, 1986, rejects staff's risk sharing proposal which would have disallowed 50 percent of costs in excess of benchmark after specific disallowances had been made. The decision, however, finds merit in staff's arguments for shareholder-ratepayer risk sharing approach but finds that circumstances in this case do not require creative ratemaking mechanism. It also finds that risk sharing may cause additional regulatory risk for applicants without providing offsetting benefits to customers. Thus, it declines to accept risk sharing in this case.

9. Georgia Power Company (GPC)
   Docket No. 3554-U
   Before the Georgia Public Service Commission
   Filed November 22, 1985
   Order Issued June 6, 1986

Witness George L. Fitzpatrick, president of Applied Energy Group, Inc., for GPC rebuts conclusions of the Energy Systems Research Group Report (ESRG), dated December 1985, which concerned Plant Vogtle. He states that the ESRG risk sharing approach would make utility stocks as risky as venture capital issues.

10. Kansas State Corporation Commission Investigation
    Docket No. 120,924-U
    Filed March 29, 1985
    Decided September 27, 1985

The Decision in Order Denying Rehearing, dated November 15, 1985, denies Kansas Gas and Electric Company (KG&E), Kansas City Power and Light Company (KCP&L), and Kansas Electric Power Cooperative (KEPCo) requests for rehearing of issues relating to management imprudence during construction of Wolf Creek nuclear power plant. It reaffirmed the decision to adopt risk sharing principles for setting value of plant.

*This appendix was prepared with the assistance of Tammy Kang at National Economic Research Associates.

11. El Paso Electric Company
Docket No. 2009
Before the New Mexico Public Service Commission
Filed January 9, 1986
Decided May 18, 1987

Witness Alan Rosenberg, consultant with Drazen-Brubaker and Associates for New Mexico Large Power Users Coalition favors principle of risk sharing between customers and shareholders for recovering deferred costs of plant. Witness Joseph E. Wasiak, vice president of El Paso Electric Company, describes the benefits of stipulation provisions on risk sharing, reserve margin, performance standards, and in-service criteria for Palo Verde nuclear power plant. He contends that sharing total Palo Verde operational risks between EPE and customers protects customers by guaranteeing backup energy when any single unit is out of operation.

12. Philadelphia Electric Co. (PECO)
Docket No. R-850152
Before the Pennsylvania Public Utilities Commission
Filed September 27, 1985
Order Issued June 27, 1986

Dr. Lewis J. Perl of National Economic Research Associates, Inc., responded to testimony by OCA witnesses Komanoff and O'Brien on aspects of PECO's investment in Limerick unit 1 nuclear power plant and witness Schinnar testimony on impact of proposed tariff increase on Philadelphia area economy. Perl asserts that only appropriate basis for disallowance of Limerick's investment is imprudence. He stated that "after the fact" analyses cast no light on prudence and are irrelevant. He opposes the imposition of risk sharing where the decision-making process was prudent, but where outcomes are unfavorable. He argues that this creates uneven risks that discourage investment in utilities.

Witness William H. Hieronymus of Putnam, Hayes and Bartlett, for PECO, responds to intervenor witnesses and rebuts Energy Systems Research Group witness Randall Falkenberg's proposal for risk sharing rate-making treatment of Limerick 1.

13. Pennsylvania Power Co. (Penn Power)
Docket No. R-850267
Before the Pennsylvania Public Utilities Commission
Filed June 20, 1986

William H. Hieronymus of Putnam, Hayes and Bartlett, for Penn Power, opposes the recommendation of Energy Systems Research Group witness Richard A. Rosen that commission should impose risk sharing losses on shareholders based on claimed net lifecycle losses associated with Penn Power participation in Perry nuclear power plant unit 1. He states that such treatment would have detrimental effects on utility plant construction, would impede access to capital markets, and would all but guarantee disallowances for any new plant construction.

