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June 18, 1991

BY FEDERAL EXPRESS

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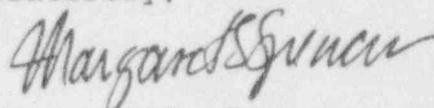
John H. Frye, III
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Application of Ohio Edison Company to Suspend Antitrust
License Conditions (Perry Nuclear Power Plant, Unit 1),
NRC Docket No. 50-440A

Dear Sirs:

Enclosed as requested is a copy of Ohio Edison's Application to Amend the Perry Operating License to Suspend the Antitrust Conditions Insofar As They Apply to Ohio Edison Company, which was filed in the above-captioned proceeding on September 18, 1987.

Sincerely,



Margaret S. Spencer

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Enclosure

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE DIRECTOR, NUCLEAR REACTOR REGULATION

In the Matter of)
)
OHIO EDISON COMPANY) Docket No. 50-440A
)
(Perry Nuclear Power Plant,)
Unit 1))

APPLICATION TO AMEND THE PERRY OPERATING LICENSE
TO SUSPEND THE ANTITRUST CONDITIONS INSOFAR
AS THEY APPLY TO OHIO EDISON COMPANY

SUBMITTED BY OHIO EDISON COMPANY
CO-OWNER OF THE PERRY NUCLEAR
POWER PLANT

OHIO EDISON COMPANY

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE DIRECTOR, NUCLEAR REACTOR REGULATION

In the Matter of)
OHIO EDISON COMPANY) Docket No. 50-440A
(Perry Nuclear Power Plant,)
Unit 1))

APPLICATION TO AMEND THE PERRY OPERATING LICENSE
TO SUSPEND THE ANTITRUST CONDITIONS INsofar
AS THEY APPLY TO OHIO EDISON COMPANY

Pursuant to 10 C.F.R. §§ 50.90 and 2.101, Ohio Edison Company ("OE"), a co-owner of the Perry Nuclear Power Plant, Unit 1 ("Perry"), requests the Director of Nuclear Reactor Regulation to amend the Perry Operating License No. NPF-58 ("OL") by suspending the antitrust license conditions insofar as they apply to OE. The Perry antitrust license conditions are included in the Perry OL as Appendix C. OE's proposed modifications to those conditions are attached hereto as Attachment 1.

I. INTRODUCTION & SUMMARY: WHY THE ANTITRUST LICENSE CONDITIONS IMPOSED ON OE MUST BE SUSPENDED

The operating license for the Perry plant contains eleven conditions that limit the business activities of Perry's owners, including OE. These license conditions were imposed on OE pursuant to Section 105(c)(5) of the Atomic Energy Act of 1954, as amended (the "Atomic Energy Act" or the "Act"), 42 U.S.C. § 2135(c)(5). Section 105(c)(5) requires the Nuclear Regulatory Commission ("NRC") to determine whether, in licensing a proposed nuclear facility, activities under a license would "create or maintain a situation inconsistent with the antitrust laws."^{1/}

At the time Perry was licensed, the NRC, the Department of Justice ("DOJ"), and others were concerned about the potential anticompetitive impact of nuclear-powered facilities generally, and the Perry plant, specifically. This concern was based on the anticipated economic superiority of nuclear power, a universally-held anticipation, and the impact on the electric supply marketplace of that superiority. Legislative history reflects this generic expectation; judicial and administrative decisions affirm

^{1/} Section 105(c)(6) of the Act, 42 U.S.C. § 2135(c)(6). The antitrust laws covered by this provision encompass the anticompetitive conduct that is the subject of the Sherman Act, 15 U.S.C. §§ 1-7; the Wilson Tariff Act, 15 U.S.C. §§ 8-11; the Clayton Act, 15 U.S.C. §§ 12-27; and the Federal Trade Commission Act, 15 U.S.C. §§ 41-49. See Alabama Power Co. v. NRC, 692 F.2d 1362, 1364 (11th Cir. 1982).

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it. This national expectation similarly pervaded the CAPCO^{2/} antitrust proceeding; moreover, the experts testified and specific studies indicated that the Perry plant in particular would provide to its owners, the CAPCO companies, an otherwise unattainable economic advantage. The antitrust license conditions placed on the CAPCO companies, including OE, were instituted in order to obviate or mitigate that anticipated effect.

In hindsight, it is now evident that the expectations of all concerned have not materialized. Nuclear facility ownership, and particularly OE's ownership interest in Perry, is not competitively advantageous. Circumstances are radically different from those anticipated; yet those anticipated circumstances were the exclusive basis for imposing the license conditions at issue here.

The NRC Staff is authorized to amend the Perry antitrust license conditions when the circumstances that led to their imposition have changed significantly. Moreover, if the statutory purpose of Section 105(c) is no longer being served by the continued imposition of restrictive conditions on OE's business behavior, the NRC Staff is compelled by law to lift the conditions.

^{2/} CAPCO stands for Central Area Power Coordination Group, a power pool of public utilities, including OE. See generally Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2 and 3), ALAB-560, 10 N.R.C. 265, 273-74 (1979) (hereinafter "ALAB-560").

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Circumstances have changed significantly. The relative cost of nuclear power has increased dramatically from the cost assumed and relied upon by the Licensing and Appeal Boards when they imposed antitrust license conditions on OE. This change, and others incidental to it, make it neither necessary nor appropriate for the NRC to continue to restrict OE's business activities. Suspension of the subject license conditions therefore is required.

II. THE NRC'S PREDICATE FOR ANTITRUST REVIEW

Section 105 of the Atomic Energy Act was amended in 1970 to clarify and revise the NRC^{3/} procedure for prelicensing antitrust review.^{4/} The dispositive language of the amendment, for

^{3/} At the time, it was the NRC's predecessor agency, the Atomic Energy Commission ("AEC"), that regulated commercial nuclear facilities. In 1974, this authority was transferred to the NRC. Section 201 of the Energy Reorganization Act of 1974, 42 U.S.C. § 5841. In this Application, references to these agencies are interchangeable.

^{4/} Pub. L. No. 91-560, reprinted in 1970 U.S. Code Cong. & Admin. News 4981. Prior to the passage of Pub. L. No. 91-560, the AEC had issued no commercial licenses under Section 103 of the Act, instead licensing facilities pursuant to Section 104, which provided for the licensing of research and developmental reactors. This was because a Section 103 license required a determination by the AEC that the type of reactor to be licensed had been sufficiently developed to be of "practical value" for industrial or commercial purposes. The AEC had repeatedly considered and declined to make such a finding. The controversy surrounding the distinction between these two types of licenses was due to the fact that a Section 103 license was subject to an antitrust review by the Attorney General, the nature and scope of

(Continued Next Page)

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purposes of determining the need for agency action, was subsection (c) of Section 105. This provision was modified to require the NRC, with the advice of the Attorney General, to "make a finding as to whether the activities under the license would create or maintain a situation inconsistent with the antitrust laws"5/

A review of the legislative history of this statutory provision, as well as its interpretation by the NRC, makes clear that the interest of the NRC in antitrust matters is an interest inexorably linked to the agency's purpose, that of regulating the construction and operation of nuclear power plants. General federal antitrust policing authority, residing in DOJ, was and continues to be unaffected by the passage of the 1970 amendment. Potential antitrust violations in the public utility industry simply fall within the scope of NRC's purview as well if, and only if, the licensing of a nuclear facility causes, or makes some contribution to, an extant anticompetitive situation in the relevant marketplace.

(Continued)

which "were described in a broad-brush clause of inexact import." Id. at 4990. The 1970 legislation was enacted to remedy this situation by allowing for the commercial licensing of nuclear facilities with an antitrust review process that did not constitute a "roadblock" to licensure. Id. at 4994.

5/ Section 105(c)(5) of the Act, 42 U.S.C. § 2135(c)(5).

In short, Section 105 of the Atomic Energy Act was designed to ensure that the United States government, through its regulation of nuclear power, did not unwittingly facilitate the perpetuation of anticompetitive market conditions. If that outcome is anticipated, the NRC is authorized to condition its grant of licensing authority so as to counteract that effect.^{6/} If, on the other hand, the licensing of a nuclear power plant does not facilitate the perpetuation or creation of anticompetitive market conditions, the business conduct of the license applicant is not subject to NRC scrutiny. Of course, the utility's conduct nevertheless falls within the realm of DOJ's continuing antitrust oversight.

Thus, NRC's antitrust regulation of its licensees is conditioned on a finding that the conduct over which NRC has an interest -- the construction and operation of a nuclear power plant -- "creates or maintains a situation inconsistent with the antitrust laws." If it does not, NRC has no statutory basis for overseeing the licensee's business conduct, however anticompetitive it may be.

^{6/} As the Appeal Board stated in the Farley case, "By amending the Atomic Energy Act in 1970, Congress gave this Commission added duties to fulfill in connection with its licensing of nuclear power plants. Since that time, it has had to consider, in addition to safety and environmental matters, the antitrust ramifications of its licensing actions." Alabama Power Co. (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-646, 13 N.R.C. 1027, 1035 (1981), aff'd, 692 F.2d 1362 (11th Cir. 1982). See Section 105(c)(6) of the Act, 42 U.S.C. § 2135(c)(6).

A. The Legislative History of Section 105(c)

The legislative history of Section 105(c) of the Act makes plain two points: that Congress expected nuclear power to be low-cost power, and that NRC's jurisdiction over antitrust concerns related to NRC-licensed activities in no way restricted the responsibilities of other agencies over antitrust matters.

1. The Cost of Nuclear Power

The legislative history of Section 105(c) abounds with illustrations of Congress' presumption that nuclear power plants would be a primary source of low-cost power in the United States in the decades ahead, and that access to nuclear power would significantly increase a utility's competitive advantage in the marketplace. Enunciating a recurrent theme at the time, Senator Aiken, a member of the Joint Committee on Atomic Energy, commented that it was "utterly ridiculous" for the NRC to further postpone the conclusion that "the modern atomic power plant is a profitmaking enterprise."⁷ The fear, instead, was that issues

⁷ Prelicensing Antitrust Review of Nuclear Powerplants, Hearings Before the Joint Comm. on Atomic Energy, Part 1, 91st Cong., 1st Sess. 15 (1970) (hereinafter "Joint Committee I"); see also Houston Lighting & Power Co. (South Texas Project, Units 1 and 2), CLI-77-13, 5 N.R.C. 1303, 1313 (1977) (hereinafter "South Texas"), citing 116 Cong. Rec. H. 9447 (daily ed. Sept. 30, 1970) ("in 1970 Congress found nuclear power to have acquired 'commercial value,' and amended the Act to remove the 'anachronism' requiring an AEC finding of commercial value").

of health and safety would take a back seat to "the altar of uncontrolled economic desire."^{8/}

The anticipated low cost, and consequent economic advantage, of large nuclear facilities is reflected in the statement to the Joint Committee by Roland W. Donnem, the Director of Policy Planning in the Antitrust Division of the Department of Justice. As Mr. Donnem observed:

With regard to the establishment of a large-scale nuclear power plant, it is necessary to first determine the extent to which such plants might afford the participants therein decisive competitive advantage over their competitors. The economies of scale associated with such large plants are truly substantial, and access to this low-cost power may well be decisive in any competitive race between electric power companies. Access may well be required for the continued operation of a given company or sector of the industry.^{9/}

The issue of whether a competitor could rely on an alternative facility to a nuclear plant was important because if not, the "new low-cost facility would probably create a decisive competitive advantage for the participants over those excluded, and exclusion, therefore, should not be permitted."^{10/} Thus, it was

^{8/} Joint Committee I at 5.

^{9/} Id. at 9 (emphasis added).

^{10/} Id.

"access to low-cost power" that was "compelled by the policy of the antitrust laws."11/

The views of the witnesses who appeared before the Joint Committee on the 1970 legislation to amend Section 105 of the Act uniformly echoed the presumption of Congress that nuclear power was low-cost power.

In a colloquy among Joint Committee Chairman Holifield, Congressman Hosmer, and AEC General Counsel Hennessey, the low cost of nuclear power was identified as the critical factor mandating a need for an antitrust provision in the Atomic Energy Act, notwithstanding the absence of a parallel requirement that would be applicable to fossil plants:12/

REPRESENTATIVE HOSMER. . . . Is there any more vice in a plant that is to be constructed, including some monopolistic or other anticompetitive tendencies, if it is fired by nuclear fuel than if it is fired by coal or oil?

MR. HENNESSEY. I see no distinction between the types of fuel as far as the antitrust implications are concerned.

REPRESENTATIVE HOSMER. . . . Yet there is no provision for plants fueled by conventional fuel to be subjected to this kind of review. Is that correct?

11/ Id. at 10.

12/ Id. at 75-77 (emphasis added).

MR. HENNESSEY. That is correct. The problem centers on the very large plants that do provide the most economical source of energy, whether they be nuclear fuel or fossil fuel, and an opportunity for the small publicly owned utilities to have access to that newly available cheap source of power.

* * * *

MR. HENNESSEY. At the time the 1946 and the 1954 acts were enacted, there may have been a basis for distinction. This was a newly developing industry that had been brought along in large measure by the Government's financial input and there was a small number of competitors and perhaps more of a danger of anticompetitive situations, monopolies appearing in the atomic energy industry, an opportunity that did not exist in the long time competitive coal and other fuels. But I don't think that a plausible basis for distinguishing between nuclear and fossil fuel plants exists in the present state of the nuclear industry.

* * * *

CHAIRMAN HOLIFIELD. It is your opinion, then, that a small cooperative or municipality that wanted to participate in a large nuclear plant output would have to establish that not on the basis of the Government contribution to the development of this new source of electricity, but on the basis of the antitrust laws which apply generally.

MR. HENNESSEY. That is right, on the basis that the operation of the plant as proposed would have an effect on him that would be in restraint of trade, would have anti-competitive consequences on him, that it would put him at a disadvantage as against people who have the power from the plant in providing service to their customers.

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The conviction that nuclear power is or would be economically advantageous was also reflected in the statement made to the Joint Committee by S. David Freeman, the Director of the Energy Policy Staff of the United States Office of Science and Technology: 13/

As I discussed previously, nuclear power is vital to meeting the nation's electric energy needs in the coming decades. Its growth will be due primarily to the fact that it offers low-cost power to utilities. These low costs are achieved only in very large-size individual units. For the foreseeable future, only a small proportion of individual utilities can accommodate such large units in their own systems without joint arrangements and certainly few, if any, of the thousands of smaller utilities can ever do so. Individual utilities, of necessity, are engaging in joint ventures to own and operate nuclear plants.

Since nuclear plants come only in large sizes, it is particularly important that pre-construction anti-trust review be implemented to assure that smaller utilities are not frozen out of the generation end of the power business. I do not suggest that every small utility should be in the generating business, but I do suggest that the question of fair and reasonable access to the benefits of low-cost power is not universally satisfied by wholesale purchases, especially if the wholesaler is competing with the small utility at retail.

Similarly, in his discussions with the Joint Committee, Mr. Walter B. Comegys, Deputy Assistant Attorney General, Antitrust

13/ Id. at 106 (emphasis added).

Division of the Department of Justice, commented:^{14/}

We have not wished to take the position that where competitive policies require that smaller firms have access to a large low-cost power facility the access must always be furnished by ownership share in the new plant. Nor have we wished to assert that it will always be acceptable to have contracts for the sale of power from the plant.

. . . We do think that adequate access implies the same opportunity to receive low-cost power for the same uses as those who have the unique low-cost facility.

The Department of Justice's perspective about the low cost of nuclear power was perhaps stated most succinctly in response to a question from the Joint Committee. DOJ stated, "The information we have seen indicates that there are now, and that there are even more likely to be in the future, substantial economic advantages for many electric utilities in installing large-scale nuclear generating plants rather than conventional fossil fuel plants."^{15/} Other documents included in the legislative history of the 1970 amendments share this perspective.^{16/}

^{14/} Id. at 128 (emphasis added).

^{15/} Id. at 148.

^{16/} See, e.g., Petition to Intervene and Become Parties for All Purposes," dated Nov. 6, 1969, filed by North Carolina Electric Membership Corporation and Four County Electric Membership Corporation in the Brunswick docket, Docket Nos. 50-324 and 50-325, reprinted in Joint Committee I at 287 ("inaccessibility of Petitioners to the more economical supply of bulk power made possible by large scale nuclear generating plants penalizes them as would-be competitors of CP&L").

