

CHAPTER 6

PRUDENCE, PREAPPROVAL, RISK, AND UTILITY ACCOUNTABILITY

Utility compliance planning is inherently risky. A compliance plan is extremely complex and involves looking fifteen or twenty years into the future. Once a plan is made, it can affect an entire utility system for many years. Utilities face the same uncertainties as in long-term capacity planning, but there are at least two additional uncertainties peculiar to CAAA compliance.

First, increased demand for low-sulfur coal and other substitute fuels is expected to place an as-yet undetermined premium on them. Second, the price of future emission allowances is unknown, making it difficult for utilities to compare the marginal cost of compliance or overcompliance strategies with the expected price of future emissions allowances. Since passage of the CAAA, forecasts of the future price of allowances have varied considerably (the highest price is six times the lowest) and are regarded in general as unreliable.

Since the options chosen by the utility in its compliance plan are highly dependent on the price of allowances, state public service commissions should consider policies that explicitly recognize and try to accommodate this uncertainty. These policies might include allowing utilities to enter into an appropriate portfolio mix of emission allowance contracting arrangements to manage this risk. The portfolio could include long-term, spot, and futures contracts. Of course, these contracts should be subject to some form of state public service commission oversight.¹

¹ There are possible parallels between gas supply contract portfolios and the emissions allowance portfolios suggested here. For a discussion of gas supply contract portfolios, see J. Stephen Henderson et al., *Natural Gas Producer-Distributor Contracts: State Regulatory Issues and Approaches* (Columbus, OH: The National Regulatory Research Institute, 1988). For a discussion of how state public service commissions currently review gas supply contract portfolios, see Daniel Duann, Robert E. Burns, and Peter Nagler, *Direct Gas Purchases by Gas Distribution Companies: Supply Reliability and Cost Implications* (Columbus, OH: The National Regulatory Research Institute, 1989) and Robert E. Burns, Mark Eifert, and Peter Nagler, *Current PGA and FAC Practices: Implications for Ratemaking in Competitive Markets* (Columbus, OH: The National Regulatory Research Institute, 1991). The latter report includes a conceptual framework for a light-handed approach for commission review of a portfolio of supply contracts that relies on incentive compatibility to assure the utility utilizes a lowest or best cost mix.

A third type of uncertainty faced by utilities, which is not unique to acid rain compliance planning, is the postinvestment or retrospective prudence of a capital expenditure required to comply with the CAAA. In other words, will an investment made by a utility which appeared to be prudent when the decision was made be found by the state public service commission in the future after the fact to be prudent? To avoid an adverse outcome and the harm that can be caused by the fear of it, some have proposed that state public service commissions preapprove compliance plans, expenditures, or both to minimize the chance of this occurring. The ostensible goal of preapproving compliance planning or compliance expenditures is to manage the regulatory uncertainty associated with allowance trading and compliance decisions by not holding the utility responsible for factors beyond its control. There are four major problems with this procedure, which will be dealt with below.

Proponents of preapproval feel utilities are not willing and should not be required to take risks associated with compliance planning unless there are "guarantees" from regulators that utility costs and investments will be recoverable.² Otherwise, it is argued, utilities will take a conservative approach, planning for compliance on a stand-alone basis, planning to comply for phase I only, and not overcontrolling for phase II, or choosing a strategy that minimizes risks for shareholders instead of a strategy that minimizes compliance costs. If all utilities were so conservative, the cost of compliance likely would be the same as for command-and-control approaches, and the benefits of a market-based approach would be lost. Guarantees of this sort, however, run counter to at least one hallmark of public utility regulation--prudence requirements and their reviewability.

² Ad Hoc NARUC-EEI Committee, *New Approaches to Prudence Review: Gas Utility Construction at Major Generating Facilities* (June 6, 1991); Keystone Center, *Interim Report: Keystone Dialogue on State Regulation of Allowance Trading* (February 1992), 20-23; and Daniel J. Dudek and Joseph Goffman, "Regulatory Strategies to Stimulate the Allowance Market," mimeo (March 1992), presented at the 1992 NARUC Mid-Year Conference and EEI Conference on Allowance Trading, April 1992.

