



ENTERGY

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Haley R. Fisackerly
Federal Governmental
Affairs Executive

October 28, 1996

Mr. David B. Matthews *DM 11/1/96*
Chief, Generic Issues
Environment Project Branch
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Requested Meeting With You and Other Staff

Dear Mr. Matthews:

This is to follow up on our conversation of last Friday regarding our requested meeting with you and other appropriate staff of the U. S. Nuclear Regulatory Commission to discuss Entergy Corporation's concerns about the funding process for decommissioning nuclear power plants. We are aware of the NRC's interest in this subject, and we have submitted comments in response to your earlier advance notice of proposed rule making on this subject. We also had an opportunity to discuss this issue last month with Commissioner Greta Dicus, who suggested that we arrange a meeting with you to further discuss our concerns.

In anticipation of our meeting, I enclose two documents for your review. One is Entergy's comments submitted to the NRC in response to the advance notice of proposed rulemaking. The other is a white paper that we have prepared that identifies our concerns regarding adequate funding for decommissioning and the potential impact on the funding by increased competition and industry restructuring.

You stated that the earliest date for meeting would be in mid-November. The participants from Entergy will be Ms. Carolyn Shanks of Entergy Operations, Inc., Mr. Bill Bumpers of Baker & Botts, LLP., Mr. Bill Scherman of Skadden, Arps, Slate, Meagher & Flom, and myself. I will contact you within the next few weeks to determine a precise date of the meeting.

Sincerely,

Haley R. Fisackerly

Enclosures

cc: Mr. Don Hintz

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**RESPONSE TO THE NUCLEAR REGULATORY COMMISSION'S
ADVANCE NOTICE OF PROPOSED RULEMAKING ON
"FINANCIAL ASSURANCE REQUIREMENTS
FOR DECOMMISSIONING NUCLEAR REACTORS"**

I. INTRODUCTION

Entergy welcomes the opportunity to respond to the Nuclear Regulatory Commission's ("NRC") questions concerning financial assurance requirements for nuclear decommissioning, posed in the NRC's April 8, 1996 Advance Notice of Proposed Rulemaking ("ANPR") regarding Title 10, Part 50 of the Code of Federal Regulations. In the ANPR, the NRC raises concerns regarding the effect of the impending restructuring of the electric utility industry on the funding of nuclear plants' decommissioning obligations. Entergy shares the NRC's concerns as to the negative impact restructuring could have on adequate decommissioning funding. While Entergy believes that the growth of competition in the electric industry is desirable, Entergy also believes that the introduction of competition will lead inevitably to some form of restructuring, which, in whatever form it takes, could undermine the current funding mechanism for decommissioning costs. Therefore, Entergy emphasizes in its comments that the NRC should act now to assure continued adequate funding of the federally-imposed nuclear decommissioning obligation, regardless of predictions as to the scope, nature or timing of electric utility industry restructuring. The nuclear decommissioning obligations are known today and action must be taken today to assure the public health and safety with respect to nuclear plants.

The oversight and creation of nuclear decommissioning obligations was, appropriately, established as a federal issue. See Atomic Energy Act of 1954, ch. 1073, 68 Stat. 921. The decommissioning obligation is, for many reasons, a federal mandate; and it is a mandate that is akin to the "unfunded mandates" creating problems in other arenas. Electric utilities constructed nuclear units as a direct result of federal policies and now operate the units pursuant to federal directives. But the authority to provide for adequate funding of the obligations rests primarily with state authorities. The decommissioning obligations mandated by the NRC are a matter vital to the public health and safety and it is incumbent upon the federal government to ensure adequate funding of the decommissioning obligation.

II. ENTERGY'S HISTORICAL PERSPECTIVE

Entergy is composed of a group of companies that own, in whole or in part, a total of 93 generating units, including 5 nuclear units, with a total of 22,604 MW of capacity. The Entergy system provides electric service to approximately 2.4 million customers at wholesale and retail in four states: Arkansas, Louisiana, Mississippi and Texas. The Entergy transmission system is composed of more than 15,200 miles of transmission line, extending from the northern border of Arkansas to the southern-most part of Louisiana and including the western portion of Mississippi and the southeastern portion of Texas. The multistate nature of Entergy's system means that Entergy must deal with five state and local regulatory entities, in addition to the Federal Energy Regulatory Commission ("FERC").¹

¹ Entergy Corporation entities are regulated by five different state and local regulatory agencies as follows: the Arkansas Public Service Commission has jurisdiction over Arkansas Power & Light Company; the Mississippi Public Service Commission has jurisdiction over

Through the 1960's, Entergy's system relied completely on gas-fired generation, not unusual for a utility located in the gas-rich area of the country. Since the 1960's, however, Entergy has been compelled by federal policy to use other fuels for electric generation. Entergy's predecessor began planning the construction of nuclear generating plants in the late 1960's, for operation to begin in the early 1970's. See Middle South Energy, Inc., 31 F.E.R.C. (CCH) ¶ 61,305, at 61,651 (1985).

Entergy's switch to nuclear generation in the late 1960's came as a direct result of increasingly frequent natural gas curtailments, the accompanying change in federal policy, and strategic limitations on the use of oil and gas. Entergy's primary natural gas suppliers, Arkansas Louisiana Gas Company and United Gas Pipeline Company ("United"), began experiencing gas supply problems in the late 1960's. By the early 1970's, full blown curtailment plans were in effect on both pipeline systems. United's supply problems and curtailments were among the most severe and widespread in the gas industry. These curtailments continued through the early 1970's, leading to general concern among utilities regarding long-term gas supplies. The Arab oil embargoes of the early 1970's increased concerns regarding natural gas supplies in two ways: first, by pushing up prices for natural gas as an alternative to oil, and second, by motivating the federal policy to decrease dependence on oil and gas.

