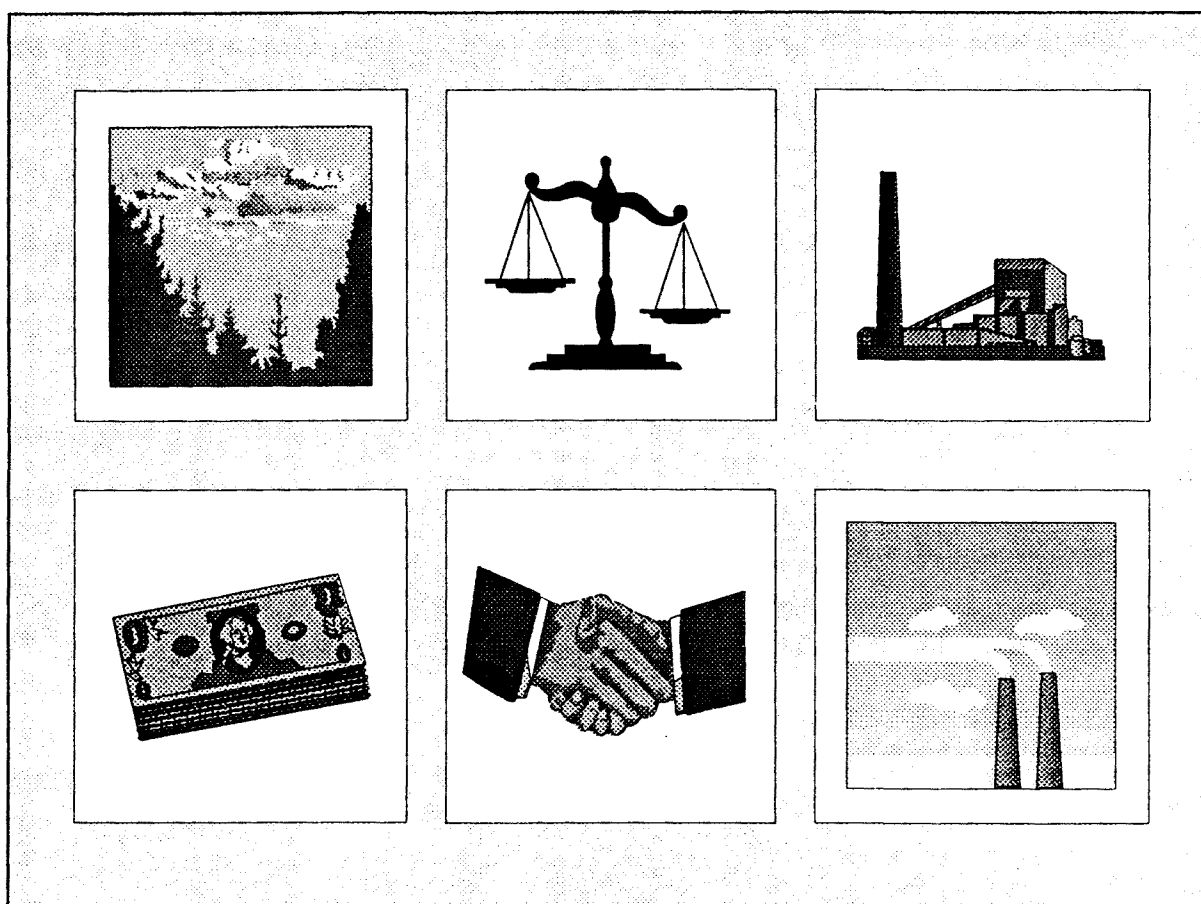


Cleaning the Air at Least Cost: PUC Options for Treatment of SO₂ Allowances



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Executive Summary

The sulfur dioxide (SO₂) emission allowance trading system, authorized under the Acid Rain Program of the Clean Air Act Amendments of 1990, is expected to save the nation \$1 to 2 billion or more per year over the cost of traditional command and control regulation of acid rain emissions. One of the major barriers to active trading of allowances, however, has been regulatory uncertainty. To date, only 9 State Public Utility Commissions (PUCs) have issued formal guidance on the ratemaking treatment of SO₂ emission allowances. The Federal Energy Regulatory Commission has issued rules on the accounting treatment of emission allowances, but similarly has not addressed their rate treatment.

This report will suggest options for PUCs to consider for guiding electric utilities on allowance trading and rate treatment. After discussing how the Integrated Resource Planning (IRP) process can be easily amended to address allowance trading as part of a least-cost compliance plan, the report suggests options in several areas. These include valuation of allowances, allocation of allowance ownership rights, risks and benefits, allowance cost recovery mechanisms and proceedings, prudence review of allowance transactions, and treatment of allowance reserves and pools. For many of these areas, three classes of options are possible: traditional ratemaking and modest and complex incentive approaches to treatment of emission allowances. It is hoped that discussion of these options will assist States in the process of developing their own emission allowance guidance that best fits their own circumstances.

This report also includes technical appendixes with two alternative model regulations for ratemaking treatment of allowances that may be used or adapted by States. A PUC, in adopting a ratemaking treatment for allowances, might also find it useful to consider language in this report for a preamble to State regulation of SO₂ allowances.

Cleaning the Air at Least Cost:

PUC Options for Treatment of SO₂ Allowances

1. The Need for Regulatory Guidance

The Acid Rain Program of the Clean Air Act Amendments of 1990 (CAAA) authorized the U.S. Environmental Protection Agency (EPA) to create an innovative system of tradeable sulfur dioxide emission allowances for affected electric utilities. EPA issued most of its implementing rules and regulations in early 1993.¹ This system is unique in that it requires a partnership between the EPA, electric utilities, the Federal Energy Regulatory Commission (FERC), State Public Utility Commissions (PUCs), and State air pollution control agencies for successful least-cost implementation and compliance with SO₂ reduction requirements.

As of April 1994, only nine PUCs have addressed the trading and ratemaking treatment of emission allowances. Four States, Ohio, Pennsylvania, Wisconsin, and Iowa, have issued generic ratemaking guidance. Four additional States, Indiana, West Virginia, Maryland and Connecticut, have given guidance on allowances through the issuance of orders in specific cases. Additionally, New York has issued interim guidance. This dearth of PUC guidance is especially troubling because Phase I acid rain compliance deadlines begin next year. Uncertainty over PUC treatment of allowances has been cited by regulators, many utilities and others as a hindrance to the full development of an efficient national market in allowances and realization of full economic benefits to consumers.²

Since emission allowances are a new and unique commodity with no exact model or precedent, State PUCs need to provide guidance to electric utilities in order to minimize regulatory uncertainty

about rate and accounting treatment of allowances and acceptable acid rain compliance options or plans.³ The novelty of the allowance trading system makes it likely that some changes in regulatory procedures and decisions will have to be made. Guidance is needed from PUCs instead of from EPA because Section 403(f) of the CAAA appropriately preserves State and FERC jurisdiction over electric utility regulation. Moreover, PUCs are in the best position to determine what are the best compliance plans for their investor-owned utilities. If more guidance is not issued, the large cost savings expected from the Acid Rain Program as compared with command-and-control regulation, perhaps more than \$2 billion a year, may not be realized.

Regulatory guidance should be issued as soon as possible irrespective of the compliance exposure in a particular State. For example, utilities in the 21 Eastern states that must meet acid rain compliance deadlines for Phase I (which begins in 1995) may have the greatest urgency for consideration of allowance trading among their compliance options. Yet Phase II utilities, whose compliance requirements begin in 2000, are currently making strategic planning decisions. These utilities may have tremendous financial opportunities in the allowance trading market. For example, the currently traded price of an allowance is low, perhaps under \$200, and utilities that project a need for additional allowances in Phase II can take advantage of the low prices by buying allowances today and banking them for future use. On the opposite side, many states have utilities with surplus allowances because of earlier State acid rain laws or strict State Implementation Plans or visibility requirements under the CAAA (e.g., many Western utilities are in this position⁴). These utilities can benefit ratepayers and possibly shareholders by participating now in the allowance market.

2. Integrated Resource Planning, Compliance Planning and Allowance Trading

The formal acid rain compliance plan requirements are detailed in EPA's Acid Rain Permits rule that was promulgated on January 11, 1993⁵. These requirements are very streamlined compared to past air pollution compliance planning requirements. In Phase I, the EPA is the permitting authority, and in Phase II the State air agency will generally issue the acid rain permits. State PUCs may well find it useful to require affected utilities to submit for review more detailed acid rain compliance plans than the plans submitted to EPA for permit issuance. Many States have already done so. Guidance on plan development and implementation by the PUCs in coordination with State air agencies would be helpful and in the best interest of least-cost compliance.