The Prudent Investment Test³

As part of the traditional regulatory compact, state commissions have provided utilities a reasonable opportunity to recover prudent investments and expenses. Prudent investments are allowed into rate base for capital recovery and are permitted to earn a return. Similarly, a utility is allowed to recover its prudent expenditures. The prudence test dates back to a concurring opinion of Supreme Court Justice Louis Brandeis in 1923. State commissions have developed four guidelines based on established case law in applying the prudence test. They are that (1) there is a presumption of prudence, (2) there is a standard of care that is reasonable under the circumstances at the time, (3) there is a proscription *against* hindsight (no Monday-morning quarterbacking), and (4) there is a retrospective, factual review.

The presumption of prudence resulted in few prudence cases before 1973. The Brandeis guideline basically states that every investment and expenditure is presumed to be the result of reasonable judgment, unless the contrary is shown. State commissions have interpreted this as establishing a rebuttable presumption of prudence. Without affirmative evidence showing mismanagement, inefficiency, or bad faith, an investment decision is presumed to be prudent. The presumption of prudence makes for efficient regulation in that commissions are neither required nor allowed to review the prudence of all utility decisions regardless of their number, importance, or outcome. This saves commission resources by allowing staff and commissioners to concentrate oversight efforts on utility decisions the prudence of which are in doubt. While final results or outcomes of an investment or expenditure might overcome the presumption of prudence, they do not necessarily address the question of whether the investment or expenditure was reasonable at the time the decision was made.

³ Much of this subsection is drawn from Robert E. Burns et al., *The Prudent Investment Test in the 1980s* (Columbus, OH: The National Regulatory Research Institute, 1985).

Once the presumption of prudence has been rebutted, however, the utility has the burden of proving that the alleged imprudent investment decision was in fact prudent, and is held to a standard of reasonableness-under-the-circumstances that were known or reasonably knowable *at the time* of the decision. Although perfection is not required when the risk of harm to the ratepayer is greater than normal, the standard of care expected from a reasonable person is higher. In applying the standard of reasonableness-under-the-circumstances, which in some instances means highly risky and expensive projects, the utilities are held to a higher than normal standard of care to compensate for the risk and added expense associated with project decisions. State commissions have, understandably, sometimes held utilities to a high standard of care when applying the reasonableness-under-the-circumstances test to the completion of a nuclear power plant, for example.

The proscription against using hindsight is a corollary to the reasonableness-under-the-circumstances test. Decisions made by the utility are not subject to Monday-morning quarterbacking. Instead, they are to be judged in light of the conditions and circumstances that were known or should have been known *at the time* of the decision. The final outcome is not relevant.

However, the proscription against hindsight does not relieve a utility of its duty under the prudence standard to be vigilant to changing facts and circumstances. It is not enough to have made a decision that was "prudent" at the time it was made, if with due diligence the utility would have discovered that the facts and circumstances that the decision was based on had changed. Utilities are under a constant duty to be prudent and, when the stakes are sufficiently high, to check continually to see if the facts and circumstances have changed. Further, where there is a great deal of uncertainty as to the facts and circumstances at the time a decision is made, the most prudent approach may be for a utility to build flexibility into its planned actions; in this case its acid rain compliance plans.

This guideline against hindsight is familiar to members of the legal profession. In most litigation, the issue of liability focuses on the facts and circumstances at the time an expenditure or decision occurred, and not on the final outcome. This allows for a time-proven, "fair," and reasonably efficient assignment of risk between investors and ratepayers, with investors bearing

the firm's "unsystematic" or "idiosyncratic" risks and ratepayers bearing "systematic" risks.