Entergy Mississippi; the Louisiana Public Service Commission and the Public Utility Commission of Texas have jurisdiction over Gulf States Utilities Company; and the Louisiana Public Service Commission and the Council of the City of New Orleans have jurisdiction over New Orleans Public Service, Inc.

By the mid-1970's, curtailment plans restricted the ability of utilities to use natural gas as boiler fuel. Congress codified that policy in 1978 by enacting the Fuel Use Act, which compelled utilities such as Entergy to stop using natural gas as boiler fuel. Instead, federal policy mandated that Entergy take used and useful gas units off line and replace that capacity with other fuel sources by 1990. As a result of the fuel policies starting in the 1960's, Entergy "embarked on a program to carry out a corporate policy . . . of moving toward a new fuel base of nuclear and coal generation." 31 F.E.R.C. at 61,654.

Pursuant to that corporate policy, Entergy built some coal units, but was subject to regional coal use limitations under the newly enacted (in 1970) clean air laws. Thereby limited as to how many new coal units could be built and how much natural gas could be burned, Entergy completed its five nuclear plants.² The investments in those nuclear plants are directly attributable to Entergy's compliance with changing federal fuel restrictions and curtailments and with environmental policies.

In addition to the asset investments in nuclear capacity, incurred due to federal policies, Entergy also is subject to federal decommissioning obligations. The nuclear decommissioning obligation was established in the context of the current industry structure, in which utilities have an obligation to serve all customers in an exclusive service territory and the rates charged to those customers are regulated by the FERC and state and local utility commissions on a cost of service basis. Under that regulatory compact, funds to ensure safe

² Construction of Arkansas Nuclear Unit 1 began in the fall of 1968, while groundbreaking for Arkansas Nuclear Unit 2 began in 1971. The Waterford 3 and Grand Gulf Nuclear Station projects were announced, respectively, on September 16, 1970 and January 21, 1972. The construction permit for the River Bend Station was issued in March 1977.

decommissioning are collected from all ratepayers over the life of the units. The projected costs for decommissioning the existing nuclear generating plants in the United States are approximately \$35 billion, of which only approximately \$8.7 billion have been collected. The advent of a new, competitive industry structure threatens the existing regulatory compact and, thus, the utilities' ability to collect decommissioning costs to protect the public health and the environment.

III. RESPONSE TO SPECIFIC QUESTIONS

A. Timing And Extent of Electric Utility Industry Deregulation

- A.1. What is the likely timetable for industry restructuring and deregulation?
- A.2. Will the electric utility industry go through several phases as it responds to deregulation and other competitive pressures? If so, what will be the likely major changes in business structure that may occur in each phase? Will rates remain regulated at the retail distribution level, with deregulation occurring for generation and transmission? Will retail wheeling become widespread and lead to deregulation of all sectors of the electric utility industry? Or will rates remain regulated at the retail distribution level, with deregulation occurring within the generation and transmission sectors? What will likely be the final structure of the electric utility industry, assuming either partial or full deregulation?
- A.3. Some States appear to oppose deregulation. Will they be able to maintain their opposition if neighboring State deregulate? What will be the industry structure if some States deregulate more than others? Can a "hybrid" system exist effectively?

The pace and scope of change in the electric industry as a result of efforts to introduce competition in the industry are unclear; however, it is certain that changes are taking place more rapidly than expected. Therefore, immediate federal action is needed to ensure continued adequate funding of decommissioning obligations, especially in light of

approaching competition, irrespective of the pace, process or form resulting from competition and restructuring.

We know now that the introduction of competition to the electric industry will happen. The FERC recently issued its Final Rule on open access transmission, Order No. 888, "Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities." IV F.E.R.C. Stats. & Regs. ¶ 31,036 (1996). Although the states are clearly not of one mind on the timing and pace of restructuring, 45 states have initiated proceedings examining industry restructuring. Thus, while some states may adopt plans earlier than others, all states eventually will be compelled to move toward competition.

We also know now that restructuring of the electric industry could jeopardize the current mechanism for funding the decommissioning obligation. With the restructuring of the industry to unbundle transmission services from electric generation, utility customers will have the option of moving across the open-access transmission grid to purchase electricity from generators other than those by which they have traditionally been served. If utility customers are allowed to purchase generation from new suppliers, and thereby avoid future payments into the decommissioning trust funds, there will be an increased burden placed on the remaining customers, a decrease in contributions to the decommissioning trust funds, greater financial instability for the licensees and a possible shift of the decommissioning obligation to the taxpayers. Thus, many customers for whom the nuclear plants were built and operated will avoid paying their decommissioning obligations and will shift the burden to other customers or to taxpayers.

Entergy believes it is imperative that the NRC address this issue now. Decommissioning funds already are underfunded, for a variety of reasons, and are in danger of becoming more severely underfunded with the introduction of competition to the electric industry. Electric consumers will be given choices as to the source of the electricity they purchase. The NRC cannot wait to address this issue until the industry has completed its transformation, or the costs of decommissioning will fall disproportionately on a smaller group of ratepayers remaining on the system, or be shifted to taxpayers.

B. Stranded Costs

- B.1. How will restructuring affect large baseload plants that currently receive rate relief to cover construction costs or have a portion yet to be phased into the rate base? Specifically, what is the probability that and degree to what these costs will be recoverable should a nuclear power plant be deemed to be non-competitive because of high construction costs? What will be the source of operating, maintenance, and capital improvement funds should such a nuclear generator decide to continue operations? What will be the source of funds to prematurely and safely shut down an uneconomic plant? Are transmission access or other surcharges to cover stranded costs likely?

