

CHAPTER 10

SUMMARY AND CONCLUSIONS

While EPA has the primary administrative role in implementing Title IV of the CAAA, the state public utility commissions and FERC are probably the most important single actors in determining the development and success of an allowance market. The policies and actions they adopt with regard to their jurisdictional utilities to implement the CAAA will profoundly influence the cost of compliance and the extent the market is used by utilities. Estimates of the cost of implementing Title IV with command-and-control measures alone put the cost 50 to 75 percent higher than with the allowance trading system created by the amendment.¹ As noted, estimates of this potential savings vary from \$1 billion to \$3 billion annually. Since commissions will have, and in some cases already have had, considerable influence on electric utility compliance decisions, their policies and actions will determine how successful allowance trading will be and, therefore, how much of this projected savings is actually realized.

The CAAA is silent on the type of policies that commissions should adopt to implement the amendments. Title IV of the CAAA states that "[n]othing in this section shall be construed as requiring a change of any kind in any State law regulating electric utility rates and charges. . . ." It has been left to each state and FERC to implement the CAAA as they consider appropriate. While the CAAA does not directly mandate commissions to alter their regulatory procedures, the novelty of the allowance system makes it probable that changes will have to be made. The most significant of these changes will likely be development of rules and procedures to accommodate the allowances and the ratemaking treatment of the costs the utility incurs to comply with the CAAA.

¹ Paul R. Portney, "Economics and the Clean Air Act," *The Journal of Economic Perspectives* 4 no. 4 (Fall 1990): 173-181.

One consequence of an allowance trading system is that the number of options available to utilities is greatly expanded over that of command-and-control environmental regulation. In this sense, trading is a two-edged sword bringing opportunity and choice while increasing uncertainty, since under command and control utilities simply are told the required reduction and technology. The allowance trading system should not, however, be thought of as just a burden to be borne or an obstacle to be overcome, but as an opportunity for utilities and commissions to get the same level of reduction in SO₂ emissions for a lower cost than command and control. The question for state commissions and FERC becomes how to manage this uncertainty while taking advantage of this new opportunity.

Since the actions of the state commissions and FERC will greatly affect the allowance market's development, commissions may consider facilitating the allowance market's development, or at least try to avoid actions that may impede it. While individual commissions may not regard the development and success of an allowance market as their responsibility, ratepayers likely will benefit if it does develop successfully. If states adopt policies in the long-term interest of their ratepayers, then an allowance market will likely develop allowing at least some of the predicted savings to be realized. When one considers that the federal objective is to see that the market develops and is successful and that the state objective is to comply with the CAAA at least cost, then the result is that federal and state objectives are coincident.

Three significant policy questions that commissions will need to consider and resolve are: who are the beneficial owners of the allowances, what are the incentives provided to the utility from the ratemaking treatment of compliance costs and allowances, and, how should the commissions manage the uncertainty associated with compliance planning?

Beneficial Ownership of Allowances

One of the more important issues for commissions to resolve is who are the beneficial owners of the allowances. While it is quite clear that Congress intended the legal title and ownership of emission allowances to be with the utility, the allocation of allowances--including bonus allowances--reflects an equity judgement by Congress. The allocation was not meant to be

a give-away or subsidy, but was an effort to cushion rate shock related to the cost of acid rain compliance with the allowance trading system intended to lower the overall cost of acid rain compliance nationwide.

Regulated utilities have a fiduciary duty to act as trustees of the public, in particular of ratepayers, under the regulatory compact. Because of this, ratepayers will often be considered the beneficial owners of the allowances while the utilities are the legal owners of the allowances.

As a result, the benefit resulting from the regulatory compact (or, stated another way, the fiduciary duty of the utility that benefits the customers) is the ability of the utility to use its allowances to lower its cost of compliance. The fiduciary duty of the utility to engage in compliance planning and allowance trading is consistent with its overall obligation to provide reliable service to customers at the lowest reasonable cost. In return, the public utility receives an opportunity to recover its prudently incurred expenditures and to earn a reasonable return on its prudently incurred investment. As beneficial owners to the emission allowances, ratepayers are third-party beneficiaries to any sale or use of the allowances.

Since the initial allocation of allowances is associated with a particular affected unit, a commission could examine the proportion to which the plant is depreciated to determine how much of the beneficial ownership of the allowances "belongs" to the utility and how much is the ratepayers'. One would expect that most of this beneficial ownership would be found to accrue to the ratepayers because many of the underlying assets are older coal-fired plants likely to be fully depreciated. In this case, the beneficial ownership of the emission allowances associated with the fully depreciated plant would go entirely to ratepayers. The outcome of this determination will drive many subsequent decisions by commissions concerning compliance costs and allowances.