Unsystematic or idiosyncratic risk is related to the circumstances of a particular company, such as the risks associated with imprudent expenditures and decisions. Systematic risks are economy- or industry-wide, say, a prolonged or deep recession. The prudent investment test allows regulators to hold utility management responsible for unsystematic risks, while sheltering them (at least in part) from systematic risks beyond utility management control. Thus, commission use of the prudent investment test has held the utility accountable for risks that are particular to it (most of which are within the control of the utility management) and relatively harmless for most industry-wide risks outside of its control. This system of accountability seems sensible and consistent with the public interest. Many other systems of risk allocation and accountability, described later, might result in allocations that shift more risks to ratepayers.

The fourth guideline provides that once the presumption of prudence is overcome there be a retrospective, factual review to develop evidence about whether the investment decision was prudent at the time it was made. To do this, the evidence must be backward-looking. (No ongoing or periodic inquiry occurs because the presumption of prudence makes such an inquiry unnecessary.) The retrospective inquiry is factual; the commission is not seeking mere opinions. These facts should cover all the elements that did or could have entered into the decision, including all relevant information, decisionmaking tools, and the circumstances at the time. For example, it would be improper to use past data in a model to review a past decision if the model was not reasonably available in the past. The facts should also be aimed at helping the commission separate systematic from unsystematic or idiosyncratic risks.

Although one financial analyst⁴ has labelled the prudence test a form of "predatory regulation," it cannot fairly be said that state regulators on the whole have abused or misused the test. A study by Oak Ridge National Laboratory set the total disallowance from 1980 to 1986 for nuclear power plant construction at \$6.6 billion, of which \$3.4 billion was disallowed as imprudent. The remainder was disallowed as not being "used and useful" or as being excess capacity. At the same time, a \$70 billion capital investment was made in nuclear plants.

⁴ Charles M. Studness, "Excess Capacity and Imprudence," *Public Utilities Fortnightly* (March 15, 1991), 41-42.

Disallowances due to imprudence therefore represented only 4.8 percent of the capital expenditures eligible for rate base inclusion during this period.⁵

A later paper by Dr. John Anderson of the Electric Consumers Resource Council recounts that many utilities and their advocates claim that prudence disallowances have averaged 12 to 15 percent of construction costs. Dr. Anderson showed that the \$9.8 billion in prudence disallowances between 1980 and 1988 amounted to 6 percent of *all* steam-electric plant entering operation (\$156 billion) during that time.⁶ Given the increased risks utilities faced in constructing nuclear power plants, this does not seem to be an unreasonable amount that utility stockholders were called upon to bear. It is likely, given the uncertainty (primarily of the systematic risk variety) concerning fuel price premiums and the price of emission allowances, that state commissions will not hold utilities to quite as strict a standard in compliance planning as in constructing nuclear power plants.

It is important here to distinguish between the prudent investment test and the used-and-useful test. Unlike the prudence test, the used-and-useful test does not require that a loss be due to an idiosyncratic risk for it to result in a disallowance. Disallowances can be the result of losses due to a systematic, industry-wide risk. It is worth noting that approximately half of the disallowances associated with nuclear power plants were of the used and useful variety. Those disallowances associated with plant cancellation were partial disallowances in most states. Although disallowances due to plant cancellations were never recovered, most state commissions recognized that plant cancellations were due to systematic risk, namely an unforecasted drop in demand. Since the cause of the cancellations was systematic, state commissions typically required only a partial disallowance. "Disallowances" due to overcapacity were typically temporary and plants were phased into rate base over a schedule or as they became needed. Often the utility was allowed to collect allowances for funds used during construction (AFUDC) while the plant was

⁵ Oak Ridge National Laboratory, *Prudence Issues Affecting the U.S. Electric Industry* (Oak Ridge, TN: Oak Ridge National Laboratory, 1987).

⁶ A Presentation by Dr. John A. Anderson at the 102nd Annual Convention and Regulatory Symposium of the National Association of Regulatory Utility Commissioners, Orlando, Florida, November 15, 1990.

not in rate base so it experienced little or no losses.