Although costs stranded by deregulation are an important issue to electric utilities, which must be addressed in the process of introducing competition to the industry, Entergy stresses that decommissioning obligations are qualitatively different from other stranded costs and should be addressed separate and apart from other stranded costs.

First, the importance to the public health and safety of funding the decommissioning obligations of nuclear units cannot be ignored. As a matter of federal policy, utilities do not have the option of accepting financial losses on nuclear units and simply abandoning them. The units must be decommissioned, a process that could be financed either through traditional funding mechanisms or, should those fail, through

government action. In recognition of the essential role decommissioning plays in protecting the public health and safety, the NRC has established decommissioning obligations for its licensees. Now, the funding of those obligations must be assured.

Second, decommissioning obligations have very different financial characteristics than other stranded costs. Typical stranded investment in assets, such as generating stations and transmission lines, can be lessened through accelerated depreciation and will eventually align with the market. In contrast, decommissioning costs are a continuing obligation and the funding necessary to meet the obligation will increase and must be collected over the life of the unit.

Should proper recovery of decommissioning costs not be provided for in the restructuring of the electric industry, then as customers leave the system, and load for which the nuclear generation assets that were built is thereby lost, the funding of the decommissioning trust funds may be undermined. Adequate funding of the decommissioning obligation would then have to be paid for by an ever-shrinking customer base or the burden of decommissioning would fall on taxpayers, since the obligations cannot be abandoned. A better solution is for the federal government to assure the continuing recovery of decommissioning costs in utility rates, through non-bypassable fees to be paid by utility customers leaving the system, or other surcharges tied to use of transmission facilities.

Thus far, although the FERC has stated its position that all legitimate and verifiable stranded costs should be recovered in the restructuring of the electric industry, the FERC's mechanism does not sufficiently provide for recovery of decommissioning costs. The FERC's Order No. 888 provides for recovery of wholesale stranded costs through the

"revenues lost" approach. The revenues lost method, however, only accounts for and allows recovery of fixed costs already incurred by utilities, presumed to be the entirety of utilities' costs of providing service. This method does not provide for costs that must be collected in the future, over the life of the plant, such as decommissioning costs. Although decommissioning costs are known and must be collected, as a matter of public health and safety, they have not yet been incurred.

Entergy has requested clarification and rehearing of Order No. 888 with respect to four issues, including the special nature of nuclear decommissioning obligations and the need for special treatment of them to ensure the recovery of the costs necessary for safely decommissioning nuclear units. See Request for Clarification and Rehearing of Entergy Services, Inc., Docket Nos. RM95-8-000 and RM94-7-001 (May 24, 1996). Entergy submits that a more appropriate mechanism for recovering the costs of decommissioning obligations, not reflected in utilities' rates currently or at the time a customer leaves the system, would be non-discriminatory surcharges. Id. at 10. Entergy has proposed that each customer be given notice that such charges may be assessed at the time it leaves the system, and that utilities be permitted by the FERC to make rate filings to implement these surcharges on a non-discriminatory basis. Id. Entergy encourages the NRC to adopt and support a policy requiring non-bypassable charges to assure collection of adequate decommissioning funds.

The NRC has requested comment on the source of recovery for construction costs and other stranded costs (besides decommissioning costs). Entergy stresses again that decommissioning costs must be treated as separate and apart from other stranded costs.

However, Entergy also will comment on a potential means of recovering sunk investment in nuclear generation assets, such as construction costs: through accelerated depreciation.

Some state regulators have begun to plan today for the potential stranding of costs in tomorrow's restructured electric utility industry. These state commissions have allowed accelerated depreciation of nuclear investments, bringing these assets down to a more competitive, market value. For example:

- The South Carolina Public Service Commission allowed South Carolina Gas and Electric ("SCG&E") to transfer \$257 million in depreciation reserves to its V.C. Summer nuclear station to mitigate risk for stranded investment. The reserves had originally been booked against SCG&E's transmission and distribution system. Thus, the transfer of depreciation reserves will effectively write down SCG&E's nuclear investment by \$257 million and write up the company's transmission and distribution assets by the same amount. This adjustment will preserve SCG&E's ability to recover costs through rates from the transmission and distribution system, which will not be subject to the same competition problems as generation. In addition, the Public Service Commission approved a plan allowing SCG&E to recover most of its regulatory assets over 5 years. These had originally been scheduled for recovery over 20 or more years.
- Another state commission that has taken a forward looking approach to stranded cost recovery is the California Public Utility Commission, which granted accelerated depreciation to Southern California Edison's investment in the San Onofre nuclear station.

- Northeast Utilities has proposed a universal service charge to be levied on all retail customers using Northeast's transmission system after the onset of competition. The charge would cover stranded investment costs, conservation programs, contracts with non-utility generators and nuclear decommissioning obligations.

Entergy encourages the NRC to fully exercise its authority to support these initiatives and help educate the state commissions on the importance of assuring continued, full collection of decommissioning cost obligations.

C. Nuclear Financial Qualifications and Decommissioning Funding Assurance

- C.1. If nuclear plants are shut down prematurely, how will licensees who can no longer pass costs through to ratepayers provide for a shortfall of decommissioning funds?

As a matter of public health and safety, the federal government cannot allow there to exist a "shortfall of decommissioning funds." There is a compelling federal interest in the safe operation and ultimate decommissioning/decontamination of our Nation's nuclear units. As discussed above, utilities built nuclear generation units in reaction to federal fuel restrictions and curtailments and to clean air policies. Moreover, to insure the protection of the public health and safety, nuclear units cannot simply be abandoned as uneconomic, but must be carefully dismantled and disposed of. Therefore, funding of the decommissioning obligation is critical and must be assured through federal legislation.