2. The Role of Other Agencies

The Commission's involvement in the economic regulation of nuclear power was not intended to, nor did it, preempt the many other bodies charged with enforcing the antitrust laws. This conclusion is evident from the language of Section 105, which states that "[n]othing contained in this Act shall relieve any person from the operation of the [antitrust laws]." ^{17/} Thus, the Court of Appeals for the District of Columbia concluded, "Section 105(a) . . . provides that nothing in [the] Act preempts the normal operation of the antitrust laws." ^{18/}

To the extent any question whatsoever remains about the role of other agencies vis-a-vis alleged anticompetitive conduct of electric power utilities, the 1970 legislative history of Section 105 fully addressed the issue. For example, in summarizing the contents of the 1970 legislation, Congressman Holifield, the Chairman of the Joint Committee on Atomic Energy, stated: ^{19/}

I must emphasize, and it must be borne in mind, that this whole antitrust feature of the Atomic Energy Commission's licensing procedure will be completely separate and apart from the application of the antitrust laws

^{17/} Section 105(a) of the Act, 42 U.S.C. § 2135(a).

^{18/} Ft. Pierce Utilities Authority v. United States, 606 F.2d 986, 1001 (D.C. Cir. 1979).

^{19/} 116 Cong. Rec. H. 34,309 (Sept. 30, 1970).

now on the statute books. The antitrust laws, and the authorities and responsibilities of the Attorney General and others by virtue of these laws or in connection therewith, and the implementation of these laws, remain completely unaffected by the antitrust review dealt with in section 6 of the bill. The antitrust laws referred to in subsection 105(a) of the Atomic Energy Act are not qualified, limited, extended, or interfered with in any way whatsoever.

Senator Pastore, Vice Chairman of the Joint Committee, similarly addressed this matter:

I want to stress in the clearest possible way that subsection 105c. in no way extends, revises, impairs, modifies, or impinges on the antitrust laws of our statute books, or prevents or limits their full application. The authorities and responsibilities of the Attorney General and others by virtue of our antitrust laws remain completely uninterfered with and unaffected by the review functions dealt with in section 105c.20/

And, Congressman Hosmer, the ranking minority member of the Joint Committee, emphasized that the NRC's antitrust review responsibility "in no way extends, impairs, amends, or affects any of the antitrust laws or prevents their application."21/

20/ 116 Cong. Rec. S. 39,619 (1970).

21/ 116 Cong. Rec. 34,316 (1970); see also 116 Cong. Rec. H. 34,316 (1970) (statement by Congressman Holifield); Joint Committee on Atomic Energy Report on P.L. 91-560, reprinted in 1970 U.S. Code Cong. & Admin. News 4981; Joint Committee I at 70 (statement by Joseph F. Hennessey).

In sum, in the event the NRC were to conclude that its basis no longer existed for imposing the licensing conditions at issue here and accordingly, it suspended those conditions, the "anti-trust laws now on the statute books" would continue in full force and effect.

B. Judicial and Administrative Applications of Section 105(c)

The judicial and administrative decisions applying Section 105 of the Atomic Energy Act, although limited in number, are consistent in content. The NRC's interest in antitrust matters stems from Congress' concern in 1970 that the construction and operation of large and efficient nuclear power plants would "create or maintain a situation inconsistent with the antitrust laws." In the decisions on Section 105, emphasis is placed on ensuring that access to the perceived economic boon of nuclear power is not limited because of anticompetitive conduct by the proposed facility licensee. It also is evident from the case law that in the absence of an economic advantage resulting from access to a nuclear power plant, anticompetitive conduct by a licensee is not subject to NRC oversight.

1. Judicial Applications

Only one federal court has reviewed a final agency order under Section 105(c) of the Atomic Energy Act. In Alabama Power

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Co. v. Nuclear Regulatory Commission,^{22/} the Eleventh Circuit affirmed the NRC's imposition of ownership conditions on the operating license for the Joseph M. Farley Nuclear Plant, Units 1 and 2, along with conditions providing for access to Alabama Power's transmission facilities. The Court of Appeals endorsed the NRC's conclusion that the agency's inquiry into antitrust matters included not only likely violations of the antitrust laws, but also potential contraventions of the policies underlying those laws.^{23/} This, the court concluded, was fully consistent with Congress' basic policies towards that extraordinary new economic resource, nuclear power.

Those who had worked with the government were not to be the unbridled beneficiaries of the windfall head start they would have when private parties were allowed into nuclear power production.^{24/}

2. Administrative Decisions

In the handful of administrative decisions on Section 105(c), the NRC has elaborated further on the purpose of Section 105(c) and the Commission's enforcement role with respect to it.

^{22/} 692 F.2d 1362 (11th Cir. 1982).

^{23/} Id. at 1368.

^{24/} Id. at 1368-69.

There are five Commission decisions on Section 105, none of which review an agency decision on the merits of a Section 105 challenge. In the two South Carolina decisions^{25/} discussed in Section III.B.1 below, the Commission articulated the standard applicable to a determination that there have been "significant changes" in the antitrust circumstances surrounding the operation of a nuclear power plant which merit further agency consideration; it found that the standard had not been met in that case.

In its 1977 South Texas decision, which involved the timing of the agency's antitrust review at the operating license phase, the Commission observed that Congress fashioned only a limited role for the NRC in antitrust matters associated with the licensing of nuclear power plants. The NRC's primary concern is its regulation of the technical complexities associated with nuclear power that are designed to protect the public health and safety.^{26/} Nevertheless, the Commission is also authorized to involve itself in antitrust matters "if," and only if, it finds "that an applicant's plans may be inconsistent with the antitrust laws or their underlying policies."^{27/} This authority stems from the fact that "[n]o nuclear power can be generated without an NRC

^{25/} So. Carolina I, CLI-80-28, 11 N.R.C. 817 (1980); So. Carolina II, CLI-81-14, 13 N.R.C. 862 (1981).

^{26/} South Texas, supra, 5 N.R.C. at 1316.

^{27/} Id.

license"; consequently, the licensing process allows the NRC to act in a unique way -- through the imposition of license conditions -- to fashion antitrust remedies.^{28/}

In two 1973 Waterford decisions, the first decisions issued by the agency under amended Section 105, the Commission articulated the so-called "nexus" standard which required that NRC exercise its antitrust jurisdiction only if activities under an NRC license would contribute to creating or maintaining an anticompetitive situation. Focusing first upon the purpose of Section 105, the Commission observed:

[T]he requirement in section 105 for prelicensing antitrust review reflects a basic Congressional concern over access to power produced by nuclear facilities. The Commission's antitrust responsibilities represent inter alia a Congressional recognition that the nuclear industry originated as a Government monopoly and is in great measure the product of public funds. It was the intent of Congress that the original public control should not be permitted to develop into a private monopoly via the AEC licensing process, and that access to nuclear facilities be as widespread as possible.^{29/}

^{28/} Id.

^{29/} Louisiana Power & Light Co. (Waterford Steam Electric Generation Station, Unit 3), CLI-73-25, 6 A.E.C. 619, 620 (1973) ("Waterford II"); see also Louisiana Power & Light Co. (Waterford Steam Electric Generating Station, Unit 3), CLI-73-7, 6 A.E.C. 48 (1973) ("Waterford I").

Thus, the Commission plainly recognized the importance of the Congressional mandate to assure that AEC-licensed activities not run afoul of the antitrust laws. But the Commission also appreciated the limited interest of the agency in antitrust matters, and so stated:

At the same time, however, we must emphasize that the specific standard which Congress required for antitrust reviews -- "whether the activities under the license would create or maintain a situation inconsistent with the antitrust laws as specified in subsection 105a" -- has inherent boundaries. It does not authorize an unlimited inquiry into all alleged anticompetitive practices in the utility industry. The statute involves licensed activities, and not the electric utility industry as a whole. If Congress had intended to enact a broad remedy against all anticompetitive practices throughout the electric utility industry, it would have been anomalous to assign review responsibility to the Atomic Energy Commission, whose regulatory jurisdiction is limited to nuclear facilities. It is the status and role of these facilities which lie at the heart of antitrust proceedings under the Atomic Energy Act.³⁰

Other than the CAPCO case, the Commission's nexus standard has been applied three times by the Appeal Board. Two cases, Midland and Farley, involved a Section 105 merits decision. The third is the Appeal Board's interlocutory review of Wolf Creek.

^{30/} Waterford II, supra, 6 A.E.C. at 620 (emphasis in original).

In its 1975 Wolf Creek decision, the Appeal Board reiterated the Waterford standard that "[i]f activities relating to a facility have no substantial connection with alleged anticompetitive practices, there is no need for a hearing"31/ At issue in Wolf Creek was the definition of the "activities under the license" that fell within the scope of Section 105. A local cooperative that had intervened in the proceeding argued that the applicant's alleged refusal to wheel supplemental power to it would prevent the cooperative from acquiring an interest in Wolf Creek. This was purportedly true because without the right to have supplemental power wheeled to it, the cooperative argued that it would not be able to demonstrate to the financial community that it could use the nuclear power from Wolf Creek in an economically viable manner; consequently, it would be unable to borrow the necessary funds to purchase a share of the nuclear plant.32/

The Appeal Board held that the anticompetitive activity alleged by the cooperative fell within the scope of Section 105. While the described conduct was "not traceable immediately and directly to operations of the licensed nuclear facility itself,"

31/ Kansas Gas & Electric Co. (Wolf Creek Generating Station, Unit No. 1), ALAB-279, 1 N.R.C. 559, 566 (1975), citing Waterford II, supra, 6 A.E.C. at 621.

32/ Id. at 567.

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it was apparent that such conduct might enhance the applicant's "ability to use nuclear-generated power to the disadvantage of competitors."33/

In short, nexus was not to be interpreted to preclude from NRC's oversight anticompetitive consequences which ineluctably flowed from the economic advantage that the nuclear plant represented. Citing the 1970 Report on Section 105 by the Joint Committee on Atomic Energy, the Appeal Board in Wolf Creek stated:

[A]s the Commission's antitrust responsibilities are linked to license applications, the Commission's antitrust mandate extends only to anticompetitive situations intertwined with or exacerbated by the award of a license to construct or operate a nuclear facility.34/

On the other hand, if an anticompetitive situation is not so intertwined or exacerbated, NRC need not scrutinize the applicant's business activities. "[A]lleged anticompetitive practices -- however serious -- which have no substantial connection with the nuclear facility, are beyond the scope of antitrust review under the Atomic Energy Act."35/

33/ Id. at 568.

34/ Id. at 569 (emphasis added).

35/ Waterford II, supra, 6 A.E.C. at 621.

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Midland was the first full-fledged antitrust decision on the merits subject to Appeal Board review.^{36/} The licensing board had rendered a decision in favor of the applicant, Consumers Power Company, and the complaining parties appealed. They maintained that anticompetitive acts by Consumers "blocked their access to cheaper sources of power," and resulted in Consumers' retaining "the cost advantages of the nuclear facility . . . , thus enhancing its monopolistic dominance over the available sources of cheaper power."^{37/}

The Appeal Board reversed and remanded the case, finding it reasonably probable that Consumers' activities under the Midland licenses would maintain the present situation inconsistent with the antitrust laws.^{38/} Referencing the Wolf Creek "intertwined or exacerbated" test, the Appeal Board concluded that Consumers had monopolized the relevant markets for coordination services, and wholesale and retail electric power. Given this situation, Consumers' installation of large nuclear powered generating units "[m]anifestly . . . will exacerbate the anticompetitive situation."^{39/} The Appeal Board emphasized,

^{36/} Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-452, 6 N.R.C. 892 (1977).

^{37/} Id. at 900.

^{38/} Id. at 1098.

^{39/} Id. at 1095.

[O]ne of the reasons for [Congress'] amending section 105c to its present form was the desire to prevent the foreclosing of the advantages of nuclear power to all but the very largest electric utilities. But unless we step in, that is precisely what will happen in this case: Consumers will have successfully used its monopoly power to retain the benefit of nuclear-powered baseload generation for itself, to the disadvantage of its "land-locked" smaller competitors.^{40/}

The Appeal Board concurred with the Department of Justice that the Midland units would operate almost full-time, and were expected to provide "the cheapest available power."^{41/} It also found that because of the Midland plants, Applicant would be able to "integrate low-cost nuclear generation with its system," thereby reducing its average cost, while "denying its competitors the same advantage."^{42/}

Consumers' anticompetitive conduct was of significance to the Appeal Board because it would be furthered -- exacerbated -- by the use of the low-cost Midland units. But it was the cost "advantages" of nuclear power along with the "foreclosing" of those advantages that constituted the two critical independent variables in the Appeal Board's analysis.

^{40/} Id. (emphasis added).

^{41/} Id. at 1096 n.722.

^{42/} Id. at 1098.

Relying particularly on its analysis in the Midland case, in its 1981 Farley decision,^{43/} the Appeal Board concluded that the unconditional licensing of the Farley plants would create or maintain a situation inconsistent with the antitrust laws. Thus, the Appeal Board concluded that "the antitrust ramifications of its licensing actions"^{44/} were adverse. In resolving the question of the appropriate remedy to impose, the Appeal Board commented on the purposes and objectives to be served by its decision.

One of the basic foundations on which the Atomic Energy Act rests is the principle of free competition in private enterprise. This principle is manifested at the very outset of the Act by the policy declaration that the "development, use, and control of atomic energy shall be directed so as to . . . strengthen free competition in private enterprise. This policy finds manifestation again in Section 105 of the Act . . ." Thus, through the mechanism of the antitrust laws, the Congress sought to protect free competition in private enterprise in the development and use of atomic energy.^{45/}

Applying these broad principles to the findings of fact in Farley, and recognizing the "benefits of lower-cost nuclear

^{43/} Alabama Power Co. (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-646, 13 N.R.C. 1027 (1981), aff'd, 692 F.2d 1362 (11th Cir. 1982).

^{44/} Id. at 1035.

^{45/} 13 N.R.C. at 1102.

power,"^{46/} the Appeal Board concluded that Alabama Power would be required to share its economically beneficial ownership interest in the plant with the aggrieved local cooperative.

3. Summary of Judicial and Administrative Decisions

The decisions applying Section 105 uniformly begin their analysis with the understanding, either presumed or established, that nuclear power is low in cost. The need to restrict licensees' business conduct through the imposition of license conditions on proposed nuclear facilities resulted not primarily but exclusively because of this understanding about the beneficial economic impact of nuclear power. If nuclear power was an economic windfall, it indeed follows that limited ownership of it might cause or maintain anticompetitive conditions in the relevant market place. Thus, the focus of the decisions was not on this syllogism, but on the factual inquiry as to the specific market conditions in each case.

In some instances, the NRC's review has focused on the legitimacy of an NRC-imposed remedy not conspicuously or even directly associated with a proposed nuclear power plant. It is clear from the cases that NRC is not limited in its license condition authority once it is apparent that a nuclear facility's

^{46/} Id. at 1110.

use is intertwined with or would exacerbate anticompetitive activity. But if a nuclear facility is not economically superior, thus maintaining or creating in its owners an automatically advantageous competitive position in the marketplace, there is no statutory basis for NRC conditioning the grant of licensure for that plant. At the same time, it remains the domain of other federal agencies to more broadly police the competitive conduct of the utility or utilities in question.

III. THE BASIS FOR RELIEF

In March, 1973, The Toledo Edison Company ("TECo"), The Cleveland Electric Illuminating Company ("CEI"), OE, Pennsylvania Power Company ("Penn Power") and Duquesne Light Company ("Duquesne") filed a joint application with the AEC to build two proposed nuclear plants, Perry 1 and 2, to be located on Lake Erie approximately 35 miles northeast of Cleveland, Ohio. Each of these plants was to have a net electrical output of 1205 megawatts. CEI sought AEC approval to own, construct and, upon subsequent approval, to operate the proposed new facilities. The other applicants, including OE, sought approval of their proposed ownership status.^{47/} In particular, OE sought approval of its proposed 35.60 percent ownership interest in the Perry facility.

^{47/} Application for Construction Permit, dated March 28, 1973; see 38 Fed. Reg. 18052 (July 6, 1973).

Id.^{48/}

On December 17, 1973, pursuant to AEC's regulations, the Attorney General of the United States advised the AEC that the Perry application raised antitrust questions, the resolution of which required a hearing.^{49/} A public hearing was called and petitions to intervene were filed by the City of Cleveland and by American Municipal Power - Ohio ("AMP-O"). AMP-O subsequently withdrew its intervention. The State of Ohio also initially participated as an interested state pursuant to 10 C.F.R. § 2.715(c), although it later effectively withdrew from the case.^{50/}

In March, 1974, the Perry case was consolidated with the then-pending antitrust litigation involving Davis-Besse Unit 1, a nuclear power plant in north central Ohio being built by TECo and CEI. Subsequently, an antitrust proceeding addressing Davis-Besse Units 2 and 3 was combined with the consolidated Perry/Davis Besse Unit 1 proceeding.^{51/}

^{48/} Subsequently, OE and CEI modified their ownership shares; OE's current share of Perry 1 is 30.00 percent.