It seems unlikely that a utility's actions taken to comply with the CAAA would not be considered used and useful. So long as a scrubber, fuel switching, or any alternative strategy has the desired result of lowering SO₂ emissions, the actions taken to fulfill the compliance plan will be held to be used and useful. Also, because of the relatively short timeframes involved, little danger exists that a compliance planning action once undertaken will be cancelled before it becomes "used and useful." (This is in contrast to the case of nuclear power plants which commonly took in excess of ten years to build, during which time the facts and circumstances that initially justified its construction could have changed leading to a prudent decision to cancel the plant--a prudent decision that nevertheless left the plant not used and useful. This highlights the prudence test as **the** relevant test for compliance planning.)⁷

As noted at the beginning of Chapter 5, § 403(f) of the CAAA specifically permits state commissions to engage in prudence reviews of utilities' allowance trading and compliance plans. If the prudent investment test were applied to compliance planning, one might expect state commissions to assume the utilities' compliance plan is the lowest-cost alternative. Given the uncertainties of the cost of premium low-sulfur fuels, the as-yet uncertain cost of advanced coal burning technologies, the marginal cost of conservation and energy efficiency, the marginal cost of scrubbers, and the unknown and uncertain future value of emission allowances, the presumption of prudence could be challenged. Again, the standard of review is not one of perfection, but of making a reasonable decision given the facts and uncertainties that were part of the circumstances at the time. The process is similar to that faced by utilities preparing least-cost plans in states requiring them. Given the presumption of prudence and the consistent record of state commissions not applying hindsight in retrospective prudence reviews, utilities engaging in CAAA compliance planning have little to fear from the prospect of state commission scrutiny

⁷ While the authors contend that prudence is **the** relevant test for compliance planning, it is possible to imagine some extreme scenarios where "used and useful" might come into play. For example, a scrubber could become too expensive to operate relative to its savings, or a plant may become too expensive to operate once it has a scrubber, or cheaper bulk power becomes available, or there is a significant demand reduction.

unfairly using the prudent investment test. The prudent investment test would only "punish" a utility for failing to consider all options in attempting to make reasonable efforts to seek a least costly strategy for compliance. One likely way a utility would be held imprudent would be to plan compliance on a stand-alone basis without considering the effect of selling or buying emission allowances.

Preapproval⁸

Alternatives to the prudent investment test have been suggested, most involving a preapproval process, whether of the utility's planned actions or its expenditures. Preapproving planned actions means a state commission reviews a utility's investment proposal and agrees to support those expenditures prudently and reasonably undertaken to complete the project. Indeed, preapproving planned actions would not differ greatly from certifications of convenience and necessity, preapproval of security issuances, or least-cost planning processes already in place at state commissions. The only difference is that preapproving planned actions would specifically find that the utility's planning is prudent. Legislative action that contains a form of preapproval of utility compliance

⁸ Much of this subsection is drawn from Russell J. Profozich et al., *Preapproval of Major Utility Investments* (Columbus, OH: The National Regulatory Research Institute, 1981); and Burns et al., *The Prudent Investment Test in the 1980s*.

decisions for the CAAA has passed in Indiana and is now being discussed in several other states.

In the context of a commission reviewing a utility's CAAA compliance plan, preapproving planned actions would involve the commission making certain that the utility examined all of the options and arrived at a least-cost plan.⁹ Commission approval of the *plan* would guarantee support for reasonable and prudent expenditures made toward completing the compliance plan. The commission decision that the plan is prudent would be made contemporaneously when all of the uncertainties are still fresh in mind. There is little or no danger of hindsight from such a strategy. However, the state commission still may reserve the right to examine the reasonableness and prudence of *expenditures* toward the completion of the plan, and can require the utility to update periodically its compliance plan to reflect facts and circumstances as they change. This periodic updating might become part of the state's integrated or least-cost utility planning process.