Compared to the planned service lives of the nuclear plants, the decommissioning obligations are significantly underfunded. For example, Entergy's nuclear plants are at 36 percent of their expected service lives, but their estimated decommissioning costs are only 13 percent funded. This is not atypical: on an aggregate basis, utilities'

decommissioning trust funds currently are funded at approximately 25 percent, or about \$9 billion out of projected total decommissioning costs of \$35 billion, while, on an aggregate basis, nuclear plants have completed 43 percent of their expected service lives. This underfunding arises from a number of factors, including increased decommissioning cost estimates, unanticipated inflation, lower than expected growth due to loss of load and customer exodus, rate settlements and the lag in collecting funds due to ratemaking delays. Most funds are "back-end loaded;" that is, they are designed to generate much larger contributions to the fund in later years. As a result, early underfunding of the decommissioning obligations may force still higher back-end contributions, making the collections unreasonably high and, in a more competitive environment, potentially impossible to collect from traditional sources. This threat to its licensees' ability to collect funds for the decommissioning obligation in a more competitive environment has motivated the NRC to begin examining its financial assurance mechanism. The NRC must recognize, however, the more immediate threat: decommissioning trust funds are already significantly underfunded and are likely to be jeopardized in the restructuring of the electric industry.

Entergy suggests that the NRC, in its role as regulator of safe nuclear power, take the lead in educating Congress and the states on the importance of the decommissioning obligation. The NRC could join with its utility licensees to pursue legislation that would ensure that funds to safely decommission and decontaminate nuclear plants will be collected and available when required. Entergy's proposal for such legislation is discussed at greater length in response to question C.5.

- C.2. At what point does an operator of a nuclear power plant cease to be a "utility" as defined in § 50.2 of the NRC's regulations?
- C.3. If an electric utility reorganizes itself, including divesting parts of itself so that the remaining entity operating a reactor is no longer regulated by a ratesetting State or Federal body, or will cease to be regulated by a rate-setting State or Federal body, or will cease to be regulated by a rate-setting State or Federal body if the reactor ceases operation, would it be appropriate to require financial assurance for the decommissioning costs in full prior to NRC approval of such reorganizations? Such assurance could take the form of self-guarantee, parent company guarantee, certification by the rate-regulating entity, or other financial surety mechanism to cover the unfunded decommissioning costs. Should the NRC require additional assurance for adequate funds for safe operation and decommissioning in anticipation of deregulation? Should the NRC require, as a condition of approval of certain reorganizations involving the transfer of control of a nuclear power plant, that newly created organizations or holding companies sign a binding agreement that holds them jointly liable for decommissioning costs associated with that nuclear power plant? What would be the impact of such actions?

The NRC's suggestion that it require financial assurance for the decommissioning costs in full, prior to granting approval of reorganizations that result in the nuclear-owning entity not being subject to regulation by a rate-setting state or federal body, is one possibility for assuring funding of decommissioning obligations in a restructured utility environment. Entergy recommends an alternative to company guarantees of full funding of the decommissioning obligation prior to reorganization. In particular, Entergy recommends the imposition of a non-bypassable wires charge from all customers, to assure there will be adequate funds to cover decommissioning cost obligations at the time they are needed.

- C.4. Should the NRC require a licensee to provide a reasonable assurance of the availability of funds for decommissioning by imposing a minimum level of net worth, cash flow, or other financial measure (similar to 10 CFR Part 30, Appendices A and B)? If below the minimum levels, the licensee would no longer be allowed to accumulate decommissioning costs over remaining facility life, but would need a guarantee that funds would be available for decommissioning through various financial measures. What financial measures would be effective and reasonable?

The NRC's suggestion that it establish a minimum level of financial soundness for licensees collecting decommissioning costs over the life of the facilities has merit. However, the NRC's suggestion that it would bar entities that fall below that minimum level of fiscal health from collecting funds for the decommissioning obligation over the life of their facilities may not be the optimal solution.

Entergy's concern with the test as propounded by the NRC in this question is that it would deny continuing rate recovery of funding for the decommissioning obligation to those very entities that most require it, because of their financial situation. Unlike levelizing back-end loaded decommissioning costs over the life of the unit, an up-front requirement would be akin to accelerated decommissioning, which Entergy believes could have negative competitive consequences.

If, however, the results of the NRC's proposed fiscal health test could be used as a basis to seek assurance of recovery of funds for the decommissioning obligation through a mechanism such as that discussed in greater detail in Entergy's response to question C.5., then the test could be useful. In that scenario, the test would establish, in addition to the federally mandated decommissioning obligation, a determination by a federal agency that the utility requires assurance of continuing rate recovery of the decommissioning obligation in order to protect the public health and safety.

- C.5. Would PUCs and FERC be willing to certify that licensees under their jurisdictions, both electric utility and Part 50 licensees other than electric utilities, would be allowed to collect sufficient revenues through rates to complete decommissioning funding?

Relying on state public utility commissions and the FERC to allow the collection of sufficient revenues through rates to adequately fund the decommissioning obligation may not be completely adequate. The FERC's recent Final Rule on open access transmission and stranded costs does not adequately address the special nature and importance of decommissioning funds (for a more complete discussion of this problem, see Entergy's response to question B.1.), and, therefore, at this time, does not provide for sufficient revenues to be recovered through rates to complete the funding of decommissioning obligations. Entergy has requested clarification and rehearing of Order No. 888 on this issue, in the belief that the FERC intends that all legitimate and verifiable stranded costs, including decommissioning costs, be recovered in the restructuring of the electric industry.