Good acid rain compliance planning should have many of the same features of, and should be integrated with, a well-designed integrated resource plan (IRP) or planning process.⁶ Some of these features are:

- The plan should be system-wide and comprehensive.
- The plan should be transparent with clearly documented assumptions.
- The plan should consider a reasonably large number of scenarios and compliance options or portfolios (e.g., low and high-sulfur coal prices, gas prices and availability, cost and availability of renewable energy generation and independent power production, scrubbing and allowance trading costs, early retirement and life extension of power plants).
- The plan should consider risk and uncertainty of the compliance options.
- The plan should encourage flexibility to respond to changing market conditions.

- The plan should consider the modularity of the compliance options, i.e., the ability of the options to be implemented incrementally.
- The plan should consider the potential for energy efficiency in a least-cost compliance strategy (i.e., EPA's Conservation and Renewable Energy Reserve allowances, reduced utilization of Phase I units, and system-wide emissions reduction through energy conservation).

Allowance trading deserves particular attention from PUCs in an IRP or compliance plan because it is a newer and less familiar option. A good resource or compliance planning process is generally well suited to accommodate allowance trading and should consider all aspects, i.e., the purchase, sale, freeing-up (through over-control of high-SO₂ emitting units), and banking of allowances and allowance futures and options. In general, a utility with low direct SO₂ reduction costs will find it profitable to over-control and sell excess allowances, while a utility with high SO₂ reduction costs will find it more cost-effective to purchase allowances on the market.

3. Accounting v. Ratemaking and the FERC Rules

a. Allowance Accounting

It is the general practice in the field of utility regulation for the accounting treatment of costs to flow from the ratemaking treatment of those costs or transactions. This follows from the historical flexibility of utility accounting practices. Soon after passage of the CAAA, several observers speculated on the accounting treatment of emission allowances through the use of existing accounts.⁷ The FERC, however, has largely preempted this approach through the promulgation of new accounting rules for emission allowances.

The FERC issued final rules in March 1993 that revise their Uniform Systems of Accounts (USofA)

to include allowances under the CAAA.⁸ The FERC issued its allowance accounting rules *before* its ratemaking rules apparently because it foresaw the need for uniform changes in its accounting procedures, while being less certain of what changes might be required in ratemaking.⁹ In the rules, the FERC does not prescribe the ratemaking treatment of allowances under its jurisdiction or that of any state PUC, i.e., the rules are intended to be "rate neutral".

There is some concern, however, that PUCs may look to generally accepted accounting principles (GAAP) as reflected in the USofA to provide a framework for ratemaking treatment out of convenience and unintentionally bias compliance choices. In particular, until cost recovery procedures for allowances are universally adopted by the FERC and the States, there will be uncertainty about the cost recovery mechanism, timing, valuation, and PUC scrutiny of allowance market transactions. These concerns underscore the need for all Commissions to adopt allowance ratemaking procedures.

The FERC accounting rules amend the USofA to create new accounts for allowances in Balance Sheets, Operation and Maintenance Expense, and Income Statements. This is accomplished by classifying the initial allowances as inventory and anticipating the creation of regulatory assets and liabilities to result from allowance rate actions of electric regulatory commissions. In addition, the rules designate several other existing accounts for additional allowance classifications, transactions, or penalties. These new accounts are summarized in Table A.

b. Valuation of Allowances

GAAP require that an asset be booked at the lower amount of acquisition cost or the market value. The allowances allocated to utilities by EPA, either the basic allowance allocations or various bonus allowances, are issued at no direct cost and thus these allowances must be booked by the utility at zero cost. Valuation of allowances is also discussed in the FERC rules, which address several

other situations that can occur besides that of allocated or bonus allowances. These include allowance auctions and other unbundled market transactions, utility affiliate allowance transfers, allowances acquired through exchanges, and bundled fuel or power pool purchases.

The FERC rules require that allowances shall be valued generally at historical cost, i.e., the amount of cash or its equivalent paid to acquire an allowance. A weighted average cost method would then be used for determining the cost of allowances issued from a utility's inventory. Thus the zero-value allowances, once traded, would be valued, like allowances sold through an auction, at their most recent purchase price. The FERC rules similarly require that allowances received in exchanges shall be valued based on the inventory value of the allowances traded. If a utility exchanges one set of allowances plus "boot" (monetary consideration) for another set of allowances, the value of the acquired allowances would be the sum of the inventory cost of the allowances traded and the boot paid.

Allowance trades between utility affiliate companies would be valued at the fair market value. The FERC reversed its proposed rule, which would have valued such transactions at the initial inventory cost. This change in valuation method was made in the interest of system-wide least cost compliance planning, i.e., so that affiliate allowance trades would not be discouraged and the number of accurate allowance market price signals would be increased. This, in turn, will facilitate the development of the allowance market. Allowances acquired in a bundled purchase with fuel or power, or through a purchase stream over time, would also be valued at their fair market rate at the time of purchase. If fair market value cannot be determined for an allowance stream, a discounted present value approach based on the interest rate for ten-year U.S. Government bonds will be used. The FERC's fair market valuation of allowances transferred between utilities engaged in wholesale power sales surmounts the ratemaking problem of allocated allowances having zero value, since under most regulatory embedded cost-based formula rates incremental charges are not recoverable from ratepayers.

Table A
FERC ALLOWANCE ACCOUNTING CATEGORIES

Account #	Name of Account	Comments
158.1	Allowance Inventory	<ul style="list-style-type: none"> • Main account for allowances owned by utility. • Records costs of allowances. • Account is credited when allowances are used.
158.2	Allowances Withheld	<ul style="list-style-type: none"> • Covers allowances <u>withheld</u> by EPA for annual allowance auctions. • Once allowances are purchased in auctions, costs of allowances are transferred to the Allowance Inventory account (#158.1).
509	Operation and Maintenance Expense	<ul style="list-style-type: none"> • Account debited when allowances are used. • Debits are concurrent with monthly SO₂ emissions.
426.3	Penalties	<ul style="list-style-type: none"> • Charges for excess emissions penalties.
124	Other Investments	<ul style="list-style-type: none"> • Accounts for allowances acquired for speculative purposes.
254	Other Regulatory Liabilities	<ul style="list-style-type: none"> • Accounts for gains from general (nonspeculative) allowance trades by credit, or deferral when there is regulatory uncertainty.
182.3	Other Regulatory Assets	<ul style="list-style-type: none"> • Accounts for losses from general (nonspeculative) allowance trades.
421	Miscellaneous Nonoperating Income	<ul style="list-style-type: none"> • Below the line account for gains from speculative allowance trades.
426.5	Other Deductions	<ul style="list-style-type: none"> • Below the line account for losses from speculative allowance trades.
186	Miscellaneous Deferred Debits	<ul style="list-style-type: none"> • Non-speculative futures/options contracts. • Used to hedge against unfavorable price changes.
253	Other Deferred Credits	<ul style="list-style-type: none"> • Non-speculative futures/options contracts. • Used to hedge against unfavorable price changes.
407.4	Regulatory Credits	<ul style="list-style-type: none"> • Credits for allowance gains on income statement (regulatory assets).
407.3	Regulatory Debits	<ul style="list-style-type: none"> • Debits for allowance losses on income statement (regulatory liabilities).
411.8	Gains from Disposition of Allowances	<ul style="list-style-type: none"> • Credits for allowance gains on income statement (non-regulatory assets).
411.9	Losses from Disposition of Allowances	<ul style="list-style-type: none"> • Debits for allowance losses on income statement (non-regulatory liabilities).

4. Beneficial Allowance Ownership, Risks and Rewards

The principal factor that should determine whether the ratepayers or utility shareholders receive any available gains or losses from allowance trading is who "owns" the traded allowances. While the legal title and ownership of the allowances rests with the utilities, the "beneficial" ownership of the allowances will typically lie with the ratepayers if the risk and reward or penalty from allowance trading is symmetrical.¹⁰ The initial allowance allocation by the EPA to the electric utilities is based on fuel consumption and SO₂ emission levels of generating units, for which the underlying costs (e.g., fuel, operating costs, depreciation, etc.) is normally paid for by ratepayers. In some cases, States have imposed earlier or more stringent air pollution control limits that result in compliance by their utilities with the emission reductions required under EPA's Acid Rain Program before the deadlines in the CAAA. In these cases, the allowances will also have been usually "paid for" by the ratepayers.