A preapproval of *expenditures* refers to a state commission's approving the recovery of expenditures on a utility investment without the traditional retrospective, factual inquiry into whether the expenditures were prudent. Thus, a preapproval of expenditures could prove to be quite different from current commission practices. Preapproval of expenditures would seem unlikely to be implemented by a state commission, unless it were accompanied by a contemporaneous assessment of the prudence and reasonableness of the utility's expenditures by the commission or its staff. Such a close involvement by the commission or its staff might result either in the commission becoming "coopted" by the utilities or with the commission staff taking over the utility's management tasks. Neither is thought to be desirable. Moreover, most

⁹ Given the uncertainties involved in this type of prospective decisionmaking, the use of innovative administrative procedures--such as joint problem solving or the collaborative process--might be appropriate. See Robert E. Burns, *Administrative Procedures for Proactive Regulation* (Columbus, OH: The National Regulatory Research Institute, 1988).

commissions do not currently have the resources to commit to a detailed analysis of utility compliance expenditures that would seem to be required for preapproval.

As noted earlier, there are four significant problems associated with the preapproval procedure. The first is its potential financial impact that stems principally from its potential for both risk reduction and the shifting of risk from stockholders to ratepayers. This could be the case because not all of the uncertainties associated with compliance planning decisions can be reduced or eliminated; the remaining risks are shifted from shareholders to ratepayers. To see this, consider that there are basically several types of risk that the utility faces: market risk associated with changing supply and demand conditions (for example, fuel price changes or changes in the demand for electricity), technological risk associated with changes in technology (for example, equipment obsolescence), and regulatory risk, which results from unexpected changes in regulatory treatment or some future action by the commission.

Utility managers and investors are compensated for bearing the first two, technological and demand, risks in their rate of return, *to the extent they are within the utility's control*. Regulatory risk most would agree can and should be reduced. While regulatory risk potentially can be reduced by preapproval, preapproval in no way reduces technological and demand risks; it merely shifts these risks from utility stockholders to ratepayers. That is to say, those who bear the risks are not compensated for doing so.¹⁰ To avoid the socialization of risks (and losses) accompanied by the privatization of undue profits, any decrease in risk bearing on the part of the utility should be reflected by a decrease in the equity portion of the utility's rate of return.

Moreover, the concept of preapproval may be inconsistent with most current regulatory practices. Most states regulate their jurisdictional investor-owned utilities with rate-base/rate-of-return or cost-based regulation. A major and often cited disadvantage to cost-based regulation is that the utility has little or no incentive to minimize its cost where the firm's return on investment is not based on its performance. Retrospective reviews of utility actions evolved to counteract this lack of incentive (among other things). Removing the possibility of retrospective reviews with preapproval only serves to remove this rectification of cost-based regulation. Therefore,

¹⁰ In other words, there may be deterioration in the efficiency with which society bears risks.

lowering the rate of return with preapproval does not, in itself, insure cost minimizing behavior by the utility.¹¹

Steps can be and probably should be taken to reduce regulatory risk. One way is to make future regulatory actions more predictable. While there have been several proposals for preapproving compliance plans, expenditures, or both, a reasonable degree of predictability is all that is required to enable a utility to anticipate commission actions. These actions then can be considered by the utility when examining the various compliance options it faces.

It is appropriate for utilities to ask for and expect clear and relevant guidelines from their state public utility commissions on ratemaking treatment of allowances and compliance expenditures, and also the standard to be used for any future reviews of compliance planning decisions. As noted above, regulators might apply a prudence standard as the appropriate way to balance ratepayer and stockholder risks by having the ratepayers bear systematic risks, those beyond the control of the utility, while shareholders bear the unsystematic or idiosyncratic risks that are within the control of the utility.¹² If a prudence standard is applied, it is important that it be applied in a manner consistent with the way it was originally envisioned, a retrospective factual review of the utility's reasonableness given the facts and circumstances at that time, **without hindsight**. Without this standard, the cost of a retrospective review could be as much or more than the cost of a preapproval process. The possibility of a retrospective review has the important feature that it gives the utility a strong incentive to control its costs.