The FERC, however, has jurisdiction only as to rates for wholesale sales of power generated by nuclear units. More than 80 percent of decommissioning costs are recovered through rates for retail sales, over which state public utility commissions ("PUCs") exercise jurisdiction. Past experience with state PUCs has been inconsistent as to whether state PUCs will be willing to provide assurances that decommissioning costs will be recovered through retail rates and emphasizes the need for the FERC to maintain oversight of this issue. Despite decommissioning cost studies approved by the FERC, state PUCs have previously made adjustments to the amounts of decommissioning costs that could be covered in retail rates.

Leaving the funding decision to state regulators could be particularly problematic for multi-state utilities, that must contend with a patchwork of state rate recovery schemes in safely operating and planning for the decommissioning of nuclear units. As the various state PUCs propose a variety of approaches to the restructuring of the electric industry, with concomitant differences in the assurance provided for the continuing recovery of nuclear decommissioning costs, multi-state utilities' efforts to assure the NRC of their ability to safely decommission their nuclear units are hindered.

Entergy proposes that the NRC play a key role in securing assurance of continued rate recovery of adequate funding of decommissioning obligations. Entergy would support a proposal that would provide for the following:

- A utility that believed its decommissioning obligation is underfunded could seek a determination by the NRC that its recovery through rates of funds for decommissioning is insufficient.
- If the NRC determines that the utility's rate recovery for decommissioning is insufficient, the utility could petition its state PUC to grant full faith and credit to the NRC's finding and modify its ratemaking for the utility accordingly.
- If the state PUC does not approve a rate design for adequate recovery of funds for decommissioning in line with the NRC's finding, the utility may seek relief from the FERC. Upon its determination that the state's action is insufficient to correct the underfunding problem identified by the NRC, the FERC would be required to provide for recovery through rates of funds for decommissioning, pursuant to the NRC's finding.

- C.6. What would be the impact if the NRC required licensees to accelerate collection of decommissioning funds such that decommissioning funding for all plants would be complete within 10 years (or some other time period)?

Entergy does not believe that accelerated collection of decommissioning funds is an appropriate solution to underfunding of decommissioning trust funds. The ultimate amount of costs is uncertain and to accelerate collection would be to risk incorrectly specifying the appropriate amount.

- C.7. Assume that licensees have accumulated funds that are determined to be adequate based on current estimates of decommissioning costs. If these estimates turn out to be low far in the future (for example, if final dismantlement occurs after a 50-year safe storage period), how will underfunding be remedied? What measures should the NRC consider for obtaining assurance of funds for such situations? Should the NRC require larger contingency factors in estimates to cover such situations?

The NRC should take measures immediately to prevent the underfunding in future years. In the current, regulated environment, utilities are not being allowed by the FERC and state PUCs to collect an adequate amount of funding for decommissioning obligations. The NRC's intervention is necessary to remedy present underfunding due to unanticipated inflation, lower than expected growth due to loss of load and customer exodus, rate settlements and the lag in collecting funds due to ratemaking delays.³ The current status of decommissioning funding and the certainty that restructuring, whenever it occurs, will exacerbate the problem warrants the NRC's attention now.

³ Moreover, the funding shortfalls from these reductions in collection create an additional shortfall. The utilities must recoup not only the funds that should have been collected in earlier years, but the lost earnings potential on those funds as well. To the extent utilities under collect in early years due to inflation, rate settlements and the time lag in ratemaking, they also lose several years of appreciation of the value of the amounts under collected.

- C.8. Would it be feasible for the nuclear industry to develop a captive insurance pool to pay for decommissioning funding shortfalls that result from premature decommissioning? Could such a pool be structured similarly to Nuclear Mutual Limited (NML) and Nuclear Electric Insurance Limited (NEIL), who currently insure on-site property damage and replacement power of member utilities?

Entergy has no comment on this issue.

- C.9. If PUC or FERC oversight is either substantially limited or eliminated, are there any other options for financial assurance of decommissioning that the NRC should consider?

Entergy believes that the onset of competition in the electric utility industry does not necessarily mean that a higher level of financial assurance is required. There is, however, an urgent need for assurance of continued recovery in rates of adequate funds to meet the existing financial assurance requirements, to safely decommission nuclear units. Decommissioning obligations are federally mandated and are a matter of compelling federal interest, as being vital to the protection of public health and safety. It is crucial, therefore, that the NRC take action to assure that decommissioning obligations are immediately addressed irrespective of the pace of restructuring.

D. Decommissioning Funding Assurance and a Federal Government Licensee

- D.1. Section 50.75(e)(3)(iv) provides that an electric utility which is a Federal Government licensee need only provide assurance in the form of a statement of intent indicating that decommissioning funds will be obtained when necessary. Since a Federal utility licensee will likely be confronted with many of the same new competitive pressures as non-Federal utilities, the question arises, should the regulations continue to permit the provisions of a statement of intent as the method by which these licensees provide financial assurance for decommissioning. There is, for example, no Federal law which clearly provides that the Federal Government would pay the Tennessee Valley Authority's financial decommissioning obligations should TVA be unable to do so. Does this fact or any other factors militate for or against allowing Federal utility licensees to continue to use statements of intent as the method by which financial assurance for decommissioning is provided?