State PUCs have used a "burdens and benefits" or "risk and rewards" test in determining how to treat a financial gain from the sale of utility property. This test uses three criteria: who financed the investment in the asset, who actually owned the asset, and who bore the risk of any decline in the asset's value?¹¹ The application of this test by PUCs confirms that they have long treated ratepayers as the beneficial owners of utility property.¹²

Under what conditions might the beneficial ownership of allowances lie with the shareholders? This could occur with below-the-line or speculative allowance transactions, or with allowances associated with newer power plants that are not fully depreciated or amortized. In addition, shareholders might have beneficial ownership of allowances if power plant capital or compliance costs are not in the utility's rate base and construction work in progress expenses were not collected from the ratepayers, e.g., because of a disallowance of imprudently incurred compliance costs.

In most cases, the allowances that a utility beneficially owns will be a small share of its total allowance inventory, normally much less than 20%. This will be the case because most PUCs will undoubtedly discourage or disallow speculative allowance transactions (as opposed to allowance price hedging) for ratemaking purposes, and prudence disallowances are likely to be rare or of small financial consequence. In addition, most of the allowances allocated to utilities are for older, fully depreciated power plants, at least during Phase I (1995-1999), and scrubber retrofits will normally be fully recoverable in rate base.

Even if a utility has little or no beneficial ownership rights to its emission allowances, there may be circumstances under which an incentive for engaging in allowance trading is called for, as long as the symmetry between risk and reward or penalty is still preserved. For example, in the current early stage of development of the allowance market, price and supply data may be scarce or unreliable. While most of the 30+ initial allowance trades have occurred at a low price, most utilities have not yet entered the market. The circumstances where incentives for trading may be useful will be explored in the next section.

5. Allowance Ratemaking Treatment Mechanisms and Procedures

This section will discuss three alternative approaches to ratemaking treatment of emission allowances. These options are based on several existing PUC ratemaking treatments and utility proposals, among other sources.¹³ They can be distinguished by the degree to which a special incentive is believed to be required or fair in order to optimally use the allowance market as part of a least-cost compliance strategy. These options, in reality, should be conceptualized as points along a continuum of a greater range of ratemaking options, and only serve to illustrate the major features of the different approaches. A PUC, in adopting a rate treatment for allowances, might consider the discussion that follows, along with

elements of earlier sections, for inclusion in a preamble to State regulations concerning rate-making treatment of allowances.

a. Option A - Traditional Ratemaking

Traditional ratemaking treatment of emission allowances would use a cost of service approach. This option would utilize existing ratemaking procedures and presumes that utilities already have sufficient incentive to use and trade for emission allowances when it is cost-effective to do so. These incentives arise from a utility's obligation to serve its ratepayers at the lowest reasonable cost and from regulatory lag.¹⁴ In many states this incentive is strengthened by risk-based, integrated resource planning (IRP) requirements, which can be extended to acid-rain compliance planning and competitive challenges under the Energy Policy Act of 1992. Thus, under this option, existing PUC mechanisms such as IRP reviews, fuel adjustment clauses, rate-of-return profit regulation, and *ex post* prudence review are viewed as adequate checks and balances to achieve least-cost compliance and economic use of the allow-

ance market. This section summarizes possible features of a traditional ratemaking approach to the treatment of SO₂ allowances. Appendix A contains model language for a policy statement and regulations based on this type of option.

This option would recognize in rate base the historical cost of holding allowances in the allowance inventory. A close analogy can be made between allowance inventory and fuel inventory, since generally the rate of allowance use will be a direct function of the rate of fuel use and the resulting SO₂ emissions (as measured by the Continuous Emissions Monitoring System) at a fossil fuel power plant. Once an allowance is used by a utility as part of its energy-related power production activity, its cost may be recoverable as an operation and maintenance expense in the same period. This expense would be recovered in most states through a fuel adjustment clause, energy cost rate, or a similar provision. Gains as well as losses (e.g. through allowance trading) would be similarly flowed through to ratepayers.

Traditional ratemaking allows for a reserve in a utility's fuel inventory and would also allow for a small allowance operating reserve as a contingency against unforeseen circumstances or emergencies such as power outages and adverse weather. Similarly, a utility may bank allowances for future use if this action is part of an overall compliance strategy. Allowances that are held (banked) for future use *could* be recovered through Allowance for Funds Used During Construction (AFUDC), including any carrying charge accrual. An alternative would be to allow carrying charge accrual to be recovered through a fuel clause. While the PUC will establish the general rate treatment for allowance reserves and banks, this does not assure that it will find prudent a particular level of reserves or banks held by the utility. The proper level of the reserve or bank will vary depending on a utility's particular operating situation, and the case for its level should be made by the company. The pooling of allowances between utilities provides a mechanism for lowering the number of allowances that would need to be reserved or banked. A utility may pursue allowance pooling but would not be required to do so.

OPTION A - TRADITIONAL RATEMAKING

Example

Ohio - Issued guidelines through a generic order dated March 25, 1993 to encourage all Ohio utilities to engage in economically justified allowance trading and apply to EPA for allowances from the Conservation and Renewable Energy Reserve. This includes requirements for an allowance trading report that describes trading plans, allowance reserves, and banks, and possibly participation in allowance pools, futures, and options markets. Revenues and expenses from allowance transactions will be reviewed in the annual Electric Fuel Clause proceeding, and flowed through to ratepayers on an energy basis, except for below-the-line transactions. Incentive treatment of allowances may be considered in the future on a case-by-case basis.

b. Option B - Modest Incentives

There may be circumstances under which a special incentive may be called for in order to encourage a utility to engage in cost-effective allowance trading. Advocates of this type of option contend that utilities will be asked to bear non-traditional risks in using the allowance market. These advocates argue that some utilities will be unwilling to take these risks because the experience of regulatory disallowances in the 1980s has created a highly risk averse and capital averse industry. Thus, according to this view, modest incentive mechanisms should be crafted so that ratepayers and shareholders each benefit from favorable allowance transactions, and accrue costs from unfavorable transactions, in direct proportion to the actual risks taken. Such an incentive could also help jump-start the allowance market and thereby increase the level of cost-effective trading and cost savings for consumers. This section summarizes possible features of a modest incentive ratemaking approach to treatment of SO₂ allowances. Appendix B contains model language for a policy statement and regulations based on this type of option.

The State PUC may determine that it is in the ratepayers' best interest if the utility has a special incentive to search out the allowance market and to engage in beneficial trading, particularly in the early stage of market development. In this case, the PUC could set the shareholders' share of gains and losses from allowance trading equal to the utility's allowed percentage rate of return on equity. The logic behind this analog is that while in financial markets a utility requires a reasonable rate of return in order to attract capital investment in the company, a utility needs a small share of potential gains from allowance trading in order to attract it to participate in this still relatively unknown market. This could be designed in the same manner as a shared savings incentive that is used in many States to encourage utilities to cost-effectively invest in energy efficiency programs. Admittedly the chosen percentage split may be arbitrary although it could be adjusted or phased out over time as trading experience is gained and market circumstances change.

When an allowance transaction occurs, the ratepayers' share of the allowances would be used to determine what portion of the gains or losses are flowed through to them, again by a fuel adjustment clause, energy cost rate, or similar provision. The remaining minority share of the gains or losses is retained by the company. As with the traditional ratemaking treatment, the modest incentive-ratemaking treatment does not obviate the need for *ex post* prudence review by the PUC.

There are other situations whereby an allowance trading incentive could be established by design or by default. These could include non rate-based, below-the-line or speculative allowance transactions, allowances associated with a newer power plant that is not fully depreciated, or a disallowance of imprudently incurred compliance costs that earned or freed-up allowances. The simplest of these cases may be the class of circumstances under which below-the-line transactions are recorded. For example, a utility may decide to establish an unregulated subsidiary to speculate in the market with allowances beyond its EPA allocation. In this case, a PUC could allow this activity as long as it is separated from the rate base.

OPTION B - MODEST INCENTIVES

Example

Connecticut - Issued a decision dated March 4, 1993 on a petition by the United Illuminating Company (UI) to sell an option for 5000 yearly or half of its excess Phase II allowances to the Wisconsin Electric Power Co. The Connecticut Department of Public Utility Control approved a 15%/85% shareholder/ratepayer revenue split from the potential sales, based on shareholder-funded expenditures for sulfur-free generation (nuclear power) that contribute to UI's projected allowance surplus. The ratepayers' share of the potential revenue would be placed in a reserve account to offset the cost of Phase II compliance. Any future surplus allowance sales would be subject to the same revenue splitting arrangement.