^{49/} 39 Fed. Reg. 2029 (Jan. 16, 1974).

^{50/} See ALAB-560, 10 N.R.C. at 276 n.29.

^{51/} See Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2 and 3), LBP-77-1, 5 N.R.C. 133, 138-40 (1977) (hereinafter "LBP-77-1").

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The antitrust proceeding that ultimately resulted in the license conditions at issue here was a lengthy and complex litigation much of which is not relevant to the issues raised in this license amendment application. Attachments 2, 3, and 4 summarize the Licensing and Appeal Board decisions and the positions of the parties in the CAPCO antitrust proceeding.

In summary, the NRC's factual predicate for imposing anti-trust license conditions on OE was that it was anticipated that the construction and operation of Perry, in fact, would create or maintain a situation inconsistent with the antitrust laws. There were two elements to this conclusion. First, that a situation inconsistent with the antitrust laws existed in the OE service area for which OE was responsible. And, second, that this situation was expected to be maintained by NRC's authorization to construct and operate the Perry plant. As to the first element -- dealing with the situation inconsistent with the antitrust laws -- for purposes of this license amendment application, OE will assume *arguendo* that the Licensing and Appeal Board findings are correct and that the situation is unchanged from the mid-1970's. But, as to the second element -- addressing whether the licensing of Perry creates or maintains the anticompetitive situation -- the facts today belie NRC's expectation at the time. In fact, because of the relatively high cost of nuclear power, the operation of Perry is not competitively advantageous to OE. Perry

therefore cannot and does not create or maintain an anticompetitive situation.

A. Why Conditions Were Imposed on OE

The major controversy in the CAPCO antitrust proceeding concerned the characterization of the conduct of CAPCO and of the marketplace at issue. This characterization was relevant to the first element of the conclusion in the case, viz., that a situation inconsistent with the antitrust laws existed in the OE service area for which OE was responsible. As to the second element, whether the licensing of Perry created or maintained an anticompetitive situation, there was also some dispute. But there was absolutely no disagreement among the participants that nuclear power from Perry would be low in cost. This understanding is evident in the decisions of the case and the underlying evidentiary record. Moreover, it is clear that in the absence of this factual predicate, the NRC would not have had a basis for meeting the "create or maintain" standard or, consequently, for imposing antitrust license conditions on OE.

1. The Decisions Below

In the CAPCO antitrust proceeding, the Appeal Board concluded that it was appropriate to impose antitrust license conditions on OE. The Appeal Board's factual findings included a number of statements about the low cost of nuclear power, and the

consequent need to ensure access to it and to impose other competitive restrictions on Applicants' conduct so that the owners of the proposed nuclear facilities would not control or monopolize the relevant markets.

Thus, in describing the CAPCO coordinated planning and transmission system, the Appeal Board observed that CAPCO "permits applicants to take advantage of 'economies of scale' (i.e., to build larger plants capable of generating power at lower cost). . . ."52/ The effect of the CAPCO arrangement was "to allow applicants to increase the reliability of their electric power systems while lowering the costs of operating them."53/ Unquestionably, the value of -- and hence, the competitive threat posed by -- the nuclear plants, including Perry, was their use as low-cost sources of power. This fact essentially was assumed by the Appeal Board. For example, in summarizing the Licensing Board's findings, the Appeal Board stated:

Given applicants' one-system planning and coordinated operations, [the Licensing Board found that] the unconditional addition of five large nuclear power plants advantageous for "baseload" (low operating cost) generation would increase the CAPCO system's bulk power generating capacity by nearly a third. This would exacerbate the existing anti-competitive situation, making it even more difficult for the isolated public power

52/ ALAB-560, 10 N.R.C. at 274 (emphasis added).

53/ Id.

systems to continue to compete with the applicants.54/

In short, the linchpin of the Appeal Board's determination that NRC could impose competitive restraints on OE was that the nuclear plants in question would be competitively advantageous since they would be cheap. Because of this fact, the "specific and (in the overall context of the electric power industry) relatively limited activities" that the NRC licenses authorized would contribute to situations inconsistent with the antitrust laws.55/

The Licensing Board's decision also is laced with findings concerning the presumption that NRC intervention into the competitive conduct of its licensees was warranted because of the low cost of nuclear power. In the Preamble to LBP-77-1, the Licensing Board explained that this issue becomes of "statutory concern" to the NRC only when the benefits of the power generated from proposed nuclear stations will have a substantial (presumably adverse) impact on the delivery and sale of electric energy in the relevant market.56/ Noting the large quantity of additional generation contemplated by CAPCO, with the addition of five large nuclear units totalling 4,500 megawatts, the Licensing

54/ Id. at 281.

55/ Id. 284.

56/ LBP-77-1, 5 N.R.C. at 141.

Board stated:57/

Applicants are of the opinion that these units will produce economies of scale and will provide for long term generation costs well under average system costs which could be obtained either compared to the cost of operating their present generating equipment or in comparison to new generation relying upon fossil fueled units. Thus, the operation of the Davis-Besse and Perry stations will have a substantial effect upon both the supply and the cost of electricity within the CCCT area.

In the Licensing Board's view, because of the benefits from the proposed nuclear plants, the competitive conduct of the Applicants, in all of its potential forms, was subject to NRC scrutiny. Conversely, if the subject facilities did not provide "low cost base load power,"58/ with associated "benefits of economies of scale,"59/ the Applicants' conduct, however anticompetitive, would not be of interest to the NRC.

The NRC is not charged with the responsibility of the general enforcement or administration of the antitrust laws. Its particular interest is focused not upon a regulatory mandate to investigate all market activities of Applicants but only to consider the effect of granting a nuclear license on the competitive environment in which Applicants operate.60/

57/ Id. at 143 (emphasis added).

58/ Id. at 155.

59/ Id.

60/ Id. at 237.

2. The Evidentiary Record

The desirability of OE utilizing nuclear generation to produce baseload power appeared so obvious to all of the parties at the time of the hearing that the Licensing Board was not faced with any argument on the issue. Considerable evidence nevertheless existed in the record which uniformly supported this conclusion. This evidence was in three forms: (i) Economic studies; (ii) Expert testimony; and (iii) Demands for access to nuclear power. In the first instance, however, the Licensing Board relied on the fact that the Applicants themselves were of the opinion that the units would produce long-term generation costs well under average system costs calculated in comparison to either existing or new fossil-fueled units.^{61/} DOJ, and the experts for both DOJ and the NRC Staff, also placed great reliance on the Applicants' decision to construct nuclear power plants.^{62/} This decision was treated as establishing that nuclear power was presumptively cost-advantageous.^{63/}

^{61/} LBP-77-1, 5 N.R.C at 143. See also *id.* at 49.

^{62/} DOJ Prehearing Brief at 115; Hughes NRC 207, p. 30-31; Tr. 5900, 5922 (Kampmeier); Tr. 7074, 7236, 7277-78 (Wein).

^{63/} See Tr. 7277 (Wein). In fact, the Licensing Board had incorrectly articulated the Applicants' position. The Applicants actually had contended that "[t]he installation of nuclear units increases Applicants' average embedded costs . . . [although] that

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As DOJ observed, "It is undisputed [in this proceeding] that the power available from the subject nuclear units is expected to be the cheapest base load power available to serve new and growing loads."^{64/} Indeed, the factual record was peppered with comments made by witnesses from all sides asserting the superiority of nuclear power.^{65/}

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increase is less in the long run than it would be if Applicants were to build, instead, similarly-sized fossil plants." Applicants' Joint Reply Brief, September 15, 1976 at 10 (citations to expert testimony omitted). Similarly, on March 6, 1974, in providing information requested by the United States Attorney General for his antitrust review, OE had indicated that the total estimated annual cost of Perry Unit 1 in mills/KWh exceeded OE's 1970 average cost of bulk power by 4.78 mills/KWh. NRC 157, "Information Requested By The Attorney General For Antitrust Review: Answers of Ohio Edison System," at pp. 18, 20. Interestingly, like the Licensing Board, DOJ was so convinced of the cheapness of nuclear power that it had ignored this OE answer to its own question. In both its Prehearing and Reply Briefs, DOJ alleged that "[t]he marketing of power from the subject nuclear plants will enable Applicants to lower their average cost of power." DOJ Prehearing Brief at 115; DOJ Reply Brief at 179. This allegation was at odds with the testimony of DOJ's own expert, who had agreed with OE's projections. Tr. 6042 (Kampmeier).

^{64/} DOJ Appeal Brief at 179 (citations to record omitted).

^{65/} See Kampmeier DOJ 450, pp. 24-25, 52; Kekela DOJ 574, p. 123; Masters DOJ 567, pp. 55-56; DOJ 285, pp. 10-14; Rudolph, DOJ 558, p. 165; Sullivan DOJ 578, pp. 210-11; Williamson DOJ 581, pp. 36-38; Hughes NRC 207, pp. 30-32, 38, 152, 153; Mozer NRC 205, p. 61; Tr. 8873 (Dempler); Tr. 6122-23 (Kampmeier); Tr. 10129 (Smart).

a. Economic Studies

There were a number of economic studies relied on by the Licensing Board in its findings on the low cost of Perry. A 1973 CAPCO Planning Committee Report, inter alia, had "determine(d) the relative economics . . . of a 1200 MW nuclear unit program and a 1200 MW coal unit program."^{66/} By pursuing a program using nuclear units, it was calculated that total annual costs from 1981 through 1986 would be reduced by over \$500 million.^{67/} The present worth of the savings in annual costs from 1981 to 1995 achieved by using nuclear power was calculated to be in excess of two and a quarter billion dollars.^{68/} This report confirmed the conclusions of an earlier study presented by CAPCO to the Edison Electric Institute.^{69/}

Other studies, prepared or introduced in evidence by the NRC Staff and DOJ, supported the Licensing Board's conclusion that nuclear power was anticipated to be the lowest-cost source of new power for OE. In both the Draft Environmental Statement and the

^{66/} "CAPCO Base Load Generating Capacity Requirements Following Perry 2, 1981-84," Planning Committee Report no. 5 ("CAPCO Planning Rpt"), June 14, 1973 at 21; see LBP-77-1, 5 N.R.C. 133, 155 n.30 (1970).

^{67/} CAPCO Planning Rpt at 22.

^{68/} Id.

^{69/} DOJ 285, "Recent Generating Capacity Commitments of the CAPCO Group," February 4, 1974.

Final Environmental Statement for the proposed Perry Nuclear Power Plant,^{70/} the NRC had made a cost comparison "between the Applicant's proposed nuclear plant and coal-fired and oil-fired plants of the same size and the same cooling system."^{71/} The Perry FES had concluded that on a total annualized basis, the Perry facility was expected to be \$46.8 million cheaper than the least expensive coal-fired facility of the same size and \$113.2 million cheaper than an oil-fired facility of the same size.

DOJ also offered in evidence a Toledo Edison chart dated April 18, 1973, entitled "Comparative Costs of Coal and Nuclear Units."^{72/} On a levelized basis, electricity produced by an 1100 megawatt nuclear facility located in Ohio was calculated to be the least expensive, costing only 15.79 dollars per megawatt-hour ("MWh"). In comparison, it was estimated that coal-fired

^{70/} United States Atomic Energy Commission, Draft Environmental Statement Related To The Proposed Perry Nuclear Power Plant, Units 1 and 2 (November 1973) ("Perry DES"); United States Atomic Energy Commission, Final Environmental Statement Related To The Proposed Perry Nuclear Power Plant, Units 1 and 2 (April 1974) ("Perry FES"). The cost comparisons in the Perry DES were identical to those in the Perry FES.

^{71/} The NRC Staff only compared Perry to oil-fired and coal-fired plants because it had concluded that other energy sources -- natural gas, liquified natural gas, methanol, gas turbines, combined-cycle turbines, hydroelectric, solar, fusion, magnetohydrodynamics, geothermal, and purchases of power from other utilities -- were not viable alternatives in the CCCT. Perry FES at 9-5 to 9-11.

^{72/} DOJ 94.

facilities of an identical size would cost 16.75 or 19.26 dollars per MWh, depending upon whether the facility was located in Pennsylvania or Ohio. A 300 megawatt coal-fired facility located in Ohio would also be more expensive, generating electricity for 16.75 dollars per MWh. Another Toledo Edison report offered in evidence by DOJ, entitled "Forecasts For Electric Generation and Transmission: 1974-1984", had concluded that "[n]uclear fuel presently provides the least costly energy source for large base-load generating plants."73/

b. Expert Testimony

Further support for the Licensing Board's position on the economic superiority of the nuclear option was available from the testimony of the parties' experts. Dr. William R. Hughes,74/ the NRC staff economist, stated that the "ability of the applicants to add nuclear plants such as the Perry and Davis-Besse units confers an added economic advantage over systems that are unable to add nuclear capacity"75/ Dr. Hughes further testified that "[n]uclear units will contribute to the effectiveness of the applicants' bulk power supply systems and enhance the economic advantage these systems enjoy over alternative sources, thus

73/ DOJ 511 at 92.

74/ See LBP-77-1, 5 N.R.C at 155, 241, 249.

75/ Hughes NRC 207, p. 30; see also id. at pp. 30-32; Tr. 3686.

enhancing their market power."76/

Other experts for the NRC Staff and DOJ concurred with Dr. Hughes about the low cost of power produced by nuclear generating facilities. Mr. Mozer stated that "[n]uclear power has a lower overall cost at many locations than other alternatives."77/ Mr. Kampmeier testified that "the cost of coal and oil have risen so much that [a] nuclear plant has a large cost advantage."78/

In short, it is indisputable that the record in the CAPCO antitrust proceeding amply supported DOJ's assertion, with which the other parties concurred, that "[t]he power . . . generated [by the proposed nuclear units] will be more economical than any other form of new base load generating capacity"79/ It was this critical finding which inexorably led to the conclusion that the licensing of Perry would create or maintain an anti-competitive situation in the OE service area.

76/ Huges, NRC 207, p. 31.

77/ Mozer, NRC 205, p. 61.

78/ Kampmeier, DOJ 450, pp. 24-25.

79/ DOJ Prehearing Brief at 118.

c. Demands for Access to Nuclear Power

The economic significance of the anticipated low cost of nuclear power, magnified by multiple units, related directly to the extensive discussion in the record of the extent to which the Applicants were found to have denied their competitors direct participation in their proposed nuclear construction program. The clamor over the issue of access stemmed from the belief that licensing the CAPCO nuclear facilities without imposing economic restrictions on CAPCO would "den[y] these competitors the low-cost power they will need to compete with Applicants' nuclear power for new and growing loads"80/ Or, as the NRC Staff had stated, "Applicants' denials of access to nuclear units constitutes denials of access to an essential resource,"81/ possession of which was believed to be necessary "in order to compete with Applicants and meet their future loads."82/ Thus, in all of the extensive discussions by the NRC Staff and DOJ about access, the assumption was made that without nuclear power, the non-Applicant utilities would be incapable of competing with the Applicants.83/

80/ DOJ Prehearing Brief at 118-19.

81/ NRC Proposed Conclusions of Law 7.10.

82/ NRC Proposed Findings of Fact 2.06.

83/ For example, the City of Cleveland, the operator of MELP, had stated that "[u]nless small electric systems in the

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Not surprisingly, then, there also was uniform agreement by the parties that to compete, the non-Applicant CCCT utilities would have to secure the economic benefits provided by access to the nuclear units. For example, DOJ witness Kampmeier testified that "[w]ithout . . . access to the nuclear [units] . . . the competitive positions of the small systems would deteriorate very seriously, if not beyond the point of continued viability.^{84/} Similarly, DOJ's Dr. Wein maintained that joint ownership of a nuclear facility was one of the terms on which a non-CAPCO company would have to be admitted into the CAPCO pool in order to prevent anticompetitive effects.^{85/} The Applicants did not contest the economic benefits of access, arguing instead that such benefits were available to the small utilities through other means, including Applicants' proposed license conditions,^{86/}

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CCCT . . . obtain access to nuclear power . . . the small electric systems will lose their ability to compete with Applicants. It is necessary that Cleveland, like Applicants, have access to nuclear capacity . . ." "Prehearing Brief of the City of Cleveland," November 26, 1975 (citations omitted) (emphasis supplied). This assertion was accepted by the Licensing Board: "In order to remain or to become a viable competitor Cleveland must have . . . access to nuclear power" LBP-77-1, 5 N.R.C. at 176.

^{84/} Kampmeier, DOJ 450, p. 52.

^{85/} Wein, DOJ 587, pp. 144-45.