14. Duke Power Company
Docket No. 86-188-E
South Carolina Public Service Commission
Filed April 2, 1986
Decided November 5, 1986

Witness Stephen S. Bernow, of Energy Systems Research Group, testified for the South Carolina Department of Consumer Affairs. He identified losses to Duke Power customers for plant life, based on company's ownership share and buyback agreement costs. He recommends a risk sharing approach to insure that customers will not pay all costs.

15. Central Vermont Public Service Corp. (CVPSC)
Docket No. 5030
Before the Vermont Public Service Board
Filed May 31, 1985
Order Issued February 18, 1986

Richard S. Bower, professor of financial and managerial economics at Dartmouth College for CVPSC, evaluated CVPSC's proposed rate-making treatment of Seabrook unit 2 expenses and concluded that if expenses were prudently incurred, they should be given full rate base treatment. He also affirms that under conventional risk sharing, expenditures on prudently cancelled plant must be included in rate base.

Direct statement of J. Peter Williamson, professor of business administration at Dartmouth College, also evaluates costs of Seabrook unit 2. He stated that this proceeding was not appropriate to establish long-term policy for construction investment and risk sharing.

FUEL AND GAS COST ADJUSTMENT

16. Union Gas System, Inc. (UGS)
Docket No. 149,467-U
Before the Kansas State Corporation Commission (SCC)
Filed February 7, 1986

Robert D. Elliot of the Kansas SCC presents staff recommendations regarding UGS gas purchasing practices. He believes that the company's inefficiency has caused customers to pay, through the purchased gas adjustment (PGA), certain local production which were more costly than other available options at the time. He recommends a portion be returned to customers, noting that one option is risk sharing between UGS and its customers.

17. Brooklyn Union Gas Company (BUG)
Docket No. 28947 (Phase IIB)
New York Public Service Commission
Filed November 5, 1984
Decision Pending

Drs. Charles J. Cicchetti and Jeff D. Makholm, witnesses for intervenor National Fuel Gas, stated that economically defensible rationale for applying partial pass-through mechanism to electric utilities cannot be used in regard to gas distribution utilities. They stated that it is illogical to use the concept of risk sharing between customers and shareholders as reason to implement a partial pass-through mechanism for the gas adjustment clause.

18. Gulf States Utilities Company (GSU)
Docket No. 7195
Texas Public Utilities Commission
Filed November 18, 1986

Daniel J. Lawton, of Diversified Utility Consultants, testified for certain cities served by GSU. He asserts that investment that is not used and useful should be subject to a risk sharing adjustment between customers and stockholders. He states that at most, a 30 percent reserve margin should be allowed before adopting a risk sharing mechanism.

19. Niagara Mohawk Power Corp (NIMO)
Docket No. 29069
New York Public Service Commission
Filed April 19, 1985
Order Issued March 12, 1986

Witness Carl Pechman, principal economist with the New York Department of Public Service, explains the importance of marginal energy cost to NIMO and the New York Power Pool. He proposes risk sharing between customers and stockholders as a method to assure the economical purchase of fuel.

20. Arkansas Power and Light Company (APL)
Docket No. ER-85-265
Before the Missouri Public Service Commission (PSC)
Filed June 7, 1985
Decided April 24, 1986

William J. Cochran of the Missouri PSC discusses APL excess capacity, management prudence, and risk sharing of excess capacity. He recommends a 100 percent or 91 percent risk sharing allocation regarding costs associated with Grand Gulf nuclear power plant unit 1. His proposed risk sharing plan would allocate approximately 9.00 percent of Grand Gulf 1 costs to retail and wholesale customers.

RATE DESIGN

21. Washington Gas Light Co. (WGL)
Docket No. 840
Before the District of Columbia Public Utilities Commission
Filed October 23, 1985
Decided September 5, 1986

Baker G. Clay, of Baker G. Clay and Associates, for the District of Columbia Hospital Association, emphasized the unfairness of risk sharing under the proposed tariff structure as all fixed costs are initially borne by the firm customer.