Similarly, if a utility has a power plant or scrubber that has not been fully depreciated and amortized, it may request that all or a portion of the remaining costs be taken off the books along with the allowances, to be funded by the shareholders without carrying charge deferral. Finally, if a utility suffers prudence disallowances associated with compliance expenditures (including nuclear power plant investment), any earned or surplus allowances associated with these costs should be regarded as beneficially owned by the utility to do with as it best sees fit. In each of these cases, there would be a direct incentive for the company to more vigorously trade allowances in order to increase the potential benefit to its stockholders.

Under the modest incentives option a utility could be encouraged to enter into and trade in an allowance pool with other utilities (perhaps in different regions of the nation) in order to minimize the number of allowances it needs to reserve or bank. A "carrot" for encouraging allowance pooling could be for a PUC to allocate utility shareholders a slightly higher share of any gains from allowances sold into an allowance pool (with symmetrical treatment for losses), while a "stick" approach would be for the PUC to give greater scrutiny to the level of allowance reserves and banks.

c. Option C - Market-Value Incentives

A third option for the rate treatment of allowances presumes that traditional ratemaking treatment of compliance costs has a bias in favor of scrubbing or fuel-switching, depending on the jurisdiction. This problem may be compounded by the valuation of allocated allowances at zero and the capital gains tax on the sale of such allowances (as discussed later). Thus, it can be argued that a more radical departure from traditional rate-of-return regulation is called for, one that utilizes a market-based incentive consistent with the market orientation of the allowance trading system. The promising precedence for a market-based incentive mechanism for allowances can be derived from shared-savings programs for energy conservation, power plant or scrubber performance standards and price-cap utility regulation.

The market-value incentives approach for allowances has been advocated by Rose of the National Regulatory Research Institute¹⁵, although similar proposals have been adopted or made by others such as Southern Indiana Gas & Electric Co., PSI, and the Chicago Board of Trade. The idea of this option is to create a strong incentive for a utility to minimize its SO₂ reduction costs. This mechanism would be designed to reward a utility for good performance within its control and to penalize it for poor performance within its control. This incentive could increase a utility's interest in adopting innovative and cost-effective emissions reduction options, more so than under Options A and B.

An essential feature of this option is the establishment of a benchmark price of allowances, which would create a standard against which a utility's compliance costs are measured. If the company's compliance costs per-ton of SO₂ reduced are less than the benchmark price, it would retain a share of the difference between its actual compliance costs and what the costs would have been at the benchmark rate. Any excess allowances could be sold by the utility. If its per-ton compliance costs exceed the benchmark price, the utility would be

OPTION C - MARKET-VALUE INCENTIVES

Example

Indiana - Issued a decision dated October 14, 1992 on a petition by Southern Indiana Gas and Electric Company (SIGECO) to preapprove its Clean Air Act Compliance Plan, which focuses on retrofitting the Culley Units No. 2 and 3 with scrubbers. Per this agreement, the Indiana Utility Regulatory Commission set a market benchmark price of \$365 at which any sales by SIGECO of EPA extension allowances would be credited to ratepayers on an energy basis. Consequently, if the sale price is different from \$365 per allowance the difference in revenues would be debited or credited below-the-line for shareholders. The decision also orders SIGECO to bank at least 10% of its allocated allowances in Phase I.

given rate recovery of either compliance costs based on the benchmark rate, or a predetermined portion of the difference between the actual compliance costs and compliance costs based on the benchmark rate. Cost recovery would occur periodically based on such a formula without the ratebasing of assets.

Two problems with this approach, which make it controversial, are the need for accurate determination of a utility's compliance costs and a benchmark allowance price. A third concern is that this option may result in large gains or losses assumed entirely by the utility. While the compliance costs can be reviewed in an IRP process, compliance planning, preapproval, rate case or related proceedings, they may be subject to extensive debate and alternative assumptions. A solution could be to base the utility's compliance cost recovery *only* on the benchmark price. Predetermination of a benchmark allowance price, however, especially in the early years of the market, may prove to be even more vexing. The best method might be to base the price on the fair market value of allowances, to the extent that it is known. That price, however, may initially change frequently, and a PUC would have to post the price in advance and apply it objectively. The price could be periodically adjusted to respond to a changing market, although frequent price adjustment would make compliance planning difficult.

d. Other Proposals

Some advocates of ratemaking incentives for allowance trading have argued that changes in the tax code are necessary to encourage allowance trades.¹⁶ Proponents of this proposal contend that a potential hindrance to allowance trading has been created by the Internal Revenue System (IRS) decision to tax the proceeds or capital gains from the sale of initially allocated allowances (with a historical cost of zero), typically at a 34% corporate income tax rate.¹⁷ The objection to this income taxation is that it fails to recognize the linkage between the allowance sale and any future costs necessitated by the transaction, e.g., the cost of a scrubber or the future purchase of replacement allowances. Consequently, the sale of any allocated allowances may be discouraged.

The proposed solution to this disincentive would be to use an investment tax credit mechanism, whereby a utility could choose to deduct the revenue from a sale of allocated allowances from the asset value, for rate purposes, of its investment in scrubbers or similar technology related to the sale.¹⁸ Alternately, a utility could reduce the depreciation amount in its cost of service for the emissions abatement property by an amount equal to such proceeds. This proposal assumes that the gain from the allowance sale is less than the utility's basis in emissions abatement property, and may not be applicable to other compliance options.

The proposed mechanism would allow gains from allowance sales to be gradually passed onto ratepayers using the amortization methods applied to the investment tax credit. And since it would not increase the utility's income tax burden, the proposal would remove the potential disincentive to sell allocated allowances.

EPA has not taken a position on this issue. Moreover, because the proposed solution would require either new federal tax law or a ruling by the IRS, it is not now applicable to PUC allowance ratemaking decisions.

6. Summary

It is urgent for the PUCs to issue policy guidance for electric utilities on the ratemaking treatment of sulfur dioxide emission allowances and acid rain compliance planning in order to reduce regulatory uncertainty and maximize the economic benefits of the allowance system. As of this writing, only nine Commissions have done so. Those that provide such guidance remove a key impediment for their utilities to pursue least-cost compliance with the CAAA and minimize rate impacts for their customers. A well-designed integrated resource planning process provides a logical place in which to integrate compliance planning, including allowance trading. The FERC issued major allowance accounting rules in early 1993 that can provide a reference point for ratemaking treatment without

prescribing it. These rules also require allowances to be valued generally at historical cost. Exceptions to the valuation rule will occur for allowance trades among utility affiliates and for bundled fuel and power pool purchases. In these cases the allowances should be valued generally at the fair market value.

While utilities retain the legal title and ownership of allowances, their "beneficial" ownership will typically lie with the ratepayers. This factor provides the basis for ratepayers to generally receive any rate gains or losses from allowance trades. Traditional ratemaking treatment presumes that a utility already has sufficient incentive to trade allowances and would flow gains or losses to ratepayers through a fuel clause or similar provision. Incentive ratemaking could set aside a share of trading gains or losses for shareholders, create a market-value incentive or permit below-the-line allowance trading:

Endnotes

1. *Federal Register*, Vol. 58, No. 6, January 11, 1993, pp. 3590-3766; *Federal Register*, March 23, 1993, Vol. 58, No. 54, pp. 15634-15717.
2. Resolution to Encourage States to Enunciate Policies on Treatment of Allowance Transactions, Adopted at the NARUC 1993 Summer Committee Meetings, San Francisco.
3. B.D. Solomon and K. Rose, "Making a Market for SO₂ Emissions Trading", *The Electricity Journal*, Vol. 5, No. 6 (July 1992), pp. 58-66.
4. C.V. Mathai, "Phase II Allowance Allocations and an Assessment of the Allowance Market in the West", *Air & Waste*, Vol. 43 (June 1993), pp. 839-844.
5. 40 CFR Part 72.
6. Mitchell's comprehensive 1992 survey of State IRP programs found that an increasing number of them have good IRP, especially Wisconsin and some in the West and Northeast. See C. Mitchell, "Integrated Resource Planning Survey: Where the States Stand", *The Electricity Journal*, Vol. 5, No. 4 (May 1992), pp. 10-15. See also E. Hirst, "Data and Analysis Needed to Prepare an Electric-Utility Integrated Resource Plan", Oak Ridge National Laboratory, Oak Ridge, TN, for suggestions about how to integrate IRP with acid rain compliance planning; and S. Brick, "Analysis of Utility Acid Rain Compliance Plans: A Discussion of Issues and Methods", pp. 75-90 in K. Rose and R.E. Burns, eds., *Regulatory Policy Issues and the Clean Air Act: Issues and Papers from the State Implementation Workshops*, Columbus, OH: NRRI 93-8; Final Report to the U.S. EPA, July 1993.
7. See, for example, B.D. Solomon and S. Brick, "State Regulatory Issues in Acid Rain Compliance", *The Electricity Journal*, Vol. 5, No. 2 (March 1992), pp. 20-27.
8. *Federal Register*, Vol. 58, No. 65, April 7, 1993, pp. 17982-18007.
9. K. Rose and R.E. Burns, "A Need to Act: The FERC, the State Commissions, and the Clean Air Act", *Public Utilities Fortnightly* (December 1, 1992), pp. 19-21.
10. K. Rose, R.E. Burns, et al., *Public Utility Commission Implementation of the Clean Air Act's Allowance Trading Program*. Columbus, OH: National Regulatory Research Institute, NRRI 92-6, May 1992, pp. 145-155.
11. D. Sponseller, "Accounting for Gains on the Sale of Utility Property", *Public Utilities Fortnightly* (May 16, 1985), pp. 49-52.
12. Note 11, op. cit., p. 150.
13. See, for example, The Keystone Center, *State Regulation of Allowance Trading: Final Consensus Report of a Keystone Policy Dialogue*. Keystone, CO: The Keystone Center, November 1993; K. Rose, A.S. Taylor and M. Harunuzzaman, *Regulatory Treatment of Electric Utility Clean Air Act Compliance Strategies, Costs, and Emission Allowances*. Columbus, OH: National Regulatory Research Institute, NRRI 93-16, December 1993; Braine, B., Mann, C. and Button, A., *Utility Ratemaking Options for SO₂ Emissions Allowances*. Fairfax, VA: ICF Resources, Prepared for Edison Electric Institute, January 1994.
14. L. Chalstrom, "Allowance Trading - No Need for States to Reinvent the Regulatory Wheel", *The Electricity Journal*, Vol. 6, No. 8 (October 1993), pp. 70-75.
15. K. Rose, "Regulatory Treatment of Allowances and Compliance Costs", pp. 117-140 in K. Rose and R.E. Burns, eds., op. cit.

16. ICF Resources, "Analysis of a Proposal for Tax Treatment of SO₂ Allowance Sales Revenue", prepared for Allegheny Power System, August 1992.

17. Internal Revenue Service, "Revenue Procedure 92-91, Regarding Income Tax Consequences of Air Emission Allowance Program Established by Clean Air Act Amendments of 1990", *Internal Revenue Bulletin* 1992-46, November 16, 1992.

18. A similar incentive proposal has been offered by D.R. Bohi and D. Burtraw, "Avoiding Regulatory Gridlock in the Acid Rain Program", *Journal of Policy Analysis and Management*, Vol. 10 (1991), pp. 676-684; D.R. Bohi and D. Burtraw, "Regulatory Aspects of Emissions Trading: Economic and Environmental Goals", *The Electricity Journal*, Vol. 4, No. 10 (December 1990), pp. 47-55.

Appendix A

Policy Statement and Rules For Trading and Ratemaking Treatment of Clean Air Act-SO₂ Allowances - Version I (Traditional Ratemaking)

- 1.01 General Policy.
- 1.02 Definitions.
- 1.03 Regulatory Oversight of Compliance Plans and Emission Allowance Trading.
 - (a) Acid Rain Compliance Plans.
 - (b) Conservation and Renewable Energy Reserve Allowances.
 - (c) Auctioned Allowances.
 - (d) Allowance Pools.
 - (e) Allowance Market Speculation.
- 1.04 Allowance Accounting.
 - (a) Accounting Treatment.
 - (b) Valuation.
- 1.05 Ratemaking Treatment of Emission Allowances.
 - (a) Valuation.
 - (b) Ratemaking Treatment.
 - (c) Fuel Adjustment Clause Rate Treatment.
 - (d) Allowance Reserves.
 - (e) Banked Allowances.
 - (f) Allowance Futures and Options Contracts.
- 1.06 Public Information and Confidentiality.
- 1.07 Prudence of Compliance Plans and Allowance Transactions.

1.01 General Policy.

The Commission expects the electric utilities of this State to engage actively in cost-effective allowance trading as part of a least-cost Acid Rain Compliance Plan to meet their requirements under Title IV of the Clean Air Act (CAA Title IV) to reduce sulfur dioxide emissions. Allowance trading has the potential to lower significantly the cost of complying with the CAA Title IV by increasing the flexibility of electric utilities to develop a

compliance plan from a broader range of compliance options and to lower the costs of methods of emissions reduction, such as fuel switching, flue gas desulfurization, and energy conservation. Recognizing that the development of a liquid market for allowance trading is therefore in the ratepayers' interest, the Commission promulgates these rules in order to reduce regulatory uncertainty regarding its policy toward allowance trading and the ratemaking treatment of allowances. The regulatory treatment of allowances, as set forth in these rules, will be based on traditional Commission mechanisms and procedures.

1.02 Definitions.

The following words and terms, when used in this rule, shall have the following meanings:

Acid Rain Compliance Plans - A utility plan to meet its requirements under CAA Title IV to limit or reduce emissions of sulfur dioxide and nitrogen oxides at affected units.

Affected Unit - A utility boiler or combustion turbine that is subject to a sulfur dioxide emission limitation under CAA Title IV.

Allocated Allowances - Allowances allocated by the U.S. Environmental Protection Agency (EPA) at no cost to affected units under CAA Title IV, either through annual allocations as set forth in 40 CFR 73.10, Tables 2 and 3, or through allocations based on the use of specified compliance options (e.g., substitution plan, Phase I extension plan, reduced utilization plan, energy conservation, renewable energy generation, or repowering plan) under 40 CFR parts 72 and 73.

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Allowance - An authorization under CAA Title IV to emit one ton of sulfur dioxide during or after a specified calendar year.

Allowance Futures Contract - An agreement between a futures exchange clearinghouse and traders to buy or sell an allowance on a specified future date at a specified price.

Allowance Options Contract - A contract that conveys the right, but not the obligation, to buy or sell an allowance at a certain price for a limited time. Only the seller of the option is obligated to perform and only if the buyer exercises the option.

Allowance Pool - A voluntary agreement between two or more utilities or other organizations to divide up an allocation of allowances among the pool members, based on mutually agreed upon conditions.

Allowance Reserves - Allowances held in reserve for non-speculative, short term use for contingencies or emergencies, such as unusual weather or forced plant outages.

Auction Allowances - Allowances acquired or sold through the EPA's annual allowance auctions, or through auctions held by another organization.

Banked Allowances - Allowances held in reserve for non-speculative, future use.

Below-the-line - Revenues and expenses that are not associated with utility operations and that are not used to set rates.

Boot - Something acquired or forfeited to equalize an exchange, usually monetary consideration.

Conservation and Renewable Energy Reserve - A reserve of 300,000 total allowances that are allocated under 40 CFR 73, subpart F on a first come, first-served basis by the EPA to an electric utility for avoided SO₂ emissions associated with qualified energy conservation measures or renewable energy generation that is implemented before the utility's Acid Rain compliance deadline.

Excess Emissions - Any emissions of sulfur dioxide in a year in excess of an affected unit's allowances that can be used under 40 CFR part 73 to authorize that year's emissions.

Fair Market Value - The amount at which an allowance could reasonably be sold in a transaction between a willing buyer and a willing seller, other than in a forced or liquidation sale.

Historical Cost - The amount of cash or its equivalent, if any, paid to acquire an allowance.

Integrated Resource Plan - A resource plan prepared by the electric utility and reviewed by the Commission that attempts to evaluate supply-side and demand-side utility resource options on an equal basis, while accounting for risk and uncertainty.

Speculation - The use of the allowance market including futures contracts or options to profit from expectations of future price changes.

Weighted Average Unit Cost of Inventoried Allowances - The total historical cost of the allowances that are in inventory at the end of the month and are eligible for use in the given year divided by the total number of allowances that are in inventory at the end of the month and eligible for use in the given year.

1.03 **Regulatory Oversight of Compliance Plans and Emission Allowance Trading.**

(a) **Acid Rain Compliance Plans** - No later than on June 1, 1994, each utility shall file with the Commission an Acid Rain Compliance Plan that details its plans for reducing emissions of sulfur dioxide and nitrogen oxides as required under CAA Title IV. The Plan shall include the plan submitted to the EPA and relevant portions of the Integrated Resource Plan (IRP) and contain additional information concerning all actions involving allowances (e.g., participation in the allowance trading market, use of allowance pools, futures and options contracts, actual allowance contracts and

contract offers, plans for participation in allowance auctions and to apply for allowances from the EPA's Conservation and Renewable Energy Reserve, etc). Revisions to this Plan shall be filed annually with the Commission by June 1 in subsequent years.