^{86/} App. 44. See, e.g., Applicants' Joint Brief in Support at 678-80, 689-90.

wholesale sales,87/ or the construction of a small coal-fired facility.88/

In short, the stated desire for access to the CAPCO nuclear facilities, expressed by some parties and presumed to be the case for every CAPCO competitor given the opportunity, in itself, constituted evidence of the perceived economic superiority of these plants.

d. Other Factors

Once it became apparent -- as it was to everyone at the time -- that nuclear power was low in cost, the Licensing Board found that the impact of operating such a plant was heightened by a number of characteristics of the situation extant within the CAPCO service areas. These included the quantity of such low-cost nuclear power plants -- five large units,89/ the transmission expansion plan designed to transmit this low-cost power,90/ and the CAPCO coordinated planning which allowed for an exclusive sharing of the benefits of nuclear power.91/ The Licensing Board

87/ See, e.g., Applicants' Joint Brief in Support at 681-84.

88/ E.g., id. at 688-89.

89/ See, e.g., id. at 239, 240.

90/ Id.

91/ Id. at 223-37, 240-41.

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felt free to remedy the anticompetitive impact of the CAPCO nuclear plants by means that affected all of these factors, e.g., through access to the plants, use of transmission facilities and wheeling, and the opportunity to participate in CAPCO.^{92/} The critical fact, however, for purposes of Section 105(c) review, and the fact at issue today, was the low cost of nuclear power. The analysis used by the Licensing Board and the NRC Staff's own expert indicates that where this is not the case, characteristics of the electric utility industry, such as wheeling or transmission capability, which allow for the use of nuclear power are not of concern to the NRC. This is because "[i]t is the effect of the licensed activities" -- construction and operation of Perry -- "measured against particular situations which is the predicate for Commission involvement in Section 105(c) license consideration."^{93/}

A good example of the NRC's analysis in the CAPCO case of other factors that were affected by the anticipated low cost of nuclear power was the trepidation aroused by the massive commitment of the Applicants in the 1970's to expand their nuclear generating capacity. At the time of the hearing, the Applicants had constructed, were in the process of constructing, or had

^{92/} Id. at 256-59; see also ALAB-560, 10 N.R.C. at 296-99.

^{93/} LBP-77-1, 5 N.R.C. at 238.

committed themselves to construct fourteen generating units with a total generating capacity of slightly over 13,000 megawatts ("MW").^{94/} Nine of these facilities were nuclear units which would have a total generating capacity of over 9,000 MW;^{95/} the five remaining facilities were coal-fired units.^{96/}

To place this construction program in perspective, in 1973 the total generating capacity of the Applicants was approximately 13,000 MW.^{97/} Thus, constructing the nine proposed nuclear facilities was the equivalent of replacing over 70% of the existing fossil-fueled generating capacity of the Applicants. Upon completion of the construction program, the nine nuclear units would have constituted approximately 35% of the total generating capacity of the Applicants (assuming that none of the earlier units were removed from operation). Even if one looks only at the five nuclear units which were the subject of the hearing, they were the equivalent to almost 40% of the existing capacity, and would

^{94/} LBP-77-1, 5 N.R.C. at 153; Applicants' Brief In Support at 274-75; NRC 157 (Question 12).

^{95/} Beaver Valley 1 and 2 (856 MW each); Davis-Besse 1, 2 and 3 (906 MW each); Perry 1 and 2 (1205 MW each); Erie 1 and 2 (1260 MW each). Applicants' Brief In Support at 275 nn.170 & 171.

^{96/} Sammis 7 (625 MW), Eastlake 5 (625 MW), and Mansfield 1, 2 and 3 (825 MW each). Id. The CAPCO companies also were jointly committed to three blocks of fossil-fueled, short-lead-time-capacity to compensate for slippages in the in-service dates of the proposed units. Id.

^{97/} LBP-77-1, 5 N.R.C. at 143.

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have constituted almost one quarter of the Applicants' total capacity even if the other nuclear units had been cancelled (again, assuming that none of the earlier units were removed from operation).

Most importantly, these units would generate base load power, "power and energy for the lower part of the load cycle, generally up to or slightly above the minimum load level."^{98/} Since base load units "supply loads which occur a greater number of hours during a year" compared to "peaking" units,^{99/} a utility has more opportunity to obtain the benefits of the anticipated low cost from such base load units. As DOJ noted, the "nuclear electric power produced by the installation which are the subject of this proceeding, together with the power from the Beaver Valley Power Station, Unit No. 2, will represent approximately 50% of Applicants' present generating capacity, and will represent an even greater percentage of Applicants' base load capacity."^{100/} Not surprisingly, then, the NRC Staff considered, CAPCO to be "a power pool overwhelmingly committed to the planning, construction, and operation of predominantly large-scale, nuclear base load units and integrating that nuclear capacity into a bulk

^{98/} NRC Trial Brief at A-1.

^{99/} DOJ Proposed Findings of Fact 2.11.

^{100/} DOJ Prehearing Brief at 114.

power supply system."^{101/}

The commitment of CAPCO to nuclear generation was expected to have an even greater potential impact on competition than would the isolated construction of a single nuclear facility. "Where nuclear generation is the superior base load choice, the cumulative effect on market power of a sequence of nuclear plants will be greater than the impact of any one plant alone, because each successive nuclear addition will confer an incremental advantage."^{102/} In effect, the Licensing Board recognized the simple truism that the higher the percentage of bulk power that is generated by a low-cost method, the more the advantage of that method is reflected in average cost.^{103/} Because multiple nuclear facilities were viewed as "the superior base load choice," they conferred "an incremental advantage." Of course,

^{101/} NRC Reply Brief at 14.

^{102/} LBP-77-1, 5 N.R.C. at 241 (emphasis added), citing NRC Staff witness Dr. Hughes; see Hughes NRC 207, pp. 31-32; see also NRC Proposed Findings of Fact 3.16; NRC Trial Brief at 72 (quoting Dr. Hughes). As Dr. Hughes further explained, "the benefits of each new unit would leave the applicants free to exercise progressively greater market power as nuclear generation increased its share of the total generation of this area." Hughes NRC 207, pp. 31-32.

^{103/} Dr. Wein, DOJ's expert witness, recognized that the converse of this also is true. He therefore argued that a utility could protect itself to the extent it anticipated rising prices by purchasing an interest in the first nuclear plant, and thereby avoiding the impact of increasing incremental costs on average cost. Tr. 6632-33, 7075-78 (Wein).

in the absence of such an assumption, there would be no "advantage" to be "reflected in average cost" from the construction of multiple units, nor would there be anticompetitive significance to CAPCO's major nuclear commitment.

This same analysis applies to an examination of the significance of power supply services, such as transmission and coordination.^{104/} The Licensing Board had found and, for purposes of this Application, OE assumes that these services would be necessary for the non-Applicant CCCT utilities to avail themselves of nuclear power.^{105/} But as Dr. Hughes' analysis had indicated -- an analysis which the Licensing Board found "particularly helpful"^{106/} -- this "impediment" had competitive significance only because its continued existence was viewed as granting the Applicants the exclusive use of nuclear power, thereby improving their competitive position. But where nuclear

^{104/} See, e.g., NRC Proposed Findings of Fact 1.022-.054, 1.087-.112, 1.114-.162, 1.179-.266, 1.282-.293, 1.298-.361; DOJ Proposed Findings of Fact 6.01-.16, 6.18-.23, 7.01-.09, 7.11-.18, 8.01-.12, 9.01-.25, 9.29-.33, 10.01-.20. Since both the NRC Staff and DOJ believed that "effective utilization of nuclear power require[d] other power supply option and bulk power services which would not be available except with the applicants' cooperation," the denial of access to coordination was tantamount to denial of nuclear power. NRC Trial Brief at 71. See also DOJ Proposed Findings 2.27 ("A small municipal system without access to coordinated operation and development could not efficiently install or use nuclear generation.") (citations omitted).

^{105/} LBP-77-1, 5 N.R.C. at 240-41.

^{106/} Id.

power is not "the superior base load choice," Applicants' position would not be improved by virtue of such an exclusive use. In fact, as is later demonstrated, OE's position would be (and has been) worsened. Thus, transmission and coordination were significant during the CAPCO proceeding because of competitive assumptions about the transmission of low-cost nuclear power and coordination to better utilize low-cost nuclear power that are not true today.

In short, the Licensing and Appeal Boards and the parties were interested in the size of the CAPCO nuclear program, the associated transmission expansion plan, and coordination because these circumstances affected the ability of CAPCO's competitors to gain access to nuclear power. In view of the common understanding that nuclear units were the superior economic choice, such access was essential. Conversely, in the absence of cost-advantageous nuclear power, municipalities would not have been interested in access or disadvantaged without it, thereby eliminating the basis for the NRC's interest in the structure of CAPCO.

B. The Legal Standard For Suspending The Conditions

In its evaluation of OE's present request to amend the Perry operating license, the determinative question that the NRC Staff must resolve is whether there are changed circumstances that

compel issuance of the proposed amendment -- i.e., suspension of the antitrust license conditions as they apply to OE. It is OE's position that unquestionably, the relative economic cost of nuclear power, and the anticipated benefits from nuclear generation, have changed dramatically from those assumed and relied upon by both the Licensing and Appeal Boards when they imposed antitrust license conditions on OE. The consequence of this change is not merely the inappropriateness of the subject license conditions; it is their impermissibility.

1. The Section 105(c) Changed Circumstances Test

Section 105(c) of the Act establishes "a particularized regime for the consideration and accommodation of possible anti-trust concerns arising in connection with the licensing of nuclear power plants."107/ As evidenced in this case, a thorough antitrust review takes place at the construction permit stage of the facility licensing process. A "second narrower review"108/ occurs during the OL phase if, and only if, there have been "significant changes in the licensee's activities or proposed activities"109/ subsequent to the first detailed review. No such

107/ Houston Lighting & Power Co. (South Texas Project, Units 1 and 2), CLI-77-13, 5 N.R.C. 1303, 1309 (1977) ("South Texas").

108/ Id. at 1312.

109/ Section 105(c)(2) of the Act, 42 U.S.C. § 2135(c)(2); see South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Unit No. 1), CLI-80-28, 11 N.R.C. 817, 823 (1980) ("So. Carolina I").

changes occurred in this instance.110/

Subsequent to the issuance of an OL for a nuclear power plant, no further antitrust evaluations ordinarily take place unless a license amendment is sought which is determined would result in "significant [antitrust] changes" to the licensed activities.111/ In such circumstances, the NRC undertakes another antitrust review.112/

110/ 51 Fed. Reg. 41,711 (Nov. 18, 1986).

111/ See 10 C.F.R. § 50.80(b); Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit No. 2), ALAB-475, 7 N.R.C. 752, 755 n.7 (1978); South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Unit No. 1), CLI-81-14, 13 N.R.C. 862, 874 n.47 (1981) ("So. Carolina II").

In South Texas, supra, the NRC focused on the two-step antitrust review process, rejecting the argument that Congress placed general antitrust policy authority in the NRC. The Commission instead concluded that there were "more suitable forums" for general antitrust enforcement, alluding to the Department of Justice's Antitrust Division and others. 5 N.R.C. at 1314-18. In reaching this conclusion, the Commission was careful, however, to distinguish its "continuing police power over conditions properly placed on licenses, after 105(c) antitrust review," and situations where "significant changes" occur after an operating license is issued. Neither of these circumstances was at issue in South Texas. Id. at 1317-18.

112/ Three criteria have been identified that circumscribe the circumstances in which a change in licensed activities is considered to be significant, for antitrust purposes. Those criteria are whether the change (1) occurred since the previous, detailed antitrust review of the licensee(s); (2) is reasonably attributable to the licensee(s); and (3) has antitrust implications that would likely warrant some antitrust remedy. So. Carolina I, 11 N.R.C. at 824; So. Carolina II, 13 N.R.C. at 854 n.3. This third critical criterion has been further explained as establishing that "changes would be considered 'significant' only when the competitive structure, as changed, would likely warrant and be susceptible to a greater than de minimus license modification." Id.

Board's exceptions concerned Mr. Sharfman's view that the Licensing Board should be vested with continuing jurisdiction over the CAPCO antitrust proceeding. Mr. Sharfman had concluded that this remedy was necessary so that in the future the Licensing Board could "relieve the applicants from conditions that might prove an extreme hardship or impossible of compliance."114/ As Mr. Sharfman explained:

However, should this license condition [concerning wheeling] confront the applicants with a situation of extreme hardship or impossibility at some time in the future, they may petition the Licensing Board for relief from it. We hereby vest the Licensing Board with continuing jurisdiction to entertain such a petition. This is precisely what the District Court did in response to a similar argument in Otter Tail, supra, 115/ that interconnection or wheeling would "erode its integrated system and threaten its capacity to serve adequately the public"; and the Supreme Court held that that was a proper exercise of discretion. 410 U.S. at 381-82. 116/

The Appeal Board majority agreed with Mr. Sharfman that "license conditions seemingly fair today may prove inequitable tomorrow."117/ But, it concluded that Mr. Sharfman's proposed

114/ Id. at 294.

115/ Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).

116/ 10 N.R.C. at 392 (separate opinion of J. Sharfman) (footnote added).

117/ Id. at 294.

jurisdictional approach to relief was unnecessary. As the Appeal Board observed, "Commission regulations give the Director of Nuclear Reactor Regulation -- who is assisted by an able anti-trust staff -- authority to modify license conditions where necessary and provide as well as [sic] means for review of his determinations. 10 CFR Sections 2.200-2.204 and Section 2.206."118/

The Appeal Board noted that a modification of one of the anti-trust license conditions already had taken place between the Licensing Board's decision in LBP-77-1 and the Appeal Board's opinion in ALAB-560. It therefore was clear to the Appeal Board that the impact of changed conditions could readily be remedied by the NRC Staff. Thus, the Appeal Board saw "no occasion to continue the Licensing Board's jurisdiction over aspects of the case."119/

In summary, the Appeal Board that imposed the license conditions at issue here expressly considered the circumstances which OE submits are true today: that the subject conditions are no longer appropriate. The Appeal Board held that, in such circumstances, the NRC Staff has the authority to remedy the situation.

118/ Id.

119/ 10 N.R.C. at 294-95 (footnote omitted).

C. The Circumstances Today

Having described the fundamental underlying premise of the CAPCO antitrust case -- that nuclear power would be low in cost -- it remains to compare this central premise with current realities. That comparison shows the obvious: that nuclear power not only is not low cost but that it is high cost; consequently, OE's participation in Perry, is not competitively advantageous. Moreover, even if one looks beyond the central issue of the cost of nuclear power and considers the other related factors considered by the Licensing and Appeal Boards, it is apparent that these factors also have changed in ways that prevent the operation of the Perry plant to create or maintain a situation inconsistent with the antitrust laws.

1. OE Compliance With The Conditions

As a preliminary matter, the record reflects the fact that antitrust license conditions have been imposed on OE since the Licensing Board's 1977 decision and the issuance of the Perry construction permits in May 1977. In connection with the antitrust reviews for the Perry and Beaver Valley 2 operating licenses, OE has affirmed under oath on three separate occasions that OE "is committed to and has complied with all applicable [antitrust] license conditions."^{120/} The NRC has conducted

^{120/} See Affidavits by Justin T. Rogers (President of OE) at Item 2 (dated May 12, 1981, December 13, 1982 and October 8, 1985), filed with the NRC.

antitrust reviews for these two operating licenses and has found no antitrust concerns about any OE conduct, nor any reason to doubt OE's commitment to comply with the antitrust license conditions.^{121/}

a. Nuclear Access

On December 29, 1978, twenty-one wholesale customers of OE and the four municipal wholesale customers of TECo gave notice of a general intent to obtain access to the Perry 1 and 2 and the Davis-Besse 1, 2 and 3 nuclear units. By letter dated March 26, 1979, attorneys for these wholesale customers requested a meeting between representatives of the municipalities and representatives of each of the CAPCO companies to exchange views and information. The requested meeting was held in Cleveland on June 1, 1979. During that meeting, the establishment of an Ohio Municipal Electric Authority to be set up as a financing vehicle for 83 Ohio municipalities was discussed. Creation of such an authority required an amendment to the Ohio constitution which was defeated by Ohio voters on June 3, 1980. No further action has been taken by the requesting entities to obtain access to the nuclear units -- two of which have since been cancelled.

^{121/} See 48 Fed. Reg. 52992 (Nov. 23, 1983); 52 Fed. Reg. 15402 (Apr. 28, 1987).