Ratemaking Treatment of Allowances

The ratemaking treatment of allowances is probably one of the most difficult and complex issues that commissions face with CAAA implementation. This is because the novelty of the allowance system means there is no exact analogy. Furthermore, the allowance system is to be integrated into an already complex system of state and federal regulation. Commissions are likely to begin by drawing upon previous experiences with similar assets and issues when determining a policy for CAAA compliance. This may include the regulatory treatment of the sale of assets (for example, financial, land, and so on), coal contracting and inventory, fuel price changes, and planning for future power supply (for example, integrated resource planning procedures).

Since there is no exact analogy for allowances, commissions should consider the particular qualities of allowances, including:

- (1) that the original allocation of allowances will be obtained at no cost from the Environmental Protection Agency and are associated with specific units;
- (2) that while the utility will have title to the allowances, because the utilities are regulated entities, beneficial ownership will, in many cases, reside with the ratepayers;
- (3) that both allocated and purchased allowances will have some market value, although uncertain at this time; and
- (4) that allowances will be required by many facilities that generate electricity and emit sulfur dioxide for the foreseeable future.

Commissions may also consider at least two features when developing their ratemaking policies that can be used as general guiding principles. First, that the reward or penalty from compliance planning decisions, including allowance trading, should be commensurate with the party taking the risk. That is, the ratemaking treatment should be symmetrical with respect to gains and losses. While it may appear obvious that the

risk taker should receive the reward or penalty, with compliance planning who took the risks will not always be obvious.

A second matter for commissions to consider is that the ratemaking process itself could introduce biases toward particular compliance options, other than those in the long-term interest of ratepayers. This means that attempts should be made to develop a ratemaking treatment that makes it in the utility's self-interest to comply in a manner that is also in the interest of ratepayers. One method is to develop an incentive mechanism for the ratemaking treatment of allowances and compliance costs. This would minimize commission involvement in the details of compliance planning, relieving it of the burden of developing a ratemaking treatment that covers every contingency that could arise. Developing an incentive-based ratemaking process is itself a complex task, but well worth the effort. This is not only because it could lead to lower compliance costs, but because it also could perhaps be applied to other future emission trading programs (for example NO_x or CO₂). A three-step mechanism is described in Chapter 9 as an example of an incentive-based ratemaking approach.

Managing Uncertainty

Another important consideration for commissions is that utilities face two important uncertainties associated with complying with the CAAA. The first is the future price of allowances. Since passage of the CAAA, forecasts have varied considerably (the highest price is six times the lowest) and are regarded in general as unreliable. Since the compliance option chosen by the utility is highly dependent on the allowance price, commissions should consider policies that recognize and try to accommodate this uncertainty. These policies include allowing utilities to participate in an allowance pool and enter into a mix of contracting arrangements to manage this risk. These include long-term, spot, and futures contracts.

The second uncertainty faced by utilities is the post-investment 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 at the time the decision was made be found by its commission in the future to be imprudent? To avoid this outcome and the harm that can be

caused by the fear of it, some have proposed that preapproving compliance plans, expenditures, or both be done to minimize the chance of this occurring. The goal is to manage the uncertainty associated with allowance trading and compliance decisions by not holding the utility responsible for factors that are beyond its control. As discussed in Chapter 6, there are several significant problems associated with this type of procedure.

Alternatively, to minimize their market risk, utilities should be allowed by their commissions to enter into agreements as a buyer or seller in the long-term, spot, forward, and futures markets (as hedgers), or all three, and in the EPA auction. If the risk, however, is shifted away from the utility toward ratepayers, then there is little incentive for the utility to manage its risk with these actions. Commissions may want to reserve their prerogative to conduct retrospective reviews of the contracts and other actions by the utility. Ideally, the responsibility should be the utility's to develop its own compliance and risk management strategy and be able to back up its assumptions and assertions if required. In exchange for this responsibility, the utility should be allowed to benefit from good decisions.

There are other means, besides preapproval, available to commissions to reduce regulatory risk. One is to make future regulatory actions predictable. While there have been several proposals for preapproval of compliance plans, expenditures, or both a reasonable degree of predictability (concerning the ratemaking treatment of compliance cost, for example) 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 commissions on ratemaking treatment of allowances and compliance expenditures.

It is important that these guidelines include the procedures and standards that will be used in future prudence reviews of compliance decisions. It is also important that this prudence standard be consistent with the way it was originally envisioned, principally, with no hindsight or "Monday morning quarterbacking." 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 is useful because it is a strong incentive to the utility to control its costs. To some extent, an incentive type of ratemaking system for allowances, such as the one discussed in

Chapter 9, requires that these guidelines be predictable and credible to the utility. After all, the utility must have assurances that the "rules of the game" will not change once decisions have been made. Also, to be consistent with providing an incentive to the utility for good decisions, the utility should bear the market risk associated with compliance planning. The market risk should not be shifted to ratepayers (as preapproval does) and then allow the utility a share of any gain from allowance sales. In other words, the ratemaking treatment should be symmetrical with respect to the risks and rewards.