The fact that "there is no Federal law which clearly provides that the Federal Government would pay the Tennessee Valley Authority's financial decommissioning obligations should TVA be unable to do so,"⁴ along with recent NRC findings regarding the financial condition of the Tennessee Valley Authority ("TVA"), militates against allowing Federal utility licensees to continue to use statements of intent to provide financial assurance for decommissioning. A statement of intent on the part of a Federal utility licensee provides no assurance, particularly when the Federal utility can use its decommissioning fund at its own discretion, as is the case with the TVA.

Entergy supports Acting Inspector General Leo Norton's recommendation that the NRC re-evaluate the basis for allowing federal utilities to provide financial assurance through statements of intent. Entergy would go further and recommend that exceptions for federal utility licensees as to financial assurance requirements for decommissioning be

⁴ "Financial Assurance Requirements for Decommissioning Nuclear Power Reactors," Advance Notice of Proposed Rulemaking, 61 Fed. Reg. 15427, 15429 (April 8, 1996).

eliminated. To allow federal utility licensees such as TVA to continue to provide financial assurance through statements of intent illustrates and highlights the potential fate of all decommissioning obligations: as a burden on federal taxpayers. If taxpayers are tacitly required to serve as an ultimate source of decommissioning funds for federal utilities, why would they not be required to fund the decommissioning obligations of investor owned utilities that cannot recover funding for the decommissioning obligation pursuant to the regulatory compact under which nuclear units were constructed ?

At this time, Entergy does not suggest, however, that taxpayers ultimately be responsible for the decommissioning obligations of federal utilities or investor-owned utilities. Rather, Entergy believes that federal utilities should not be allowed to implicitly rely on the taxpayers to pay for their decommissioning obligations, because such an implicit arrangement provides a competitive advantage for federal utilities.⁵ Further, Energy believes that taxpayer exposure for the costs of the decommissioning obligations of investor-owned utilities is also undesirable. For that reason, Entergy supports federal action that would provide assurance of continued rate recovery of adequate decommissioning funding from all utility customers for whom the nuclear units were built, through exit fees or other non-bypassable surcharges.

⁵ The TVA's recent addition of \$400 million of investment to its nuclear decommissioning fund is not competitively neutral, either. The TVA will likely fund this investment by issuing tax-exempt public bonds, an option that investor-owned utilities do not have for the funding of their decommissioning trust funds.

E. Status of Decommissioning Trust Funds During Safe Storage Period

- E.1.** What real rate(s) of return should the NRC allow licensees to use as credit for earnings on the decommissioning trust funds during the extended safe storage period?
- E.2.** What time period(s) should the NRC allow licensees to use in estimating the credit for earnings on the decommissioning trust funds during the extended safe storage period?

Entergy currently plans to decommission its nuclear plants through removal of radioactive components and dismantling. Therefore, Entergy's current decommissioning plan does not include a "safe storage period."

F. Reporting on the Status of Decommissioning Funds

- F.1.** What information should the NRC require to be included in the periodic reporting requirements?

Each year, the NRC should require licensees to provide the following information: (i) cost estimates for decommissioning the nuclear plant; and (ii) the status of funding of decommissioning costs, which would include the dollar amount in the decommissioning fund.

- F.2.** How often should the NRC require licensees to report on the status of decommissioning funding?

The NRC should require licensees to file updated decommissioning cost estimates and report on the status of decommissioning funding every year. Annually, decommissioning information will be captured in each utility's financial statements under the Financial Accounting Standards Board's proposed "Accounting for Certain Liabilities Related to Closure or Removal of Long-Lived Assets."

WHITE PAPER ON PROPOSAL TO ENSURE COLLECTION OF FUNDS FOR THE SAFE DECOMMISSIONING OF NUCLEAR POWER PLANTS

I. Introduction

Since the early 1970's the United States has relied heavily on electricity produced by nuclear generating plants. Today, nuclear generating units provide almost a quarter of the country's annual electricity generation. Over the next twenty years, however, a substantial number of the country's nuclear units will face retirement. At retirement, these nuclear power plants must be safely decommissioned, through dismantling and disposal of their irradiated components.

State regulators approved plans to collect funds for the decommissioning obligations through rates over the entire service lives of the nuclear power plants. This method was intended to equitably spread the costs of decommissioning the plant over all the customers served by the plant over the course of its service life. In numerous jurisdictions, however, regulators have not allowed adequate collection of funds to pay for the cost of decommissioning these units; therefore, the funding of decommissioning has not kept pace with the aging of the units. At a time when many nuclear units are reaching mid-life, the current level of decommissioning funds presents an urgent problem, and the introduction of competition promises to exacerbate the problem by threatening the ongoing levelized collection of funding over the entire service lives of nuclear power plants.

There is a compelling federal interest in the safe decommissioning of nuclear power plants. At present, there are 110 operating nuclear power plants in 32 states across the country. To ensure protection of public health and safety and to avoid imposing a disproportionate burden on a small group of utility customers or shifting the costs for decommissioning to taxpayers, Congress must act now to assure continued and adequate cost recovery for the safe decommissioning of these units.

II. The Problem

A. Obligation To Collect Decommissioning Funds

Since the first nuclear unit was brought on line, utilities and regulators have anticipated the ultimate need for decommissioning the units. To ensure the safe decommissioning of these nuclear plants, the Nuclear Regulatory Commission ("NRC") requires nuclear utilities to provide assurance that adequate funding will be available when the plants are retired. Typically, utilities provide the assurance through an external "nuclear decommissioning trust fund," which is funded through collections from electric consumers over the life of the unit. Although the NRC issues the license and requires that adequate funding be reasonably assured, state commissions and the Federal Energy Regulatory Commission ("FERC") set the rates charged to customers which are necessary to finance the trust funds.