Critics of the traditional prudence test are exploring another option sometimes called a "rolling prudence review."¹³ Such a review involves preapproving the utility's planned actions and making a contemporaneous, periodic approval of the prudence of the utility's expenditures. The technique is closely akin to the preapproval of expenditures just described. The only major

¹¹ For a discussion of incentive-based regulatory methods see Kenneth Costello and Sung-Bong Cho, *A Review of FERC's Technical Reports on Incentive Regulation* (Columbus, OH: The National Regulatory Research Institute, May 1991).

¹² If the used and useful test did come into play, then some or all of the systematic risks are borne by the utility. See Burns et al., *The Prudent Investment Test*.

¹³ See footnote 2, this chapter, *supra*.

difference is the periodic, contemporaneous prudence reviews of expenditures--perhaps at significant construction milestones. For a state commission to engage successfully in a rolling prudence review, it would seem to need an independent, highly experienced engineering staff member on site to oversee utility construction expenditures as well as other financial experts qualified to judge the prudence of expenditures on a contemporaneous basis.

Even so, the lack of retrospection could create problems. Without some retrospection, a commission probably could not separate systematic from unsystematic risks. Also, there might be the problem of "hidden imprudence," an example of which, in another context, was bad welds in a nuclear power plant that went undiscovered until the plant was close to completion. Because of the seriousness of the hidden imprudence in that particular case, the plant was converted from nuclear to coal at considerable additional expense.¹⁴

This leads to the second problem associated with preapproval, it requires considerable resources, expertise, and involvement by the commission. Prudence, on the other hand, when applied correctly, requires fewer resources because of the "presumption of prudence." Some state public service commissions, particularly those experiencing severe budget reductions, may find it difficult to devote the resources required to examine in detail a utility's plan. Moreover, utilities will always know their system and their options better than anyone else. This underscores again the need for a regulatory treatment of allowances that minimizes the state public utility commission's involvement and is, as much as reasonably possible, self-enforcing.

¹⁴ The cost associated with the Zimmer plant is currently under review by The Ohio Public Utilities Commission.

The third problem with preapproval is that it is likely to lock the utility into its commission-approved plan of action. Once a utility has successfully negotiated a plan with the state public service commission and other parties, a task which will likely involve considerable time and effort, it is unlikely to seek changes to the specifics of the plan. Any deviation from the agreed-on plan is likely to reopen negotiations. As often has been seen in the past, changes in the price and availability of fuels can occur quickly and necessitate a change in an approved plan. Allowance price changes are likely also to necessitate changes in the plan, such as buying and selling arrangements. Depending on the particular features of the agreed plan, preapproval could also encourage large capital expenditures and a "go it alone" strategy, that is, if the plan does not require allowance purchases.

The fourth problem is that once the commission approves a plan of action, particularly if expenditures are guaranteed to be recoverable from ratepayers with no or limited retrospective review, then the utility is likely to become less vigilant in carrying out the plan. This again points to the possible need for a retrospective review. Preapproval does not increase the chance of fraud, since state public service commission can always take action when fraud is demonstrated. However, outright fraud by a utility is extremely rare. The problem is that under a preapproval scheme, a utility has less incentive to minimize cost and pursue ways to reduce cost beyond what is specified in the compliance plan, once the plan is preapproved by the state public service commission. Further, it is more difficult for a state public utility commission to expose things that the utility could have done (errors of omission) in contrast to things the utility actually did under a preapproval scheme than one using a retrospective review, because the utility has more complete first-hand information on its options than the commission.

Acknowledging that it is desirable for state public service commissions to take action to decrease regulatory risks, an alternative method is for a commission to issue clear guidelines stating the rules of the game "up front" for CAAA compliance. A specific statement, in as much detail as possible, outlining the commission's regulatory approach would tend to reduce regulatory risks to the utilities by making regulatory action *more predictable* but without the downside of shifting to ratepayers technological and demand risks that might be associated with a preapproval process.