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It is the stated policy of OE to offer reasonable access to the nuclear units in which OE has an ownership interest. That policy continues today. Although there have been some informal discussions about municipal involvement in the Perry plant, no entity has made any commitment to participate in Perry. Indeed, none has expressed any interest in such access since 1979, thus confirming the changed economic attractiveness of nuclear power.

b. Other Conditions

At the time of the Davis-Besse/Perry antitrust review, OE had 21 municipal customers that individually bought capacity from OE under a Federal Power Commission (and later Federal Energy Regulatory Commission) regulated full requirements wholesale rate and resold this capacity to their retail customers. As part of a negotiated rate settlement in FERC Docket No. ER77-530, a partial requirement rate for wholesale customers was established. This rate became effective on April 1, 1981 (FERC Docket No. ER-80-361). Under this rate, OE agreed to sell specified amounts of wholesale power to its municipal customers requesting such service and to transmit (or "wheel") additional capacity required by such customers. Thereafter, the municipals bought a small amount of capacity from Buckeye Power, but generally remained individual full requirement customers of OE.

In 1983, OE was advised that the municipals had agreed to purchase capacity from American Municipal Power - Ohio, Inc. ("AMP-O") as a group, and that henceforth AMP-O would be the municipals' agent for dealing with OE. The effect of this change was to eliminate OE's municipal resale class of customers. Instead, OE was to deal with an independent power broker (AMP-O) who could purchase capacity from the lowest bidder anywhere within or outside Ohio. OE would then transmit this capacity to its former municipal customers. Following a lengthy negotiating process, OE and AMP-O agreed on a service contract, effective October 1, 1983. The key points of this service contract are:

1. OE will sell AMP-O 105 megawatts of capacity and associated energy at an off-system competitive market rate. This amount will be increased by 3 megawatts each year during the term of the contract. This sale is referred to as "base capacity" in the contract.

2. AMP-O retained the right to buy 480 megawatt-months of capacity per year from other sources and reduce the amount of base power being taken by an equivalent amount. This is referred to as "alternate capacity" in the contract. In effect, this provision gives AMP-O the option of purchasing about 40 megawatts a month at the lowest available price. OE is, of course, free to bid on this 40 megawatts.

3. OE will sell AMP-O additional capacity and associated energy required by AMP-O in order to serve the full needs of OE's former municipal resale customers. This sale is referred to as "regulation capacity" in the contract. The charge to AMP-O for regulation capacity is that charged by OE under its Public Utilities Commission of Ohio ("PUCO")-regulated rate for General Service - Large, Rate No. 53, with specified maximum charges. This provision provides AMP-O with the additional capacity necessary to serve the full requirements of OE's former municipal resale customers at a rate no greater than the lowest industrial rate charged by OE.

4. To effectuate the purposes of the service contract, OE agreed to provide all necessary transmission services at a specified rate.

5. The service contract is to continue for a term of five years ending on September 30, 1988. If no agreement is reached for continuing the arrangement, OE is obligated to file rate schedules with FERC which provide either a full or a partial requirement service to OE's former municipal customers or to AMP-O on behalf of such customers.

It is apparent that under the OE/AMP-O service contract, OE has made available to its former municipal customers a flexible mechanism that allows those municipalities to "shop around" for

One stark illustration of the utter absence of a competitive edge from an ownership interest in Perry is the recent consideration by the City of Marion to establish its own electric power company. The argument advanced in support of the establishment of a city-owned system was OE's increased cost of power from "expensive nuclear plant construction." Because a municipal system could "shop around" and thereby avoid purchasing capacity from Perry (and, in the future, Beaver Valley II), it was argued that a Marion public power company's electricity rates would be lower than would be achievable by the city's purchasing of electricity directly from OE.^{125/} Unquestionably, then, at least to some of those who argued otherwise a decade ago, access to Perry nuclear power is far from an economic boon.^{126/}

Compounding the competitive disincentive associated with access to and use of Perry nuclear power, is the potential use of the antitrust license conditions placed on OE to further exacerbate the economic impact of Perry on OE's customers. For example, in the Marion case, through merely a paper transaction and without the expenditure of any capital (except for the possible

^{125/} See An Alternative to High Utility Rates: MARION PUBLIC POWER SYSTEM Fact Book (1986).

^{126/} As Mr. Kenneth Hagerman, the Vice President of Operations of AMP-O, stated in testimony on August 11, 1986 before the City Council of the City of Marion, ". . . we are not looking for nuclear power plants. . . . [W]e are looking for power sources that are not saddled with the cost of nuclear power."

cost of a single meter), the proposed municipal system would obtain cheap power using the OE condition requiring wheeling. With that advantage, it was proposed that Marion would obtain as its only customer a major OE industrial customer currently serviced directly by OE. Thus, it was argued, not only would the proposed municipal power company (through the Perry license conditions) be able to avoid buying capacity from Perry, and to take away from OE a major industrial customer, but it would be able, through the OE license conditions, to obtain power from other sources and from OE at the below-cost (i.e., subsidized) rate unavailable to the remaining OE retail customers (including other industrial customers).

2. The Unachieved Promise of Nuclear Power

a. The Cost of Nuclear Power

Worldwide and national events have adversely affected the economics of energy generally, and of nuclear power particularly. These events dramatically increased the cost of Perry capacity.

(i) The Regulatory and Economic Morass of the 1970's and 1980's

The impact on Perry's cost of changing regulatory requirements and economic conditions is discussed in detail in a comprehensive review of the history and development of the Perry project prepared for state regulatory proceedings by Pickard,

Lowe & Garrick (PLG), a nuclear engineering firm, on behalf of
CEI.^{127/} As summarized by PLG,

Between the 1950s and the mid-1970s, the U.S. government actively endorsed and encouraged the development of nuclear power and self-regulation by the industry. There was a spirit of cooperation and common purpose between the government and the industry. Both believed in the development of the nuclear power option. Both were confident about the potential contribution of nuclear energy to the nation's power supply.

However, contrary to the government's and the industry's earlier expectations, nuclear plant design and construction commencing in the late 1960s, and especially since the early 1970s, have been subjected to ever-expanding, ever-changing regulatory requirements. The industry has also faced unprecedented inflationary cycles, and other political and economic obstacles. Although, as discussed in subsequent sections, CEI has been able to manage effectively the dramatic changes that have occurred, these adverse historical developments have nonetheless led to significant schedule delays and cost increases at Perry -- as they have for all other nuclear plants built in the same time period.^{128/}

The historical developments that adversely affected the nuclear power industry are well known. Foremost among these developments was the fact that plants, such as Perry, built in the 1970s and 1980s, were inundated with massive new, changing and

^{127/} Perry Nuclear Power Plant Assessment of Management Prudence ("PLG Report"), Section 3.2 (March 1986).

^{128/} Id., Section 3.2.1.

largely unanticipated environmental and technical regulatory requirements.^{129/} The NRC regulatory system did not permit freezing the design of a plant once construction had begun. To the contrary, utilities remained vulnerable to costly design changes and construction retrofit work throughout the entire engineering, construction and start-up process.

For example, with the passage of the National Environmental Policy Act of 1969 (NEPA) and judicial decisions interpreting that statute, extensive and costly new environmental analyses, reviews and hearings were mandated. And NEPA was one of many new federal environmental protection laws passed in this timeframe.^{130/} Furthermore, Ohio and other states also enacted extensive new requirements in the 1970s, in response to the environmental movement, which significantly affected nuclear plant siting, design and construction -- and hence, cost.^{131/} And, of course, this is only one illustration among many.

In 1974, with the passage of the Energy Reorganization Act, Congress transferred to the Energy Research and Development Administration (ERDA, now part of the Department of Energy), the

^{129/} Id., Section 3.2.3.

^{130/} Others included the Clean Air Act Amendments of 1970 and 1977, the Federal Water Pollution Control Act Amendments of 1972, and the Endangered Species Act of 1973.

^{131/} See PLG Report, Section 4.5.

AEC's research and development activities, and established the NRC as an independent regulatory commission with licensing and related regulatory responsibilities over nuclear-powered facilities.^{132/} This change corresponded with the significant shift in responsibility for nuclear power plant safety that had begun in the late-1960s. As former NRC Staffer Roger Mattson has explained:

By the late 1960s, the AEC Regulatory Staff began to codify nuclear plant design practices in General Design Criteria (10 CFR 50, Appendix A) and Quality Assurance requirements (10 CFR 50, Appendix B). These practices had been developed in the licensing review of the early plants before AEC adopted them as required features for later plants. Their subsequent interpretation and still later reinterpretations by the AEC and NRC Staff eventually led to a shift in responsibility for the details of safety away from the utilities and toward the regulators. The regulators simply took over some of the decision making authority of the utilities on many of the design details.^{133/}

Corresponding with the transfer of regulatory authority from the AEC to the NRC, an extraordinary expansion in regulatory review of plants under construction took place. The effort expended by the NRC in a typical operating license review grew from about seven professional staff-years in the mid-1970s to about

^{132/} Id., Section 3.2.3.2.

^{133/} Testimony of Roger J. Mattson, before the Pennsylvania Public Utility Commission in Philadelphia Electric's Limerick Proceeding [Docket No. R-850152], Sept. 27, 1985.

twenty in the early 1980s. This increase reflected the ever-increasing number and types of requirements that were being imposed on nuclear power plants. These NRC requirements were sometimes the product of specific events in the nuclear industry, e.g., the 1975 Browns Ferry fire and the 1979 Three Mile Island accident. In other cases, they were simply the consequence of evolving and expanding industry standards. For example, the number of standards produced by organizations accredited by the American National Standards Institute (ANSI) increased from approximately 100 in 1970 to approximately 1,700 in 1975. In both cases, the consequence was the same: a vastly expanding number of manhours of work in order to complete plant construction,^{134/} and rapidly escalating costs for nuclear facilities.

In sum, "The regulatory climate at the NRC between 1975 and 1981 can be best described as highly unstable."^{135/} The "ripple effects" of the multiple NRC regulatory changes that took place included sharply increased manhours for architect-engineers and for craftsmen at the construction site, significant increases in

^{134/} A 1985 study indicates that during the 1970s and 1980s, the number of engineering manhours for a typical plant grew at an average rate of 17.2 percent per year. Budwani, Ramesh N. (Burns and Roe, Inc.), "The Data Base for U.S. Power Plants," Power Engineering, Jan. 1985.

^{135/} Testimony of Roger J. Mattson, before the Pennsylvania Public Utility Commission in Philadelphia Electric's Limerick Proceeding [Docket No. R-850152], Sept. 27, 1985.

the physical quantities of commodities needed and new or changed equipment, and less efficient construction due to increasingly complex and congested designs. All of these activities were very costly to the nuclear industry nationwide. A recent study by Booz, Allen & Hamilton^{136/} concluded that approximately 71 to 76 percent of the increased costs in constructing nuclear plants was caused by nuclear regulation.

In addition, adverse trends in the general economy had a direct and substantial impact on nuclear power plant costs. Nuclear projects require huge investments in labor, equipment, and materials, and rely on external financing for a large portion of their total investment costs. Plants like Perry that were begun in the early 1970s had to cope with sustained high inflation and high interest rates in the 1970s and early 1980s, which dramatically increased plant costs.

Described as "[p]erhaps the most dramatic economic event that occurred during the Nixon years," the 1973-1974 energy crisis forced the issue of energy into the consciousness of the consumer, as millions of Americans at the request of the President, both turned down their thermostats to save heating fuel, and slowed their cars on the highways to save gasoline. The Arab

^{136/} Booz, Allen & Hamilton, Inc., The Impact of Regulation on Nuclear Power Plant Construction Costs (1985).

oil-producing nations imposed a five-month oil embargo, from October, 1973 to March, 1974. In response to the embargo, President Nixon unveiled Project Independence in November, 1973, designed to make America energy independent by the end of the decade.

Although estimates varied, the 1973 oil embargo was said to have resulted in the loss to the United States of about two million barrels of oil per day -- about one ninth of U.S. daily consumption. In addition to the experienced shortage of oil, there was a 400% imported oil price increase, from about \$3 to \$12 a barrel. Moreover, once raised, these prices were not lowered by the Arab oil producers. The soaring price of energy was considered to account for about 50% of the annual increase in the consumer and wholesale price indices, which now were rising faster than 10% a year. In 1972, the rate of inflation had averaged 3.3%. It was 6.2% in 1973, and 11.0% in 1974.^{137/} Reflecting the energy and economic crisis, the national consumer price for electricity rose 41% between November, 1973 and January, 1974.^{138/} This stimulated intensive energy conservation efforts, which ultimately, but not predictably, dramatically slowed the rate of growth of demand for electricity.

^{137/} Consumer Price Index, U.S. Department of Labor Bureau of Labor Statistics, June 22, 1983.

^{138/} "Continuing Energy Crisis in America," Congressional Quarterly (1975), at 1, 2, 13-14, 32-36; New York Times, Nov. 12, 1973 at 1; New York Times, Aug. 9, 1974 at 45, 50.

In 1974 and 1975, the United States experienced its worst recession in 40 years. Economic growth stagnated. In 1974, inflation averaged 12% and unemployment soared to the highest level since 1941. In January 1975, the deepest drop in industrial production occurred since 1937 -- a one-month plunge of 3.6%. Labor's George Meany labeled the slump a full depression and demanded a tax cut of \$30 billion -- \$14 billion more than President Ford's tax-cut proposal.^{139/} By 1976, the consensus forecast once again called for real growth -- 6% or more. Yet the 1974 recession had been so deep, and 1975's recovery so far short of prosperity, that less than spectacular growth was unimpressive. As one pollster stated, consumers were battered by "persistent pessimism" over the nation's long-term prospects.^{140/}

In the aftermath of the recession, business investment lagged behind the economic recovery, deterred by the uncertainties of energy supplies and prices, fear of the recently experienced steep recession and inflation, and the high costs of capital goods. At the same time, between 1974 and 1978, the rate of inflation declined substantially -- from about 12% to about 6% by 1978.^{141/}

^{139/} "The Economy: Can They Fix It," Newsweek, Feb. 24, 1975 at 85; "The Economy: How Much Is Too Much?" Newsweek, March 24, 1975 at 24.

^{140/} "The Economy: Almost Boomy," Newsweek, Jan. 19, 1976, at 61.

^{141/} President Carter's economic message to Congress, Jan. 20, 1978, reprinted in 1978 Congressional Quarterly at 216-22 (Jan. 28, 1978).

In 1979, there was a revolution in Iran, which resulted in a 68-day Iranian oil embargo and a second international oil crisis. As a result of the Iranian oil embargo, oil prices rose precipitously from a \$13/bbl price, to as high as \$41/bbl by the end of 1980.^{142/} Gross oil imports had averaged 6.1 million barrels a day in 1975, and 8.8 million barrels a day in 1977. After the Iranian crisis, President Carter announced that 1979 imports would be limited to an average of 8.2 million barrels a day, and that all future oil imports would not exceed 8.6 million barrels annually.^{143/}

The 1980 to 1985 period was a time of economic readjustment in the United States. In the late 1970s and early 1980s, the United States experienced the longest and deepest recession since the Great Depression. In January 1980, the prime interest rate was over 15%. By the end of the year, it passed the 21% mark. That year, inflation averaged 13.5%. Record prime rates continued through mid-1982. The three years between 1980 and 1982 also were characterized by near stagnation of production output, and a sharp rise in unemployment. By January of 1983, the prime rate stabilized at the "low" rate of about 11%. The combination of

^{142/} Energy Policy (2d ed), Congressional Quarterly (March 1981) at 5, 21-23.

^{143/} "Quotas on Oil Imports Not New to U.S. . . .", 1979 Congr. Quarterly Almanac at 612 (Vol. XXXV, 1978).

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high inflation rates and high interest rates resulted in dramatic increases in the cost of borrowed funds to capital intensive industries, such as the utility industry. The impact of these harsh economic conditions was the reluctance of business to borrow money for major capital expenditures, e.g., new industrial plants. By 1983, an economic recovery was underway. Inflation slowed from an average of over 10% in 1982, to 6% in 1983 and 3% in 1984.^{144/}

In summary, adverse regulatory and economic conditions affected nuclear power plant projects throughout the United States in the 1970s and 1980s. The Perry plant was not immune from these adverse national and international circumstances. And, as a consequence of them, the capital cost of the Perry plant -- a significant component of its levelized cost -- greatly exceeded all expectations.

(ii) OE's Costs for Perry

In connection with this license amendment Application, OE has compared the cost between what, in 1976, would have been anticipated to be the costs of proposed new nuclear and coal plants, and the costs that in fact would be experienced today.

^{144/} Consumer Price Index, U.S. Department of Labor, Bureau of Labor Statistics, June 22, 1983; Economic Report of the President (February 1986) at 332; OECD Economic Surveys 1985/1986, United States (November 1985) at 8.