(b) Conservation and Renewable Energy Reserve Allowances - To the extent a utility is eligible, each utility shall apply to the EPA for Conservation and Renewable Energy Reserve allowances, based on any energy conservation and renewable energy programs that are included in its IRP, for any energy savings from energy conservation and renewable energy generation that are achieved on or after January 1, 1992 but before its compliance deadline. Additionally, each utility shall determine the extent to which these programs can be cost-effectively expanded and new ones instituted based on the test described in the IRP Order. In making such determination, the utility shall take account of the benefit of the market value of allowances that may be awarded by the EPA, as well as the value of allowances that may be saved through any energy conservation and renewable energy generation. Until the Conservation and Renewable Energy Reserve is depleted, each utility shall notify the Commission on an annual basis when it is ready to apply for these allowances so that the Commission can verify previous years' energy savings and certify whether each utility's application meets the requirements of the applicable EPA regulations. If a utility believes that it is currently ineligible to apply for these allowances because the Commission has not met the requirements under 40 CFR 73, subpart F for net income neutrality and least-cost planning, the utility should recommend to the Commission a mechanism or mechanisms that would make it eligible.

(c) Auction Allowances - Each utility should participate in the March 1995 auction of allowances that will be sponsored by the EPA and in subsequent ones sponsored by the EPA and by other organizations where such participation is prudent. In particular, each utility should compare the expected price of allowances in such auctions with the utility's internal costs of compliance, with

the expected price at which allowances could be sold or acquired by other means, and with the value to the utility of retaining allowances in an allowance bank or reserve.

(d) Allowance Pools - The Commission recognizes that allowance pooling arrangements that are consistent with CAA Title IV may be appropriate and can help minimize the number and cost of allowances that a utility will need to reserve or bank. Each utility may propose to the Commission its voluntary participation in an allowance pool with other utilities or other organizations, either outside of or within the regional power pool or electric reliability council, as part of its Acid Rain Compliance Plan under paragraph (a) of this section.

(e) Allowance Market Speculation - It is the Commission's policy that the expenses and revenues from speculative allowance transactions should not be reflected in a utility's rates. If a utility plans to speculate in the allowance market, it is required to give advance notification to the Commission along with details of the types of transactions and a method for insuring that expenses and revenues associated with such transactions remain below-the-line.

1.04 Allowance Accounting

(a) Accounting Treatment - The Commission adopts the Federal Energy Regulatory Commission's Balance Sheet and Income Statement accounting practices to record allowances held, allowances transacted, and allowance penalties. These accounts are:

- (i) Account 158.1 - For Allowance Inventory.
- (ii) Account 158.2 - For Allowances Withheld by the EPA.
- (iii) Account 509 - For debiting of Operation and Maintenance Expense when allowance are used.

- (iv) Account 426.3 - For booking of excess emissions penalties below-the-line when a utility does not hold enough allowances to cover its annual emissions of sulfur dioxide.
 - (v) Account 124 - Other Investments, for allowances acquired for speculative purposes by a utility.
 - (vi) Account 254 - Other Regulatory Liabilities, to account for gains from non-speculative allowance trades.
 - (vii) Account 182.3 - Other Regulatory Assets, to account for losses from non-speculative allowance trades.
 - (viii) Account 421 - Miscellaneous Nonoperating Income, to account for gains from the trading of allowances held for speculative purposes.
 - (ix) Account 426.5 - Other Deductions, to account for losses from the trading of allowances held for speculative purposes.
 - (x) Account 186 - Miscellaneous Deferred Debits, to account for the costs of non-speculative, commodity exchange-traded allowance futures or options contracts.
 - (xi) Account 253 - Other Deferred Credits, to account for the benefits of non-speculative, commodity exchange-traded allowance futures or options contracts.
 - (xii) Account 407.4 - Regulatory Credits, to account for a gain on a regulatory asset, on the Income Statement.
 - (xiii) Account 407.3 - Regulatory Debits, to account for a loss on a regulatory liability, on the Income Statement.
 - (xiv) Account 411.8 - Gains from Disposition of Allowances, to account for a gain other than on a regulatory asset, on the Income Statement.
 - (xv) Account 411.9 - Losses from Disposition of Allowances, to account for a loss other than on a regulatory liability, on the Income Statement.
- (b) Valuation - Each allowance shall be valued generally at historical cost, which for allocated allowances and Conservation and Renewable Energy Reserve allowances from the EPA equals zero. Inventoried allowances shall be valued at their weighted average unit cost. In calculating the weighted average cost, only allowances that are eligible for use during the current year shall be included in the calculation. Allowances received in exchanges shall be valued based on the inventory value of the allowances traded. If a utility exchanges one set of allowances plus boot for another set of allowances, the value of the allowances shall be the sum of the inventory cost of the allowances traded and the boot paid. Allowances acquired in a bundled purchase with fuel or power, through a purchase stream over time, or acquired from an affiliate company shall be valued at the fair market value at the time of purchase. If the fair market value cannot be determined for an allowance stream, a discounted present value approach based on the interest rate for ten-year U.S. Government bonds shall be used. When allowances are used by a utility, their expense shall be recognized monthly.
- 1.05 Ratemaking Treatment of Emission Allowances.**
- (a) Valuation - Allowances and non-affiliate allowance trades shall be valued for ratemaking purposes as defined in Section 1.04(b). Allowances traded by a utility to a holding company or an unregulated affiliate subsidiary company shall be valued at the higher of historical cost and fair market value. Allowances traded by an unregulated affiliate subsidiary company or holding company to a utility shall be valued at the lesser of the historical cost and fair market value.
- (b) Ratemaking Treatment - The allowance inventory shall be treated the same way as fuel inventory for ratemaking purposes and will be included

in rate base consistent with the Commission's practice for operating inventory items. Allowances in inventory will earn a return, in the same way as other rate base investments, equal to the allowed rate of return on rate base.

(c) Fuel Adjustment Clause Rate Treatment -

Electric utilities shall charge allowances (including fractional amounts) to expense in the month during which related sulfur dioxide emissions occur. Expensed allowances shall be recovered through the utility's fuel adjustment clause. Profits or losses on allowance transactions (the difference between the transaction price or fair market value, in the case of bundled or affiliate transactions, and the weighted average unit cost of inventoried allowances that are involved in the utility's transaction) shall be flowed through to ratepayers in the fuel adjustment clause on an energy (kWh) basis.

(d) Allowance Reserves - Each utility shall determine in its Acid Rain Compliance Plan under Section 1.03(a) the appropriate level of allowance reserves to include in its allowance inventory, which shall be no greater than the average emissions level for one month (8.333 percent) of sulfur dioxide that is expected for the year. The actual level of allowance reserves should be based on the probability of forced outages, adverse weather conditions, fuel quality variability, variability in electric load growth, and other factors.

(e) Banked Allowances - Each utility shall determine in its Acid Rain Compliance Plan under Section 1.03(a) the appropriate level of banked allowances to hold for future use, based on the expected conditions in the allowance trading market and factors internal to the company as specified in its IRP (e.g., plant retirements, load growth, etc.). The expense of banked allowances shall be recovered through Allowance for Funds Used During Construction, including any carrying charge accrual.

(f) Allowance Futures and Options Contracts - The Commission recognizes that allowance futures and options contracts offer electric utilities a means of price hedging to minimize the risks of

limited availability and unfavorable allowance price fluctuations. Profits and losses in the allowance futures and options markets will be treated in the same way as profits and losses on other allowance transactions, although these may include any costs and credits (including carrying costs) incurred to open, maintain and close the futures and options hedging position. To ensure such treatment, each utility should describe its strategy, if any, for using allowance futures and options in its Acid Rain Compliance Plan under Section 1.03(a). The costs or revenues from hedging transactions shall be deferred and the amounts included in allowance inventories when the applicable allowances are acquired, sold, or otherwise disposed of.

1.06 Public Information and Confidentiality

It is the general practice of the Commission to treat information submitted to the Commission concerning allowance trading, the Acid Rain Compliance Plan, and the IRP as public information. For good cause, each utility may file for confidential treatment of certain proprietary information, which may be examined by the Commission, Commission staff, an Administrative Law Judge, or the Consumer Advocate under a protective order or seal. Examples of information that may be considered confidential by the Commission include trade secrets, a utility strategy for allowance contract negotiations, marketing analyses, and private technical or financial work products or papers. The burden of proof for establishing a basis for confidentiality will be on the utility making the request.