Preapproval actually may hinder the allowance market's development since there would be little incentive to minimize cost and use innovative compliance strategies such as allowance transactions. Commissions can, of course, require trading as part of an approved plan. However, forced allowance trading for the sake of trading will not necessarily lead to economic trading. Commission policy instead should be focused more on policies that provide the utility an incentive to seek an innovative and flexible compliance strategy. The utility typically knows its system and capabilities better than the commission and can, therefore, develop a more effective strategy--if provided the proper incentives. A self-regulating mechanism that gives the utility an incentive to comply at the least-cost will both lead to more economical trading decisions by the utility and benefit ratepayers in the long run.

Designing General Regulatory Guidelines

These three issues, beneficial ownership of allowances, incentives from ratemaking treatment, and managing uncertainty, fit together to form more general policy guidelines. From this discussion it is clear that commissions can take several actions to ensure that their jurisdictional electric utilities make decisions in the long-term interest of ratepayers, while at the same time foster the development of an allowance market. One action is to develop clear and credible regulatory guidelines that include the specific ratemaking treatment of the initially allocated allowances; purchased, sold, and banked allowances; and capital and fuel expenditures made for CAAA compliance. Developing guidelines can reduce the regulatory uncertainty associated with the utility's compliance decisions. These guidelines should be developed in

advance by the commission and should provide sufficient detail so the utility can predict, with a reasonable degree of reliability, regulatory outcomes when conducting compliance planning.

When developing these guidelines states may consider that a market is more likely to develop if states adopt policies that encourage economical trading and banking of allowances, and that encourage utilities to choose the lowest-cost compliance option. Commissions should consider carefully the incentives a utility receives and the consequences of the commission's actions on its compliance choice. While the effect of commission action on the emerging allowance market may not concern the individual commission, commission policies that give utilities an incentive to comply with the CAAA in a least-cost manner, mean the allowance market likely will develop and generate the predicted savings.

Three overall policy elements should be considered for these policy guidelines. First, as noted, they should provide the utility with a reasonable degree of predictability. The description of the regulatory treatment should be sufficiently detailed so the utility in making its compliance decisions can reasonably predict what the regulatory treatment will be. Again, this treatment need not necessarily include a preapproval of a specific compliance plan. Commissions may need to preserve a process of retrospectively reviewing compliance decisions since these procedures were developed, in part, to alleviate the lack of incentive the utility has to minimize costs under cost-based regulation.

Second, the guidelines should allow utilities flexibility in choosing compliance options. By allowing flexibility, the commission increases the number of compliance options considered by the utility and permits the utility to seek feasible and innovative alternatives, including buying and selling allowances. Other possible options include repowering, redispatching existing units, purchasing power from others, switching to lower sulfur coal, installing scrubbers, adopting innovative clean coal technologies, and pursuing conservation to reduce demand. The guidelines themselves should be somewhat flexible since there has been no previous experience with a trading system on this scale and since no commission has had to deal with a similar asset. For this reason, it is likely that changes to the guidelines will be required over time.

Third, and perhaps most important, commissions can adopt a ratemaking treatment that provides the utility with an incentive to minimize its net compliance cost. The treatment can be

structured in such a way that the commission's involvement in the actual compliance decisions of the utility is minimized. The primary goal is to minimize the cost of compliance to ratepayers by providing the utility with an incentive to minimize its own costs. This will help ensure that the utility makes decisions in the long-term interest of ratepayers that, again, has the incidental effect of fostering the allowance market.

The common elements of a ratemaking treatment designed to minimize the cost of compliance to ratepayers include flexibility, predictability, a lack of bias, and symmetry in the treatment of risk and gains or losses. While these features alone do not guarantee that the allowance market will succeed, they are a start. When Congress established a market-based allowance system to limit SO₂ emissions in the CAAA, it created a new asset. The national allowance market, if it develops successfully, will determine these allowances' prices or values and the cost of compliance to ratepayers. State commissions and the FERC will be determining the value of the allowances for ratemaking purposes and sending signals to their jurisdictional utilities on how to comply. While the individual commissions may not regard the development and success of an allowance market as their responsibility, it is clear that the market's fate is in their hands. From the perspective of individual commissions, creation of the allowance market provides an opportunity for utilities to comply with federal pollution control standards at a lower cost than previous environmental regulation.