OE's comparison shows that in 1976 it would have been anticipated that the 30-year levelized cost (including capital, operations and maintenance, and fuel) for a nuclear power plant would be about \$27 per MWh. The actual 1987 30-year levelized cost for Perry (including capital, operation and maintenance, and fuel) is \$184 per MWh, or 580% higher than the \$27 per MWh projected in 1976. By contrast, the projected 30-year levelized cost of a coal plant in 1976 would have been \$38 per MWh, or 41 percent higher than the then-estimated cost for Perry.^{145/} Based on a recent Electric Power Research Institute survey^{146/}, the current levelized cost estimate of a 300 MW coal-fired unit with a 1987 in-service date, which represents OE's approximate ownership share in Perry, would be approximately \$92 per MWh -- one-half of the cost of Perry.^{147/}

^{145/} OE's calculation of 1976-anticipated costs is substantiated by actual estimates made in 1977 in connection with OE's application to build Erie 1 and 2. In the Erie Environmental Report, Vol. 5 at Figure ER 9.3-1 (Amend. 3 8/29/77), OE projected the 10-year levelized cost for a 1200 MW nuclear and a coal plant brought on line in 1986. The cost (mills/KWh) for the nuclear plant ranged from 37.8 to 46.8, depending on whether one assumed an 80, 70 or 60 percent capacity factor. The cost of a coal plant ranged from 48.5 to 55.2 mills/KWh. A comparable analysis by the NRC Staff estimated nuclear from 31.8 to 42.6 mills/KWh; coal was estimated at 46.5 to 56.6 mills/KWh. NUREG-0337, Draft Environmental Statement related to construction of Erie Nuclear Plant, Units 1 and 2 (Nov. 1977) at Table 9.12.

^{146/} Electric Power Research Institute Technical Assessment Guide ("EPRI-P-4463-SR").

^{147/} The estimated levelized cost of a 1,000 MW coal plant, the approximate size of Perry, brought on-line in 1987, would be even less.

The stark realities of the high cost of Perry are reflected in nationwide statistics. For example, the Atomic Industrial Forum ("AIF") conducts an annual survey to develop actual average costs for different types of generating units. Those surveys show that nuclear was a lower cost generation source than coal prior to 1983, but that after 1983 nuclear became more expensive. Indeed, the AIF survey shows that in 1985 nuclear-generated power was, on average, 26.5 percent more expensive than coal-fired power. Since the AIF figures include a large number of older (and therefore relatively less expensive) nuclear plants, the significant increase in the average cost of nuclear power reflects the sharp increase resulting from the very high capital costs of recent nuclear plants like Perry.

It is thus obvious that, rather than being about 41 percent less expensive than a coal plant as originally expected, Perry is substantially more expensive than what a coal plant would have cost. There can be little doubt that the situation anticipated during the CAPCO antitrust case has changed dramatically. Perry is not the low cost, superior alternative it was assumed and expected it would be. Certainly, it has no competitively advantageous impact.

change made nuclear construction and operation an increasingly complex and unstable business.

In contrast to the Licensing and Appeal Board expectations, the CAPCO construction program has not foreclosed opportunities for other smaller systems. The fear has not materialized that CAPCO could entrench its dominant position by building so many large, low cost nuclear units. Of the nine new nuclear plants expected to be in service in the CAPCO service area by the late 1980's, only four will be operating -- Davis-Besse 1, Perry 1, and Beaver Valley 1 and 2. Two of those plants (Davis-Besse 1 and Beaver Valley 1) were essentially finished at the time of the CAPCO antitrust proceeding. Of the seven additional nuclear plants expected to be constructed since then, only two (Perry 1 and Beaver Valley 2) have been built. By any measure, the situation is materially changed from that anticipated during the CAPCO antitrust proceeding.

c. The Termination of the CAPCO Pool

During the antitrust proceeding, extensive time was spent identifying and describing how the CAPCO pool functioned, evaluating and assessing the enormous competitive advantages associated with CAPCO pool membership, and proving Applicants' alleged denials of pool membership to their smaller competitors. Key findings and conclusions by the Licensing Board and the

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Appeal Board were based on the unique economic advantages of nuclear access when combined with the "one-system" planning and operation concept embodied in the CAPCO pool. See Attachments 3 and 4.

Like the cost of nuclear power and the extent of the construction program, the anticipated advantages from the CAPCO pool have not materialized. Instead, the CAPCO pool has been terminated and the existing cooperative efforts among its former members are the bare essentials necessary to support those limited joint efforts begun during the period when the pool did exist. In summary, the following important changes have occurred in the CAPCO pool:

1. On December 31, 1979, the CAPCO companies ceased mandatory purchases and sales that were required to be made among them under prior agreements.

2. On September 1, 1980, the CAPCO companies terminated the CAPCO Memorandum of Understanding (dated September 14, 1967) and certain other agreements. The companies also agreed to implement pool restructuring principles, the most significant of which was the abandonment of the "one-system" planning concept. Each company is now responsible for future capacity planning, authorization of additional generating units, and establishing acceptable reserve margins.

3. The CAPCO Basic Operating Agreement was amended on September 1, 1980, August 1, 1981, September 1, 1982 and July 1, 1984. As a result, the companies no longer have unqualified entitlements to replacement capacity and energy. Instead more limited and qualified rights to "back-up" and emergency power have been established.

4. In addition, numerous other (less significant) administrative and operating principles have been revised or eliminated.

It should be understood that these changes were made because the CAPCO companies found little advantage, and substantial costs, from continuing to operate under CAPCO's previous principles. Thus, the competitive advantages perceived to flow from CAPCO membership failed to materialize. Perhaps the clearest evidence of this is that no municipal or rural electric cooperative has ever sought to join CAPCO under the very favorable access terms provided in the antitrust license conditions.

In summary, in at least three material respects, important premises underlying the conclusion that licensing the Perry plant would create or maintain a situation inconsistent with the anti-trust laws have changed significantly. Of critical importance is the first premise, viz., that rather than being low cost, Perry nuclear power is high cost. The impact of this unanticipated

outcome is compounded by several other changes. Rather than constructing numerous, large baseload nuclear plants, only two new units have been constructed. And furthermore, ^{B)} there are no substantial competitive advantages from membership in the CAPCO pool.

3. The Actual Economic Impact of Perry on OE

There is an obvious impact from the economic and other business developments that OE has described: ten years later, it is clear that the prediction of all concerned was wrong, as unexpected and uncontrollable events have dramatically and adversely affected the economics of nuclear power. Contrary to the expectations of DOJ when Congress proposed the amendment to Section 105(c), access to the nuclear power from Perry -- unquestionably not low in cost -- is, if anything, adversely "decisive in any competitive race between electric power companies."^{149/} OE's cost for capacity generated by Perry certainly is not cheaper than the cost of capacity OE generates from similarly sized fossil-fuel plants.^{150/} As a result, in contrast to stated expectations at the time,^{151/} Perry's capacity does not provide to

^{149/} See Joint Committee I at 9 (R.W. Donnem).

^{150/} Compare Applicants' Joint Proposed Findings FOF 23.14; Applicants' Joint Reply Brief at 10.

^{151/} See DOJ Reply Brief at 179; DOJ Prehearing Brief at 115; Kampmeier DOJ 450, p. 24-25.

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OE a competitive edge in the market place. OE therefore has not been able to "enhance and maintain" any "dominance and monopoly power" it may have, "to the detriment of [its] competitors."152/

Section 105(c) of the Atomic Energy Act was promulgated in order to ensure equitable access to nuclear power; it certainly was not intended to promote the deliberate avoidance of that resource, with a consequent inequitable economic penalty to nuclear energy users. As previously described, OE's customers -- particularly, the municipalities that complained of the CAPCO companies' dominant interest in Perry -- have not endeavored to become Perry owners.153/ The driving impetus for Congress' decision to allow the NRC to impose licensing conditions on its applicants' business -- not health and safety -- activities was to ensure "access to that newly available cheap source of power."154/ That impetus is wholly inapplicable with respect to OE's interest in the Perry plant. OE is not able to "use nuclear-generated power to the disadvantage of competitors."155/ Irrespective of the propriety of OE's conduct in the marketplace, any anticompetitive conduct in which OE might conceivably engage cannot be directly

152/ See DOJ Reply Brief at 180-81; 40 Fed. Reg. 8395-96 (Feb. 27, 1975); Hughes, NRC 207, pp. 30-32.

153/ See Section III.C.1.a, supra.

154/ Id. at 75-77 (AEC General Counsel Hennessey).

155/ Wolf Creek, supra, ALAE-279, 1 N.R.C. at 568.

or indirectly perpetuated or exacerbated by OE's ownership interest in Perry.

In sum, there are no "antitrust ramifications"^{156/} to OE's license to own 30 percent of Perry. Nuclear power has not been an economic windfall,^{157/} at least insofar as its impact on the competitive stance of OE, one of the owners of the Perry facility; OE therefore is not an "unbridled beneficiary."^{158/} To treat it as such, by continuing to impose restrictive conditions on OE's business activities, has no basis in fact, and is not supported by law.

In promulgating Section 105(c), Congress recognized that it was not in the public interest for NRC's licensing of nuclear power plants to create or maintain anticompetitive conditions in the energy marketplace. See Section II.A, supra. In order to ensure that this consequence did not ensue, the agency was vested with the authority to condition the construction permit and operating licenses it issued so as to avoid any such anticompetitive consequences. But the limits of this authority were expressly stated in Section 105(c), discussed during the congressional

^{156/} Farley, supra, ALAB-646, 13 N.R.C. at 1035.

^{157/} Alabama Power Co. v. NRC, 692 F.2d 1362, 1368-69 (11th Cir. 1982).

^{158/} Id.

debate on the proposed legislation, and succinctly summarized by the Appeal Board in its Wolf Creek decision:^{159/}

[A]s the Commission's antitrust responsibilities are linked to license applications, the Commission's antitrust mandate extends only to anticompetitive situations intertwined with or exacerbated by the award of a license to construct or operate a nuclear facility.

The time has come for the NRC Staff to be governed in its actions by the well-recognized "inherent boundaries"^{160/} of its antitrust responsibilities. The NRC has no statutory basis for continuing to condition OE's ownership interest in Perry. Unquestionably, circumstances have significantly changed. However appropriate the Perry antitrust license conditions may have been when they were imposed, in the case of OE they do not remedy any circumstance for which they were designed. In short, at best, they are an anachronism for which OE and many of its retail customers pay a heavy and unjustifiably high price.

In the absence of any continuing basis for imposing the antitrust licensing conditions on OE, fairness and, indeed, law dictate that the conditions be removed. OE therefore respectfully requests the Director of Nuclear Reactor Regulation to issue an Order suspending those conditions until such time as there may be any basis for reinstating them.

^{159/} Wolf Creek, supra, ALAB-279, 1 N.R.C. at 569.

^{160/} Waterford II, supra, CLI-73-25, 6 A.E.C. at 620.

IV. CONCLUSION

Activities under OE's ownership license for the Perry nuclear power plant do not "create or maintain a situation inconsistent with the antitrust laws" because nuclear power is no longer the economically superior energy alternative. Consequently, the NRC's license conditions are not responding to any anticompetitive situation that relates to -- is "intertwined with or exacerbated by" -- OE's ownership in Perry. In short, the licensing conditions that were imposed on OE about a decade ago no longer serve their intended purpose.

The NRC Staff has the authority to suspend the license conditions at issue and, as a matter of law and equity, is bound to remove unjustified restrictions on OE's business activities. A contrary conclusion would place the NRC in the untenable position of regulating business activities of its licensees that are wholly unrelated to the economic impact of a licensed facility, a function that the NRC has no authority to assume. Continued imposition on OE of the Perry antitrust license conditions also would be inconsistent with the clear mandate of Congress in passing Section 105(c), and the understanding of this agency as evidenced by decisions on the subject, that the NRC involves itself in antitrust matters if and only if a nuclear power plant poses a competitive advantage. Perry is not economically advantageous to OE.

For the reasons articulated in this Application, OE respectfully requests the Director of Nuclear Reactor Regulation to suspend the license conditions in question until such time as there may be a factual basis for imposing them.

Respectfully submitted,

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Dated: September 18, 1987

APPENDIX CPERRY NUCLEAR POWER PLANT, UNIT NO. 1NPF-58ANTITRUST CONDITIONSFORCLEVELAND ELECTRIC ILLUMINATING COMPANYDUQUESNE LIGHT COMPANYOHIO EDISON COMPANYPENNSYLVANIA POWER COMPANYTOLEDO EDISON COMPANY

- A. The licensees are subject to the following antitrust conditions:

Definitions

Applicants shall mean Cleveland Electric Illuminating Company, Duquesne Light Company, Pennsylvania Power Company and Toledo Edison Company. For purposes of this Appendix, the term Applicants does not include Ohio Edison Company. With respect to Ohio Edison Company, the antitrust conditions contained in this Appendix C are suspended until such time as circumstances significantly change such that their imposition is required.

Entity shall mean any electric generation and/or distribution system or municipality or cooperative with a statutory right or privilege to engage in either of these functions.

Wheeling shall mean transportation of electricity by a utility over its lines for another utility, including the receipt from and delivery to another system of like amounts but not necessarily the same energy. Federal Power Commission, The 1970 National Power Survey, Part 1, p. 1-24-8.

Licensing Conditions

- (1) Applicants shall not condition the sale or exchange of wholesale power or coordination services upon the condition that any other entity:
- (a) enter into any agreement or understanding restricting the use of or alienation of such energy or services to any customers or territories;
 - (b) enter into any agreement or understanding requiring the receiving entity to give up any other power supply alternatives or to deny itself any market opportunities;
 - (c) withdraw any petition to intervene or forego participation in any proceeding before the Nuclear Regulatory Commission or refrain from instigating or prosecuting any antitrust action in any other forum.

- (2) Applicants, and each of them, shall offer interconnections upon reasonable terms and conditions at the request of any other electric entity(ies) in the Combined CAPCO Company Territories (CCCT), such interconnection to be available (with due regard for any necessary and applicable safety procedures) for operation in a closed-switch synchronous operating mode if requested by the interconnecting entity(ies). Ownership of transmission lines and switching stations associated with such interconnection shall remain in the hands of the party funding the interconnection subject, however, to any necessary safety procedures relating to disconnection facilities at the point of power delivery. Such limitations on ownership shall be the least necessary to achieve reasonable safety practices and shall not serve to deprive purchasing entities of a means to effect additional power supply options.
- (3) Applicants shall engage in wheeling for and at the request of other entities in the CCCT:
- (a) of electric energy from delivery points of Applicants to the entity(ies); and,
 - (b) of power generated by or available to the other entity, as a result of its ownership or entitlements* in generating facilities, to delivery points of Applicants designated by the other entity.

Such wheeling services shall be available with respect to any unused capacity on the transmission lines of Applicants, the use of which will not jeopardize Applicants' system. In the event Applicants must reduce wheeling services to other entities due to lack of capacity, such reduction shall not be effected until reductions of at least 5 percent have been made in transmission capacity allocations to other Applicants in these proceedings and thereafter shall be made in proportion to reductions** imposed upon other Applicants to this proceeding.

* "Entitlement" includes but is not limited to power made available to an entity pursuant to an exchange agreement.

** The objective of this requirement is to prevent the pre-emption of unused capacity on the lines of one Applicant by other Applicants or by entities the transmitting Applicant deems noncompetitive. Competitive entities are to be allowed the opportunity to develop bulk power services options even if this results in re-allocation of CAPCO (Central Area Power Coordination Group) transmission channels. This relief is required in order to avoid prolongation of the effects of Applicants' illegally sustained dominance.

Applicants shall make reasonable provisions for disclosed transmission requirements of other entities in the CCCT in planning future transmission either individually or within the CAPCO grouping. By "disclosed" is meant the giving of reasonable advance notification of future requirements by entities utilizing wheeling services to be made available by Applicants.

- (4) (a) Applicants shall make available membership in CAPCO to any entity in the CCCT with a system capability of 10 Mw or greater;
- (b) A group of entities with an aggregate system capability of 10 Mw or greater may obtain a single membership in CAPCO on a collective basis;*
- (c) Entities applying for membership in CAPCO pursuant to License Condition 4 shall become members subject to the terms and conditions of the CAPCO Memorandum of Understanding of September 14, 1967, and its implementing agreements; except that new members may elect to participate on an equal percentage of reserve basis rather than a P/M allocation formula for a period of twelve years from date of entrance.** Following the twelfth year of entrance, new members shall be expected to adhere to such allocation methods as are then employed by CAPCO (subject to equal opportunity for waiver or special consideration granted to original CAPCO members which then are in effect).

* E.g., Wholesale Customer of Ohio Edison (WCOE).