Correctly establishing the amount of cost recovery necessary to assure adequate funding levels for decommissioning is difficult and problematic. Utilities and regulators first estimate the costs that eventually will be incurred to safely decommission the plant. Then, the amount that must be collected annually to produce that amount is

calculated, taking into account the number of years the plant is expected to operate, the projected number of customers paying into the fund, and the anticipated return on the funds accrued. If the estimates and projections used by regulators are correct, the fund grows to the level necessary to pay for full decommissioning. If any of the factors are incorrectly specified, it can produce a significant shortfall in the funds.

B. Current Funding of the Decommissioning Obligation Is Inadequate

There is growing concern within the industry and among policy makers that the decommissioning obligations of nuclear generating facilities are not being adequately funded. The introduction of competition to the industry, along with the possibility that decommissioning costs may not be collected at sufficient levels, magnifies the problem. The magnitude of the potential shortfall in cost recovery for funding the decommissioning obligations is staggering. On an aggregate basis, utilities' decommissioning trust funds currently are funded at approximately 25 percent of the currently estimated costs,¹ or about \$9 billion,² while their nuclear plants are approximately 43 percent through their expected service lives. Estimates of the total projected decommissioning costs for the nuclear power industry exceed \$35 billion,³ leaving a current shortfall in allowed recoveries of about \$26 billion. The size of this problem becomes obvious when

¹ California utilities represent exceptions to this general pattern of under funding, as they tend to be funded at closer to 50 percent of the total amount required.

² The estimated total in August, 1995 was \$8.7 billion. It is important to recognize that utilities do not earn any return on these funds. Rather, utilities collect and hold the funds in trust for the sole purpose of discharging their decommissioning obligation at the time the plant is taken out of service.

³ This estimated figure represents a blend of constant and future costs.

compared to the \$10 billion of total stranded costs for which FERC allowed recovery during the restructuring of the natural gas industry.

The under funding arises from a number of factors, including unanticipated inflation, escalation of decommissioning cost estimates due to expanded regulatory requirements, lower than expected growth due to loss of load and customer exodus, rate settlements, and the lag in collecting funds due to ratemaking delays.⁴ Decommissioning cost recovery for most utilities is "back-end loaded;" that is, it is designed to generate much larger contributions to the fund in the latter years. As a result, early under funding of the decommissioning obligations may force still higher back-end contributions, making them unreasonably high and, in a more competitive environment, potentially impossible to collect from traditional sources. This presents a potentially serious threat to the licensees' abilities to safely decommission nuclear units.

C. Decommissioning Obligations Must Be Specifically Recognized In The Transition To Competition

Increased competition in the electric industry will likely exacerbate the problem of under funded decommissioning obligations. If utility customers are allowed to purchase generation from new suppliers and avoid future payments into the trust fund, there will be an increased burden placed on the remaining customers, a decrease in

⁴ Moreover, the funding shortfalls from these reductions in collection create an additional shortfall. The utilities must recoup not only the funds that should have been collected in earlier years, but the lost "interest" that these funds would have accrued as well. To the extent utilities under collect in early years due to inflation, regulatory disallowances and the time lag in ratemaking, they also lose several years of appreciation of the value of the amounts under collected.

contributions to the trust funds, greater financial instability for the licensees, and a potential shift of the decommissioning obligation to the taxpayers.

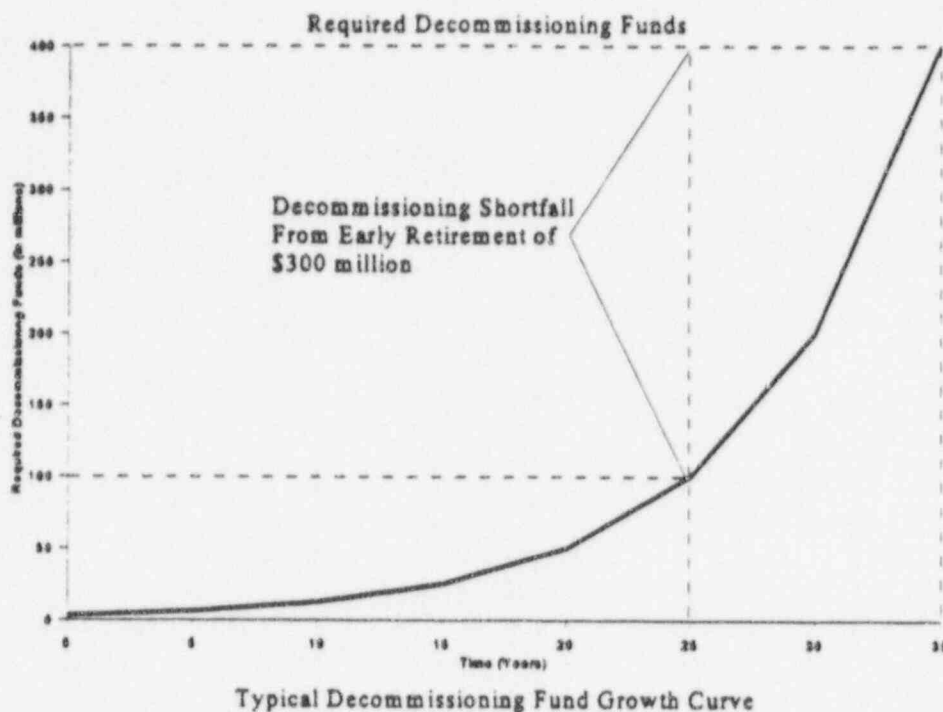


CHART A

The simple illustration in Chart A provides a vivid illustration of the nature and scope of the problem. Because of the current funding mechanism for the trust funds in most states, the decommissioning funds follow the growth pattern of a typical investment curve. If a nuclear unit were forced to retire early or could no longer recover decommissioning costs after 25 years, or approximately 70% of its useful life, the decommissioning fund would be only 25% funded; in this case, early retirement would result in a shortfall of \$300 million of the \$400 million needed for decommissioning.