1.07 Prudence of Compliance Plans and Allowance Transactions

None of the provisions of these rules constitute or imply a Commission finding of prudence and reasonableness concerning a utility's actual or potential allowance transactions or actions implementing the Acid Rain Compliance Plan, although there is a presumption of prudence. The prudence and reasonableness of such transactions and of

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actions implementing the Acid Rain Compliance Plan shall be determined by the Commission in ratemaking and other proceedings, as appropriate. A determination of the prudence and reasonableness of an allowance transaction or of actions implementing the Acid Rain Compliance Plan will be based on a retrospective, factual review using the information available at the time the transaction or action was undertaken. If a utility is not taking all reasonable actions to minimize its costs (including allowance costs) in the context of its Acid Rain Compliance Plan, the Commission will not allow the utility to recover from its ratepayers costs in excess of what would be or would have been incurred under prudent and reasonable policies and practices. If any such costs recovered by a utility from its ratepayers through the Fuel Adjustment Clause under Section 1.05(c) are found to be imprudent by the Commission, these costs shall be refunded with interest to the ratepayers through the Fuel Adjustment Clause.

Appendix B

Policy Statement and Rules For Trading and Ratemaking Treatment of Clean Air Act SO₂ Allowances - Version II (Modest Incentives)

- 1.01 General Policy.
- 1.02 Definitions.
- 1.03 Regulatory Oversight of Compliance Plans and Emission Allowance Trading.
 - (a) Acid Rain Compliance Plans.
 - (b) Conservation and Renewable Energy Reserve Allowances.
 - (c) Auctioned Allowances.
 - (d) Allowance Pools.
 - (e) Allowance Market Speculation.
- 1.04 Allowance Accounting.
 - (a) Accounting Treatment.
 - (b) Valuation.
- 1.05 Ratemaking Treatment of Emission Allowances.
 - (a) Valuation.
 - (b) Ratemaking Treatment.
 - (c) Fuel Adjustment Clause Rate Treatment.
 - (d) Allowance Reserves.
 - (e) Banked Allowances.
 - (f) Allowance Futures and Options Contracts.
- 1.06 Public Information and Confidentiality.
- 1.07 Prudence of Compliance Plans and Allowance Transactions.

1.01 General Policy.

The Commission expects the electric utilities of this State to engage actively in cost-effective allowance trading as part of a least-cost Acid Rain Compliance Plan to meet their requirements under Title IV of the Clean Air Act (CAA Title IV) to reduce sulfur dioxide emissions. Allowance trading has the potential to lower significantly the cost of complying with the CAA Title IV by increasing the flexibility of electric utilities to develop a

compliance plan from a broader range of compliance options and to lower the costs of methods of emissions reduction, such as fuel switching, flue gas desulfurization, and energy conservation. Recognizing that the development of a liquid market for allowance trading is therefore in the ratepayers' interest, the Commission promulgates these rules in order to reduce regulatory uncertainty regarding its policy toward allowance trading and the ratemaking treatment of allowances. The regulatory treatment of allowances, as set forth in these rules, will be based on modest incentives that are designed to encourage directly each utility to engage in allowance trading, by rewarding the utility for good performance and commensurately penalizing it for poor performance.

1.02 Definitions.

The following words and terms, when used in this rule, shall have the following meanings:

Acid Rain Compliance Plans - A utility plan to meet its requirements under CAA Title IV to limit or reduce emissions of sulfur dioxide and nitrogen oxides at affected units.

Affected Unit - A utility boiler or combustion turbine that is subject to a sulfur dioxide emission limitation under the CAA Title IV.

Allocated Allowances - Allowances allocated by the U.S. Environmental Protection Agency (EPA) at no cost to affected units under CAA Title IV, either through annual allocations as set forth in 40 CFR 73.10, Tables 2 and 3, or through allocations based on the use of specified compliance options

(e.g., substitution plan, Phase I extension plan, reduced utilization plan, energy conservation, renewable energy generation, or repowering plan) under 40 CFR parts 72 and 73.

Allowance - An authorization under CAA Title IV to emit one ton of sulfur dioxide during or after a specified calendar year.

Allowance Futures Contract - An agreement between a futures exchange clearinghouse and traders to buy or sell an allowance on a specified future date at a specified price.

Allowance Options Contract - A contract that conveys the right, but not the obligation, to buy or sell an allowance at a certain price for a limited time. Only the seller of the option is obligated to perform and only if the buyer exercises the option.

Allowance Pool - A voluntary agreement between two or more utilities or other organizations to divide up an allocation of allowances among the pool members, based on mutually agreed upon conditions.

Allowance Reserves - Allowances held in reserve for non-speculative, short term use for contingencies or emergencies, such as unusual weather or forced plant outages.

Auction Allowances - Allowances acquired or sold through the EPA's annual allowance auctions or through auctions held by another organization.

Banked Allowances - Allowances held in reserve for non-speculative, future use.

Below-the-line - Revenues and expenses that are not associated with utility operations and that are not used to set rates.

Boot - Something acquired or forfeited to equalize an exchange, usually monetary consideration.

Conservation and Renewable Energy Reserve - A reserve of 300,000 total allowances that are allocated, under 40 CFR 73, subpart F, on a first come, first-served basis by the EPA to an electric utility for avoided SO₂ emissions associated with qualified energy conservation measures or renew-

able energy generation that is implemented before the utility's Acid Rain compliance deadline.

Excess Emissions - Any emissions of sulfur dioxide in a year in excess of an affected unit's allowances that can be used under 40 CFR 73 to authorize that year's emissions.

Fair Market Value - The amount at which an allowance could reasonably be sold in a transaction between a willing buyer and a willing seller, other than in a forced or liquidation sale.

Historical Cost - The amount of cash or its equivalent, if any, paid to acquire an allowance.

Integrated Resource Plan - A resource plan prepared by the electric utility and reviewed by the Commission that attempts to evaluate supply-side and demand-side utility resource options on an equal basis, while accounting for risk and uncertainty.

Marginal Allowance Cost - The cost to an individual electric utility of acquiring an additional allowance from the allowance trading market, inclusive of broker fees, and including auction allowances.

Speculation - The use of the allowance market including futures contracts or options to profit from expectations of future price changes.

Weighted Average Unit Cost of Inventoried Allowances - The total historical cost of the allowances that are in inventory at the end of the month and are eligible for use in the given year divided by the total number of allowances that are in inventory at the end of the month and are eligible for use in the given year.

1.03 Regulatory Oversight of Compliance Plans and Emission Allowance Trading.

(a) **Acid Rain Compliance Plans** - No later than on June 1, 1994, each utility shall file with the Commission an Acid Rain Compliance Plan that details its plans for reducing emissions of sulfur dioxide and nitrogen oxides as required under CAA Title IV. The Plan shall include the plan submitted

to the EPA and relevant portions of the Integrated Resource Plan (IRP) and contain additional information concerning all actions involving allowances (e.g., participation in the allowance trading market, use of allowance pools, futures and options contracts, actual allowance contracts and contract offers, plans for participation in allowance auctions and to apply for allowances from the EPA's Conservation and Renewable Energy Reserve, etc). Revisions to this Plan shall be filed annually with the Commission by June 1 in subsequent years.

(b) Conservation and Renewable Energy Reserve Allowances - To the extent a utility is eligible, each utility shall apply to the EPA for Conservation and Renewable Energy Reserve allowances, based on any energy conservation and renewable energy programs that are included in its IRP, for any energy savings from energy conservation and renewable energy generation that are achieved on or after January 1, 1992 but before its compliance deadline. Additionally, each utility shall determine the extent to which these programs can be cost-effectively expanded and new ones instituted based on the test described in the IRP Order. In making such determination, the utility shall take account of the benefit of the market value of allowances that may be awarded by the EPA, as well as the value of allowances that may be saved through any energy conservation and renewable energy generation. Until the Conservation and Renewable Energy Reserve is depleted, each utility shall notify the Commission on an annual basis when it is ready to apply for these allowances so that the Commission can verify previous years' energy savings and certify whether each utility's application meets the requirements of the applicable EPA regulations. If a utility believes that it is currently ineligible to apply for these allowances because the Commission has not met the requirements under 40 CFR 73, subpart F for net income neutrality and least-cost planning, the utility should recommend to the Commission a mechanism or mechanisms that would make it eligible.

(c) Auction Allowances - Each utility should participate in the March 1995 auction of allowances that will be sponsored by the EPA and in subsequent ones sponsored by the EPA and by other organizations where such participation is prudent.

In particular, each utility should compare the expected price of allowances in such auctions with the utility's internal costs of compliance, with the expected price at which allowances could be sold or acquired by other means, and with the value to the utility of retaining allowances in an allowance bank or reserve.