** The selection of the 12-year period reflects our determination that an adjustment period is necessary since the P/M formula has a recognized effect of discriminating against small systems and forcing them to forego economies of scale in generation in order to avoid carrying excessive levels of reserves. We also found the P/M is not entirely irrational as a method of reserve allocation. We have observed that Applicants themselves provided adjustment periods and waivers to integrate certain Applicants into the CAPCO reserve requirement program. The 12-year period should permit new entrants to avoid initial discrimination but to accommodate and adjust to the CAPCO system over some reasonable period of time. Presumably new entrants will be acquiring ownership shares and entitlements during the 12-year period so that adverse consequences of applying the P/M formula will be mitigated.

- (d) New members joining CAPCO pursuant to this provision of relief shall not be entitled to exercise voting rights until such time as the system capability of the joining member equals or exceeds the system capability of the smallest member of CAPCO which enjoys voting rights.*
- (5) Applicants shall sell maintenance power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.
- (6) Applicants shall sell emergency power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.
- (7) Applicants shall sell economy energy to requesting entities in the CCCT, when available, on terms and conditions no less favorable than those available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.
- (8) Applicants shall share reserves with any interconnected generation entity in the CCCT upon request. The requesting entity shall have the option of sharing reserves on an equal percentage basis or by use of the CAPCO P/W allocation formula or on any other mutually agreeable basis.
- (9) (a) Applicants shall make available to entities in the CCCT access to the Davis-Besse 1, 2 and 3 and the Perry 1 and 2 nuclear units and any other nuclear units for which Applicants or any of them, shall apply for a construction permit or operating license during the

* Our objective is to prevent impediments to the operation and development of an area-wide power pool through the inability of lesser entities to respond timely or to make necessary planning commitments. While we grant new member entities the opportunity to participate in CAPCO it is not our intent to relieve joining entities of responsibilities and obligations necessary to the successful operation of the pool. For those smaller entities which do not wish to assume the broad range of obligations associated with CAPCO membership we have provided for access to bulk power service options which will further their ability to survive and offer competition in the CCCT.

- (11) These conditions are intended as minimum conditions and do not preclude Applicants from offering additional wholesale power or coordination services to entities within or without the CCCT. However, Applicants shall not deny wholesale power or coordination services required by these conditions to non-Applicant entities in the CCCT based upon prior commitments arrived at in the CAPCO Memorandum of Understanding or implementing agreements. Such denial shall be regarded as inconsistent with the purpose and intent of these conditions.

The above conditions are to be implemented in a manner consistent with the provisions of the Federal Power Act and all rates, charges or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

A Summary of LBP-77-1,
the 1977 Licensing Board Decision

Following a seven-month evidentiary hearing, which commenced in December, 1975, the Licensing Board in the CAPCO antitrust proceeding rendered its initial decision in January, 1977.^{161/} The decision "sustained in large measure the complaining parties' allegations, rejected applicants' legal defenses, concluded that licensing these five nuclear power plants would continue or worsen a situation inconsistent with the antitrust laws, and imposed remedial conditions on their licenses to ameliorate those consequences."^{162/} In reaching this outcome, the Licensing Board evaluated the evidence in the context of the following two Broad Issues:

- (A) Whether the structure of the relevant market and Applicants' position in that market gives them the ability, acting individually or jointly, to hinder or prevent other electric entities from achieving access to the benefits of coordinated operation and access to the benefits of economy of size of large electric generating units, and, if so,
- (B) Whether Applicants' ability has been used, is being used, or might be used to create and maintain a situation

^{161/} LBP-77-1, 5 N.R.C. 133 (1977).

^{162/} ALAB-560, 10 N.R.C. at 278.

inconsistent with the antitrust laws or their underlying policies.^{163/}

The findings related to Broad Issue A focused on the "comprehensive power pooling agreement," the CAPCO agreement, which provided that operation and development of Applicants' systems would be conducted "to the maximum extent possible as a unified system."^{164/} In its findings, the Licensing Board described in detail the nature and effect of the CAPCO agreement. It found that the CAPCO companies had a 14-facility construction program of jointly-committed generating units under a one-system planning concept.^{165/} In addition, "[c]omplementing the generation construction program" was a one-system transmission line plan designed to effectuate the goals of the CAPCO companies.^{166/} The Licensing Board concluded that the combined effect of these coordinated plans was that each of the CAPCO companies would be able to obtain the benefits of economies of scale associated with the construction of large units even though individually and in isolation the anticipated needs and load growth of each company would not permit or require their construction. Because nuclear

^{163/} LBP-77-1, 5 N.R.C. at 142.

^{164/} *Id.* at 143.

^{165/} *Id.* at 153, 223-37.

^{166/} *Id.*

power was found to be a distinctly superior choice for expanding base load capacity over the fossil-fueled alternatives, it was concluded by the Licensing Board that the nuclear units would increase the effectiveness of the Applicants' bulk power supply systems^{167/} and enhance the economic advantage those systems enjoyed over alternative sources, thus enhancing their market power.^{168/}

As to Broad Issue B, the Licensing Board found that a number of activities of the Applicants, both collectively and individually, constituted a misuse of their positions of dominance in order to achieve anticompetitive results.^{169/} In its findings

^{167/} "Bulk power" transactions were defined by the Licensing Board as transactions "involving individual contracts for sale for resale of firm electric power or for emergency, deficiency or other types of wholesale power." *Id.* at 159. The Licensing Board distinguished the bulk power product market from regional power exchange transactions and retail power transactions.

The bulk power market identified by the Licensing Board was considered by the Appeal Board to overlap with another identified market, that of coordinated services (or regional power exchanges). The Appeal Board therefore rejected the bulk power market in favor of a coordinated services market, together with the retail and wholesale power product markets. ALAB-560, 10 N.R.C. at 301, citing Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-452, 6 N.R.C. 892, 977-90 (1977). The Appeal Board defined the wholesale power market to include all firm bulk power production, whether retained for in-house retail purposes or wholesaled outside for independent retail distribution. ALAB-560, 10 N.R.C. at 301, citing Midland, *supra*, 6 N.R.C. at 991.

^{168/} LBP-77-1, 5 N.R.C. at 152-58.

^{169/} *Id.* at 145.

concerning OE, the Licensing Board concluded that OE had "pos-
sessed and used the power to control prices and other conditions
of sale, the power to refuse to engage in transactions which
would otherwise be economically beneficial and [the power] to ex-
clude competition."170/ As a result, OE was found to have been
able to and to have exercised its ability to prevent other enti-
ties within its service area from achieving the benefits of
coordination and economies of scale associated with the licensing
of the Perry plant.171/

170/ Id. at 187.

171/ Id. at 187; see generally id. at 188-211.

A Summary of ALAB-560,
the Appeal Board Decision

In ALAB-560, the Appeal Board substantially affirmed the findings of the Licensing Board, holding that "the CAPCO companies dominate generation and control transmission in the relevant electric power markets."^{172/} As a result, it was concluded that the CAPCO nuclear facilities would "enhance substantially applicants' monopolistic position."^{173/} In order to remedy this impact, the Appeal Board conditioned the Applicants' rights to such facilities on their "dealing fairly with 'landlocked' competitors."^{174/} The license conditions imposed by the Appeal Board were intended to accomplish this purpose; they "essentially [did] no more than oblige Applicants to offer similar bulk supply options and access to nuclear units to other electric utilities as they make available, by action or agreement, to each other."^{175/}

^{172/} ALAB-560, 10 N.R.C. at 294.

^{173/} Id.

^{174/} Id.

^{175/} Id. at 294 and n.75, quoting NRC Staff Opening Brief at 200 n.181.

Ten substantive antitrust license conditions were imposed by the Appeal Board on the Perry and Davis-Besse licenses.^{176/} Condition One prohibits the CAPCO companies from conditioning the sale of wholesale power on specified adverse terms. Condition Two requires interconnections within the CAPCO companies' service area.^{177/} Condition Three requires Applicants to wheel power for and at the request of other entities in the CCCT. Condition Four delineates the circumstances under which CCCT entities are entitled to membership in CAPCO. Conditions Five through Seven concern the sale to requesting entities of maintenance power, emergency power and economy energy.^{178/} Condition Eight requires the sharing of available reserves to requesting entities in the CCCT. Condition Nine provides to entities within the CCCT the right to purchase an ownership interest in the Perry or Davis-Besse units,

^{176/} An eleventh condition nullified outstanding agreements among the CAPCO members to the extent they were inconsistent with the purpose and intent of the Appeal Board's conditions. ALAB-560, 10 N.R.C. at 299.

^{177/} The CAPCO companies' service area was called the CCCT, or the Combined CAPCO Company Territories. LBP-77-1, 5 N.R.C. at 142; ALAB-560, 10 N.R.C. at 274 n.19.

^{178/} "Maintenance power" means power supplied or received to replace needed power that is unavailable because a generating or transmission unit is out for scheduled maintenance. "Emergency power" means power needed, supplied, or received in an emergency situation, i.e., an unscheduled outage. "Economy energy" means energy supplied to or received by a utility from another utility which power costs less than the receiving utility's current production cost. See Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-452, 6 N.R.C. 892, 903 nn.22-24 (1977).

as well as in future CAPCO nuclear units. Finally, Condition Ten mandates the sale of wholesale power by CAPCO to entities within the CCCT.179/

179/ ALAB-560, 10 N.R.C. at 298-99.

A Summary of the Positions of the
Parties in the CAPCO Antitrust Proceeding

The decisions of both the Licensing Board and the Appeal Board substantially tracked the views of the non-Applicant parties. But what is significant today is that these decisions were premised on the finding that nuclear power was low-cost, and hence the superior energy alternative, a presumption on which both the Applicants and the non-Applicant parties were in accord.

1. The Department of Justice

The core theory of the Department of Justice ("DOJ") was set out in its Prehearing Brief:

The Department maintains that the low-cost, large-unit base-load nuclear power to be supplied by the subject units will strengthen and expand Applicants' systems and will increase their ability in the future to install and obtain low-cost power from large units -- and that this would clearly further Applicants' respective monopolies.^{180/}

The DOJ devoted the bulk of its efforts to proving its allegation of past monopolization. Thus, DOJ was largely focused on the

^{180/} "Prehearing Brief of the Department of Justice," November 26, 1975 at 1 ("DOJ Prehearing Brief"); see also id. at 115.

"situation" that existed in the CCCT prior to the imposition of the Perry antitrust licensing conditions -- facts which OE does not challenge in this amendment application.^{181/}

Significantly, the linchpin of DOJ's position was that economic benefits would accrue to the Applicants from their program of constructing nuclear generating facilities. Specifically, in 1971, when "[i]t appear[ed] that the estimated cost of producing power at the [proposed] plant [would] be about the same as the applicant's average system costs and higher than the estimated production costs of at least one of the similar sized fossil-fuel plants being constructed by CAPCO members," DOJ comfortably advised the NRC that no antitrust hearing was required.^{182/} Later, when DOJ believed that granting an unconditional license would provide the Applicants "with a new source of relatively low-cost power and energy," DOJ changed its view, instead recommending that a hearing be convened to review the competitive advantages associated with the construction of the new CAPCO

^{181/} See, e.g., DOJ Prehearing Brief at 35-114; "Findings of Fact and Conclusions of Law of the United States Department of Justice," August 23, 1976 ("DOJ Proposed Findings") at 57-140; "Reply Brief of the Department of Justice to Applicants' Appeal Brief in Support of Their Individual and Common Exceptions to the Initial Decision," June 30, 1977 ("DOJ Reply Brief") at 42-43, 90-175.

^{182/} Department of Justice Antitrust Review Letter to the Atomic Energy Commission Regarding Davis-Besse Power Station, Unit 1, 36 Fed. Reg. 17888, 17890 (September 4, 1971).

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nuclear plants.^{183/} At the hearing, DOJ maintained that "[t]he marketing of power from the subject nuclear plants will enable Applicants to lower their average cost of power."^{184/} DOJ then argued that "[t]o the extent that Applicants are able to reduce their average cost of power while preventing their actual and potential competitors from doing so, they enhance and maintain their dominance and monopoly power to the detriment of their competitors."^{185/}

Having concluded that nuclear power was the superior alternative, DOJ analyzed the interrelationship of low-cost nuclear facilities, CAPCO membership and the Applicants' transmission facilities. DOJ contended that coordinated operation and development was essential to the construction of nuclear units.^{186/} Indeed, DOJ alleged that without these abilities, the Applicants would be unable to produce "firm" bulk power to the full extent of a nuclear facility's generating capacity.^{187/} DOJ believed

^{183/} Department of Justice Antitrust Review Letter to the Nuclear Regulatory Commission Regarding Davis-Besse Power Station, Units 2 & 3, 40 Fed. Reg. 8395, 8396 (Feb. 27, 1975).

^{184/} DOJ Reply Brief at 179. See also DOJ Prehearing Brief at 115.

^{185/} DOJ Reply Brief at 180-81. This language is identical to that appearing in the DOJ's recommendation that an antitrust hearing be held concerning Davis-Besse Nuclear Power Station, Units 2 and 3. 40 Fed. Reg. 8395-96 (February 27, 1975).

^{186/} E.g., DOJ Prehearing Brief at 116; DOJ Appeal Brief at 180.

^{187/} E.g., DOJ Prehearing Brief at 116; DOJ Appeal Brief at 178.

that the Applicants had precluded their competitors from coordinating by denying membership in CAPCO and by upgrading their transmission facilities.^{188/} This had prevented the competitors from constructing nuclear facilities, thereby preventing them from securing the lower costs of fully-utilized nuclear-generated firm power. Consequently, DOJ concluded that the construction and operation of the five proposed nuclear facilities would create and maintain a situation inconsistent with the anti-trust laws.^{189/}

DOJ sponsored two expert witnesses: Dr. Harold H. Wein and Mr. Roland A. Kampmeier. Dr. Wein, DOJ's economic expert, affirmed that the essential concern of the proceeding was access to low-cost sources of electricity.^{190/} In Dr. Wein's view, "[t]he

^{188/} E.g., DOJ Prehearing Brief at 118; DOJ Appeal Brief at 26-27, 152-71.

^{189/} E.g., DOJ Prehearing Brief at 118-19; DOJ Appeal Brief at 180-81.

^{190/} Dr. Wein also discussed the impact of economies of scale in electric generation. These economies had led to the construction of larger generating units and to increased concentration of the industry. Wein DOJ 587, pp. 40-41, 49-52, 58-62. According to Dr. Wein, these economies could also be captured and maximized through contractual coordination agreements, such as the one that governed the CAPCO pool. Wein DOJ 587, pp. 104-06, 108-10; Tr. 6623-25, 7303-04 (Wein). He believed that it was highly unlikely that small utilities could match the economies available to the Applicants by the construction of their own generating facilities. Tr. 7147-49, 7150 (Wein). Furthermore, Dr. Wein saw participation in such contractual agreements as providing benefits that are not present when a utility purchases wholesale base load power to capture economies of scale. Tr. 6627-33, 7205-06, 7229, 7266-80, 7326 (Wein).

essential economic analyses [sic] in this case is not determinent upon whether it is nuclear or fossil fuel [except] with one assumption and with one caveat and that is that . . . the nuclears are more economical than the fossil fuels"191/ Applicants' belief that nuclear power had superior economies of scale indicated to Dr. Wein that nuclear power was the most economic generation source,192/and that denied of this most economic source of generation to smaller competitive entities would enhance Applicants' competitive position.193/ Conversely, Dr. Wein stated that "if you assume they [fossil and nuclear plants] are both equal, then it would make no difference."194/ Thus, DOJ made plain that the critical factor in the NRC's investigation into the CAPCO companies' business practices was the superiority of the nuclear option.

The DOJ testimony of Roland A. Kampmeier concentrated on the benefits and techniques of utility coordination and on how electric utilities can obtain the cost benefits of large generating units.195/ Mr. Kampmeier explained how the inability to

191/ Tr. 7072 (Wein).

192/ Tr. 7074 (Wein); see also Tr. 7236, 7277-78 (Wein).

193/ Tr. 7071-72 (Wein).

194/ Tr. 7074 (Wein).

195/ See generally Kampmeier DOJ 450.

coordinate affected the Applicants' competitors.^{196/} Mr. Kampmeier also explained how "the advent of nuclear technology . . . serve[s] to magnify the competitive disadvantage of a small isolated power system as compared with a large power pool."^{197/} He noted that two factors were involved. First, that "the large power pool can build a nuclear power plant, whereas that would be out of the question for a small isolated system."^{198/} Second, Mr. Kampmeier testified that "the cost of coal and oil have risen so much that [a] nuclear plant has a large cost advantage."^{199/} Mr. Kampmeier later repeated his view that it was the cost advantage of nuclear power over coal-fired power plants which was an "essential element" in explaining how "the ability to market nuclear power . . . improve[s] the economies of the CAPCO companies."^{200/}

^{196/} Kampmeier DOJ 450, p. 24.