The FERC's announced Final Rule on Promoting Wholesale Competition

Through Open Access Non-discriminatory Transmission Services By Public Utilities and Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, IV FERC Stats. and Regs. ¶ 31,036 (1996), does not fully or adequately address the concern about insufficient funding for decommissioning obligations. Although the FERC stated its intention to allow recovery of all legitimate and verifiable stranded costs that result from the transition to competition, its Order does not directly address or take care of the decommissioning obligations imposed on utilities.⁵

It is critical to recognize that, like stranded investments that have been prudently incurred, decommissioning obligations are recognized costs that must be recovered. However, decommissioning obligations differ from typical "stranded assets" in some important ways. Stranded assets typically refer to such things as power plant costs that may not be recoverable in a competitive market unless specific cost recovery mechanisms are created. These costs already have been incurred, are known, and generally are included in rates today. These costs will not become "stranded" until the customers are allowed to change their generation provider. Thus, federal legislation requiring stranded cost recovery is not necessary until retail access and full competition are ordered.

Nuclear decommissioning costs are different. First, the obligation to decommission nuclear units is an essential health and safety requirement that cannot be

⁵ Order 888 uses a "revenues lost" methodology to permit cost recovery for stranded investment. Because decommissioning costs are future obligations, rather than sunk costs, the revenues lost methodology does not redress the problems associated with insufficient funding of decommissioning obligations.

simply abandoned. The obligation will not go away or diminish. Second, the decommissioning obligation originated when the plant began operation, although the actual costs have not yet been incurred. To ensure that all customers who have benefited from the nuclear unit share fairly in the cost to decommission the unit, the costs must be recovered over the operating life of the plant. Because the ultimate decommissioning costs are not fully known, they must be recovered through rates based on estimates of the eventual outlay. These estimates must be updated frequently and the rates adjusted accordingly. Delays in adjusting decommissioning funding rates further undermine the integrity of the funds and can unfairly shift significant costs to future customers or tax payers. Finally, the need to ensure adequate funding of the decommissioning obligation is not dependent on the transition to retail access or changes in industrial structure. The obligations currently are underfunded and legislation to ensure full decommissioning cost recovery should be passed immediately.

State utility commissions exercise authority over recovery of more than 80 percent of decommissioning costs from rates for retail sales and some state commissions often have been less willing than the FERC to assure utilities of legitimate cost recovery in the transition to competition. Despite approved decommissioning studies, state regulators have previously made adjustments which have delayed collection of decommissioning costs that could be recovered in retail rates.

For multi-state utilities, leaving the funding decisions to state regulators is particularly problematic. These utilities already have difficulties operating and planning for safe decommissioning under different state rate recovery schemes. Various state

utility commissions already have taken steps toward creating competition at the retail level, proposing a variety of approaches to the restructuring and deregulation of the electric industry. These varied approaches also have concomitant differences in the assurance provided for the continuing recovery of nuclear decommissioning costs. This type of inconsistency can only hinder multi-state utilities' efforts to assure the NRC of their abilities to safely decommission nuclear units.

Finally, the allocation of jurisdiction over nuclear units among multiple regulatory authorities further complicates the problem of ensuring funding of decommissioning costs. The Nuclear Regulatory Commission has the exclusive authority to license nuclear generating facilities, regulates them as to safety, and has the responsibility to ensure that its licensees can generate adequate funding for safe decommissioning of facilities. The authority to approve rates to recover funds necessary for the safe decommissioning of nuclear units rests primarily with the states and with the FERC. If the states and the FERC fail to act responsibly, the NRC should be allowed to exercise authority to provide for adequate funding.

III. Congressional Action Is Necessary Now to Ensure Adequate Funding for Safe Decommissioning

Congress should act now to ensure adequate funding for the safe decommissioning of nuclear units. The awkward jurisdictional position of the decommissioning issue, caught in a gap between federal agencies and state regulatory authorities, creates a situation in which inconsistent state regimes interfere with a federally mandated safety measure. This presents unacceptable uncertainty and risk for the health and safety of the citizens and for the economy. The obligation to decommission

nuclear units represents a critical health and safety requirement. The units must be decommissioned safely, a process that will be financed either through traditional funding mechanisms or, if that avenue fails, through government action.

In hearings before the Senate Energy and Natural Resources Committee, there was virtual unanimity that there be a federal requirement to ensure collection of needed decommissioning costs. Hearing On Competitive Change In The Electric Power Market, Senate Committee On Energy and Natural Resources (March 28, 1996). As the electric industry makes the transition to a more competitive structure, the need for federal legislation providing for continued rate recovery of decommissioning costs is increased. There should be no dissent from the goal of ensuring that the funding for decommissioning be secured over the life of the units.

IV. Conclusion

As a matter of public policy, to protect public health and safety, as well as to preserve sound energy and economic policy, adequate funding of the decommissioning obligations of all U.S. commercial nuclear reactors must be assured. This is a problem that merits immediate and independent attention, irrespective of the changes facing the electric utility industry. Moreover, the problem will be made worse by the changes being pursued by the states and Congress. The earlier that legislation is passed to address this problem, the sooner the shortfall in decommissioning funding can be rectified. Congress should mandate that the states require complete funding of the nuclear decommissioning trust funds and, to the extent the states do not provide such assurances, the FERC and the NRC should exercise their authority to provide for such recovery.