(d) Allowance Pools - The Commission recognizes that allowance pooling arrangements that are consistent with CAA Title IV may be appropriate and can help to minimize the number and cost of allowances that a utility will need to reserve or bank. Each utility may propose to the Commission its voluntary participation in an allowance pool with other utilities or other organizations, either outside of or within the regional power pool or electric reliability council, as part of its Acid Rain Compliance Plan under paragraph (a) of this section. A utility that enters an allowance pool and sells allowances shall retain a share of profit (the positive difference between the sale price and the weighted average unit cost, described in Section 1.05), and the equivalent share of any loss. This share of profit or loss to be retained by the utility shareholders shall equal 11 percent.

(e) Allowance Market Speculation - It is the Commission's policy that the expenses and revenues from speculative allowance transactions shall not be reflected in a utility's rates. If a utility plans to speculate in the allowance market, it is required to give advance notification to the Commission along with details of the types of transactions and a method for insuring that expenses and revenues associated with such transactions remain below-the-line. An example of speculative allowance transactions would be those conducted by an unregulated subsidiary of a utility that are funded from below-the-line sources. In this situation, the subsidiary may be permitted to retain any profits or required to assume any losses from such transactions.

1.04 Allowance Accounting.

(a) Accounting Treatment - The Commission adopts the Federal Energy Regulatory Commission's Balance Sheet and Income Statement accounting practices to record allowances held,

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allowances transacted, and allowance penalties. These accounts are:

- (i) Account 158.1 - For Allowance Inventory.
- (ii) Account 158.2 - For Allowances Withheld by the EPA.
- (iii) Account 509 - For debiting of Operation and Maintenance Expense when allowances are used.
- (iv) Account 426.3 - For booking of excess emissions penalties below-the-line when a utility does not hold enough allowances to cover its annual emissions of sulfur dioxide.
- (v) Account 124 - Other Investments, for allowances acquired for speculative purposes by a utility.
- (vi) Account 254 - Other Regulatory Liabilities, to account for gains from non-speculative allowance trades.
- (vii) Account 182.3 - Other Regulatory Assets, to account for losses from non-speculative allowance trades.
- (viii) Account 421 - Miscellaneous Nonoperating Income, to account for gains from the trading of allowances held for speculative purposes.
- (ix) Account 426.5 - Other Deductions, to account for losses from the trading of allowances held for speculative purposes.
- (x) Account 186 - Miscellaneous Deferred Debits, to account for the costs of non-speculative, commodity exchange-traded allowance futures or options contracts.
- (xi) Account 253 - Other Deferred Credits, to account for the benefits of non-speculative, commodity exchange-traded allowance futures or options contracts.

(xii) Account 407.4 - Regulatory Credits, to account for a gain on a regulatory asset, on the Income Statement.

(xiii) Account 407.3 - Regulatory Debits, to account for a loss on a regulatory liability, on the Income Statement.

(xiv) Account 411.8 - Gains from Disposition of Allowances, to account for a gain other than on a regulatory asset, on the Income Statement.

(xv) Account 411.9 - Losses from Disposition of Allowances, to account for a loss other than on a regulatory liability, on the Income Statement.

(b) Valuation - Each allowance shall be valued generally at historical cost, which for allocated allowances and Conservation and Renewable Energy Reserve allowances from the EPA equals zero. Inventoried allowances shall be valued at their weighted average unit cost. In calculating the weighted average cost, only allowances that are eligible for use during the current year shall be included in the calculation. Allowances received in exchanges shall be valued based on the inventory value of the allowances traded. If a utility exchanges one set of allowances plus boot for another set of allowances, the value of the allowances shall be the sum of the inventory cost of the allowances traded and the boot paid. Allowances acquired in a bundled purchase with fuel or power, through a purchase stream over time, or acquired from an affiliate company shall be valued at the fair market value at the time of purchase. If the fair market value cannot be determined for an allowance stream, a discounted present value approach based on the interest rate for ten-year U.S. Government bonds shall be used. When allowances are used by a utility, their expense shall be recognized monthly.

1.05 Ratemaking Treatment of Emission Allowances.

(a) Valuation - Allowances and allowance trades shall be valued for ratemaking purposes as defined in Section 1.04(b). If the fair market value cannot be determined, the utility shall value allowances in the applicable circumstances as discussed in Section 1.04(b) at the marginal allowance cost.

(b) Ratemaking Treatment - The allowance inventory shall be treated in the same way as fuel inventory for ratemaking purposes and will be included in rate base consistent with the Commission's practice for operating inventory items. Allowances in inventory will earn a return in the same way as other rate base investments, equal to the allowed rate of return on rate base.

(c) Fuel Adjustment Clause Rate Treatment - Electric utilities shall charge allowances (including fractional amounts) to expense in the month during which related sulfur dioxide emissions occur. Expensed allowances shall be recovered through the utility's fuel adjustment clause. Profits or losses on allowance transactions (the difference between the transaction price or fair market value, in the case of bundled or affiliate transactions, and the weighted average unit cost of inventoried allowances that are involved in the utility's transaction) shall be flowed through to ratepayers in the fuel adjustment clause on an energy (kWh) basis at a rate equal to 90 percent. The utility shall thereby retain 10 percent of the profits; and assume 10 percent of the losses, from such transactions, subject to prudence review. The exact amount of the profit and loss to be assumed by the utility company and the basis for the continuation of this mechanism will be reviewed by the Commission periodically, as appropriate.

(d) Allowance Reserves - Each utility shall determine in its Acid Rain Compliance Plan under Section 1.03(a) the appropriate level of allowance reserves to include in its allowance inventory, which shall be no greater than the average emissions level for three weeks (6.250 percent) of sulfur dioxide that is expected for the year. The

actual level of allowance reserves should be based on the probability of forced outages, adverse weather conditions, fuel quality variability, variability in electric load growth, and other factors.

(e) Banked Allowances - Each utility shall determine in its Acid Rain Compliance Plan under Section 1.03(a) the appropriate level of banked allowances to hold for future use, based on the expected conditions in the allowance trading market and factors internal to the company as specified in its IRP (e.g., plant retirements, load growth, etc.). The expense of banked allowances shall be recovered through Allowance for Funds Used During Construction, including any carrying charge accrual.

(f) Allowance Futures and Options Contracts - The Commission recognizes that allowance futures and options contracts offer electric utilities a means of price hedging to minimize the risks of limited availability and unfavorable allowance price fluctuations. Profits and losses in the allowance futures and options markets will be treated in the same way as profits and losses on other allowance transactions, although these may include any costs and credits (including carrying costs) incurred to open, maintain and close the futures and options hedging position. To ensure such treatment, each utility should describe its strategy for using allowance futures and options in its Acid Rain Compliance Plan under Section 1.03(a). The costs or revenues from hedging transactions shall be deferred and the amounts included in allowance inventories when the applicable allowances are acquired, sold, or otherwise disposed of.

1.06 Public Information and Confidentiality.

It is the general practice of the Commission to treat information submitted to the Commission concerning allowance trading, the Acid Rain Compliance Plan, and the IRP as public information. For good cause, each utility may file for confidential treatment of certain proprietary information, which may be examined by the Commission, Commission staff, an Administrative Law Judge, or the Consumer Advocate under a protective order or

seal. Examples of information that may be considered confidential by the Commission include trade secrets, a utility strategy for allowance contract negotiations, marketing analyses, and private technical or financial work products or papers. The burden of proof for establishing a basis for confidentiality will be on the utility making the request.

1.07 Prudence of Compliance Plans and Allowance Transactions.

None of the provisions of these rules constitute or imply a Commission finding of prudence and reasonableness concerning a utility's actual or potential allowance transactions or actions implementing the Acid Rain Compliance Plan, although there is a presumption of prudence. The prudence and reasonableness of such transactions and of actions implementing the Acid Rain Compliance Plan shall be determined by the Commission in ratemaking and other proceedings, as appropriate. A determination of the prudence and reasonableness of an allowance transaction or of actions implementing the Acid Rain Compliance Plan will be based on a retrospective, factual review using the information available at the time the transaction or action was undertaken. If a utility is not taking all reasonable actions to minimize its costs (including allowance costs) and to acquire Conservation and Renewable Energy Reserve allowances in the context of its Acid Rain Compliance Plan, the Commission will not allow the utility to recover from its ratepayers allowance costs in excess of what would be or would have been incurred under prudent and reasonable policies and practices. If any such costs recovered by a utility from its ratepayers through the Fuel Adjustment Clause under Section 1.05(c) are found to be imprudent by the Commission, these costs shall be refunded with interest to the ratepayers through the Fuel Adjustment Clause.