^{197/} Id. at 25.

^{198/} Id.

^{199/} Id. at 24-25.

^{200/} Id. at 52. Since a transmission network is required to transmit the power produced by a nuclear plant and since coordination arrangements are necessary to use nuclear power as baseload capacity, Mr. Kampmeier also listed these as essential elements in improving the economic position of the Applicants. Id.

2. The NRC Staff

The general theory of the NRC Staff in the CAPCO antitrust proceeding was that the addition of the proposed low-cost nuclear power plants would reduce the essential bulk power supply options available to the Applicants' competitors. In the Staff's view, this would strengthen the Applicants' dominance and allow the Applicants to continue a pattern of abuse of their market power.^{201/} Like DOJ, the bulk of the Staff's argument on these points involved proving that, prior to the proposal to build nuclear facilities, Applicants had, in fact, abused their dominant position in the relevant markets, thereby creating a situation inconsistent with the antitrust laws.^{202/}

While not ignoring the cost benefits anticipated to flow from the use of nuclear power,^{203/} the NRC Staff had emphasized

^{201/} "Proposed Findings of Fact and Conclusions of Law of NRC Staff," August 23, 1976 at Proposed Findings of Fact 3.01-.16; Proposed Conclusions of Law 7.11. As the NRC Staff separated Proposed Findings of Fact, Proposed Conclusions of Law, and Proposed Relief within the brief, for ease of reference we respectively refer to these sections of the brief as "NRC Proposed Findings of Fact", "NRC Proposed Conclusions of Law", and "NRC Proposed Relief".

^{202/} See "Summary of the Theory of Staff's Case," Reply Brief of the Nuclear Regulatory Commission Staff, September 22, 1976 at 4 ("NRC Reply Brief"). See generally NRC Proposed Findings of Fact 1.001-2.13, 3.01; NRC Proposed Conclusions of Law 7.01-.10; "Brief of the NRC Staff in Opposition to Applicants' Exceptions to the Initial Antitrust Decision," June 30, 1977 at 78-195 ("NRC Appeal Brief").

^{203/} E.g., NRC Proposed Findings of Fact 3.01, 3.03-.05, 3.07-.09, 3.11-.16. In a contemporaneous analysis of antitrust

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the interrelationship between a particular nuclear generating facility and the other power supply services necessary to integrate the facility into "a reliable and efficient bulk power supply system."^{204/} This was because without access to coordinated planning and operations, and without the ability to transmit any power generated, most utilities, and especially the non-Applicant entities, would be incapable of availing themselves of the benefits of nuclear power. These interrelated activities were therefore viewed by the NRC Staff as "essential" or "bottleneck" resources.^{205/} Conversely, the NRC Staff also contended that

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economics in the electric utility industry, the NRC Staff observed:

While a nuclear-fueled generating unit represents only a part of a total system that delivers electric energy to ultimate customers, it usually is the lowest cost power supply increment and some forecasts estimate that by the year 2000, nuclear generation will grow from about five percent to over fifty percent of total electric generating capacity in the United States.

NUREG-75/061, Coordination, Competition, and Regulation in the Electric Utility Industry (June 1975), United States Nuclear Regulatory Commission, Economic Analyses Section, Office of Antitrust and Indemnity at 1.

^{204/} "Trial Brief," November 10, 1975 at 71 ("NRC Trial Brief").

^{205/} NRC Proposed Findings of Fact 2.01-.13; NRC Proposed Conclusions of Law 7.09-.10. The Licensing Board noted that a "bottleneck resource" is one "to which access is essential if the

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constructing the proposed economically beneficial nuclear facilities would have positive benefits for the CAPCO system's coordination and transmission capability.^{206/}

In support of its position in the CAPCO case, the NRC Staff sponsored two expert witnesses: Dr. William R. Hughes and Mr. Harold M. Mozer. The bulk of the testimony of Dr. Hughes, the Staff's economic expert, addressed the definition of the relevant markets^{207/} and the organizational and competitive

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utilizing party is to function as an effective competitor." LBP-77-1, 5 N.R.C. at 150. As we note, see Section II.B. infra, the non-Applicant utilities, to date, have not sought to participate in the "essential" Perry facility notwithstanding the generous terms of the antitrust license conditions.

^{206/} E.g., NRC Trial Brief at 71-72. Not surprisingly, then, the Staff rejected the Applicants' view that neutralizing the impact of the nuclear plants on the cost of power sold by the Applicants was a sufficient remedy. The Staff argued that Applicants' remedy was inadequate in that it ignored the "Applicants' other anticompetitive practices (such as refusing to wheel, imposing territorial allocation agreements), and how those competitive disadvantages would be affected by the addition of the nuclear units to Applicants' systems." Arguing that the remedy must address the entire situation that had been created or maintained by the activities under the license, the Staff asserted that the NRC had the authority to implement broad remedial steps under Section 105(c) of the Act. NRC Proposed Relief at 13-14. See also NRC Appeal Brief at A-2 through A-3. This analysis of the appropriate scope of relief was adopted by the Appeal Board in ALAB-560. 10 N.R.C. at 290-94; compare 10 N.R.C. at 394-98 (separate opinion of Judge Sharfman); see also Alabama Power Co. v. NRC, 692 F.2d 1362, 1369-70 (11th Cir. 1982). For purposes of this amendment application, OE does not challenge the validity of this position.

^{207/} E.g., Hughes, NRC 207, pp. 8-29; Tr. 3636-38, 3640-43, 3671-87, 3710-27, 4030-41, 4055-77 (Hughes).

implications that flow from the economies of scale in the electric industry.^{208/} In developing the latter subject-area, Dr. Hughes engaged in an analysis of how, under an assumption that base load nuclear power was an economically superior choice, nuclear facilities would affect the Applicants' market power.^{209/} He stated that, "[t]o the extent that this belief was correct, the nuclear units would contribute to the effectiveness of the applicants' bulk power supply systems and enhance the economic advantage those systems enjoyed over alternative sources, thus enhancing their market power.^{210/}

In keeping with the NRC Staff's emphasis on bulk power supply options, Mr. Harold M. Mozer's testimony addressed "from an engineering standpoint what a power supply planner would like to have available in the way of power [supply] options" ^{211/}

^{208/} E.g., Hughes, NRC 207, pp. 33-40, 44; Tr. 3770-71, 3788, 3848, 3874-78 (Hughes).

^{209/} Hughes, NRC 207, pp. 30-32; Tr. 3686, 4090-92 (Hughes).

^{210/} Hughes, NRC 207, pp. 30-32. On the issue of the relative cost of nuclear power, Dr. Hughes explicitly stated that he had performed no study of the issue. Tr. 3659-60 (Hughes). Dr. Hughes did state that the expectation in the industry was that the newest and most advanced generation methods would be less costly than historical imbedded costs. Tr. 4090-92. However, Dr. Hughes expected the cost of nuclear units to exceed the average system cost, although this conclusion would ultimately depend upon inflation rates, environmental protection requirements, and safety standards. Tr. 3660-61, 4090-92 (Hughes).

^{211/} Tr. 3382 (Mozer).

Mr. Mozer concluded that "[a]n electrical system planner or system operator needs to have as many power supply options as possible to choose from in order to obtain the lowest overall cost of power supply."212/

While Mr. Mozer's testimony went only to the theoretical benefits of having options from which to choose, Mr. Mozer recognized that the viability of an option was important. He considered nuclear power to be a desirable power supply option.213/

Q: Does it really make any difference whether the units are coal-fired or whether they are light water nuclear units?

A: It makes a lot of difference in general, of course. What sort of difference?

Q: In terms of the benefits to be derived from the one-system concept, does it make any difference?

A: In terms [that] they both produce electricity which is the objective of the generating plant, then the only difference in the benefits would be the relative costs of the units.214/

212/ Mozer, NRC 205, p. 56; see also id. at p. 49; Tr. 3351-53, 3457 (Mozer). Mr. Mozer also testified that for nuclear power to be included as a power supply option, the non-Applicant CCCT utilities would have to (and the Applicants probably would have to) coordinate with other utilities. Mozer, NRC 205, pp. 62-65, 69-71; Tr. 3533-35. Mr. Mozer further noted that the Applicants' transmission system affected the ability of the non-Applicant CCCT utilities to coordinate. E.g., Mozer, NRC 205, pp. 9, 47-49, 57-61, 66.

213/ Mozer, NRC 205, pp. 61-62; Tr. 3573 (Mozer).

214/ Tr. 3468 (Mozer).

Thus, Mr. Mozer recognized that it was the cost of the power produced by the nuclear facilities which determined whether the "option" would be exercised.^{215/} And with respect to the cost of nuclear power, Mr. Mozer assumed that it was lower than its alternatives.^{216/}

3. The Applicants

The Applicants viewed the licensing proceeding as an attempt to obtain, from the Applicants and for their competitors, services which had no relationship to the "activities under the license." Specifically, the Applicants contended that general wheeling of electric power and general participation in a coordinated arrangement were not "activities under the license" and were not necessary to obtain the full benefits derived by the operation of the nuclear facilities at issue.^{217/}

While not denying the need to, and indeed offering to, supply replacement power to competitors participating in the proposed nuclear facilities, the Applicants considered their

^{215/} Tr. 3468-70 (Mozer).

^{216/} Mozer, NRC 205, p. 61; see also Tr. 3573 (Mozer).

^{217/} E.g., "Prehearing Legal Brief On Behalf Of The Applicants," December 1, 1975, at 136-41 ("Applicants' Prehearing Legal Brief").

competitors' demand for additional wheeling and coordination to effectively constitute a broad attack on the basic structure of the electric energy industry. This, it was argued, far exceeded the purposes of Section 105(c),^{218/} ignored the inability of the small utilities to assume their fair share of wheeling and pooling responsibilities,^{219/} and failed to take account of the regulated, natural monopoly characteristics of the utility industry which had led to the regulated development of relatively large electric power companies engaged in coordinated development.^{220/}

Emphatically, OE does not now seek to litigate the issue of the authority of the NRC under Section 105(c) to consider the relationship of wheeling and coordination to low-cost nuclear power. This discussion is only intended to apprise the NRC Staff of the focus of the prior hearing so that the Staff can properly appreciate the assumptions made at the time, as well as the extent to which these assumptions no longer are valid.

^{218/} E.g., Applicants' Prehearing Legal Brief at 121-43; Applicants' Joint Reply Brief at 5-9. The Applicants' also contended that there must be a nexus between the activities under the license and each element of the situation inconsistent with the antitrust laws. E.g., "Applicants' Joint Proposed Findings of Fact and Conclusions of Law," August 30, 1976, at COL 20.02 ("Applicants' Joint Proposed Findings"); "Applicants' Joint Brief in Support of Their Proposed Findings of Fact and Conclusions of Law," August 30, 1976, at 676 ("Applicants' Brief in Support").

^{219/} E.g., Applicants' Prehearing Legal Brief at 209-12, 217-22; Applicants' Joint Proposed Findings 33.21, 33.41, 33.53.

^{220/} E.g., Applicants' Prehearing Legal Brief at 94-113, 204-08, 213-15; Applicants' Joint Proposed Findings 22.03, 22.04.

In addition to contesting the statutory basis for such a far-reaching review of the electric utility industry, the Applicants argued that, in any event, a situation inconsistent with the antitrust laws neither existed in the CCCT nor would be created or maintained by the addition of the proposed nuclear facilities.^{221/} Again, for purposes of this amendment application OE does not challenge the conclusions reached about the competitive situation existing in its service area. Applicants also maintained that their proposed license conditions were a part of the "situation" to be considered and that when so considered, no anticompetitive situation could be created or maintained by the addition of facilities subject to such license conditions.^{222/}

^{221/} E.g., Applicants' Brief in Support at 252-674; "Applicants' Joint Proposed Findings at FOF 22.04, 32.00 and 37.40; Applicants' Appeal Brief at 137-39, 272-73; Tr. 3867-70.

^{222/} E.g., Prehearing Legal Brief at 129-30, 135-41; Applicants' Joint Reply Brief at 11.

The Applicants filed with the Licensing Board on March 14, 1975, proposed license conditions which they explicitly proposed to have affixed to their nuclear licenses. Applicants' Exhibit No. 44. The proposed license conditions provided for, inter alia, (a) the opportunity to participate in the nuclear units either by an ownership interest, a contractual prepurchase of power, or a unit power purchase; (b) sufficient transmission services to deliver to the participating entity its share of the nuclear power; (c) sufficient transmission services to provide replacement power equivalent to the amount of power purchased from the nuclear unit when the nuclear unit was unavailable as a result of a forced or scheduled outage.

On the issue of the costs of the power generated by the proposed nuclear facilities, the Applicants believed that the addition of the proposed facilities would increase average embedded costs; but the Applicants also believed that the cost of power so generated would be cheaper than the cost of power generated by similarly-sized fossil-fuel plants.^{223/} Notwithstanding these cost advantages, the Applicants denied that nuclear power would affect their competitive stance because, in the Applicants' opinion, their competitors could otherwise obtain at least the same benefits. This was because any savings realized by the Applicants would be passed through to wholesale customers in the wholesale power rate.^{224/} The Applicants also argued that their competitors could construct, on account of preferential tax treatment, a small coal-fired facility at a cost that produced electricity at the same per-kilowatt-hour cost as the proposed nuclear facilities.^{225/}

^{223/} Applicants' Joint Proposed Findings FOF 23.14; Applicants' Joint Reply Brief at 10.

^{224/} E.g., "Applicants' Appeal Brief in Support of Their Individual and Common Exceptions to the Initial Decision," April 14, 1977, at 127-28. Applicants' Joint Reply Brief at 10; Applicants' Joint Proposed Findings FOF 38.03. Indeed, the Applicants also contended that the smaller utilities could gain an advantage over the Applicants by purchasing a share of the nuclear facility, thereby taking advantage of their lower cost of capital. Applicants' Joint Reply Brief at 10; Colloquy between Chairman Rigler and Mr. Wm. Bradford Reynolds, Tr. 5907-12; Pace App. 190, p. 17; Tr. 11570 (Gerber).

^{225/} Applicants' Joint Proposed Findings FOF 38.04, COL 38.02.

Dr. Joe D. Pace, the Applicants' economic expert, testified how an economist would assess the impact of a new nuclear plant on the competitive situation in the electric utility industry within a given area.^{226/} This analysis "required a determination of whether or not the nuclear plant offers to its owners cost advantages of such a magnitude that those excluded from access to the nuclear unit . . . are at a significant competitive disadvantage."^{227/} Dr. Pace was asked to assume that "it has been determined that the nuclear unit would confer a significant cost advantage of its owners;"^{228/} therefore, the bulk of his testimony concerned the means by which such an advantage might be eliminated.^{229/} Dr. Pace had supported the Applicant's contention that a small non-generating utility that purchased power at a wholesale rate based upon the Applicants' average cost would obtain its share of the benefits of the nuclear facility.^{230/}

^{226/} Pace, App. 190, pp. 4-8.

^{227/} Id. at 5.

^{228/} Id. at 8.

^{229/} Id. at 8-26; see also Tr. 11718-19 (Pace). Dr. Pace also supported other positions advanced by the Applicants. He noted that the tax subsidies held by the Applicants' competitors affected the competitive situation. Pace, App. 190, pp. 17-20. The inability of a small system to meaningfully coordinate with a large utility was also a subject on which Dr. Pace testified. Id. at 31-36.

^{230/} Id. at 14-15, 20; see also Tr. 11720-21 (Pace).

Where the small utility generated its own power, Dr. Pace viewed it as sufficient for the Applicants to provide unit power to it on a proportionate basis.^{231/}

Mr. Abraham Gerber provided the basis for the Applicants' argument that the competitive disadvantage experienced by the Applicants' competitors was not caused by anticompetitive activity but resulted from the natural and efficient development of the electric utility industry. Mr. Gerber testified that inherent economic factors -- capital intensiveness, economies of scale, long construction lead times, lack of product inventory capacity, and the need for direct physical connection between production and consumption -- lead naturally to the development of relatively large vertically and horizontally integrated utilities.^{232/} Mr. Gerber also noted that the cost of power generated by new facilities was not following the historical trend because incremental costs were exceeding, rather than falling below, average costs.^{233/}

^{231/} Id. at 11-16, 20; see also Tr. 11719-20, 11722-25 (Pace).

^{232/} E.g., Gerber, App. 189, pp. 23-24.

^{233/} Tr. 11487 (Gerber).