

Peter Zarakas
Vice President

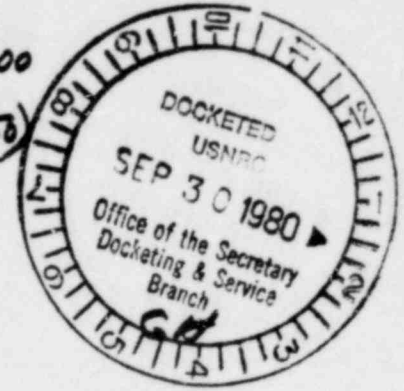
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Secretary of the Commission
Attn: Docketing and Service Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Advance Notice of Rulemaking: Revision of
Factor Siting Criteria, 45 Fed. Reg. 50350

Dear Sirs:

Enclosed please find the comments of Consolidated Edison to the Commission's July 29, 1980 Advance Notice of Siting Rulemaking.

Very truly yours,

Peter Zarakas
Peter Zarakas
Vice President

Att.

Acknowledged by card. 9/30/80

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Advance Notice of Rulemaking:)
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MODIFICATION OF THE POLICY AND)
REGULATORY PRACTICE GOVERNING)
THE SITING OF NUCLEAR POWER REACTORS)
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COMMENTS OF CONSOLIDATED EDISON
COMPANY OF NEW YORK, INC., TO
ADVANCE NOTICE OF SITING RULEMAKING,
45 Federal Register 50350

Consolidated Edison Company of New York, Inc. ("Con Edison") submits these comments in response to Advance Notice of Rulemaking concerning the siting of nuclear power reactors, published by the Nuclear Regulatory Commission ("Commission") on July 29, 1980 (45 Federal Register 50350). Con Edison supplies electricity, gas and steam to customers in areas of New York City and Westchester County, State of New York. Con Edison owns and operates a nuclear power reactor located at Indian Point, Buchanan, New York, and is the holder of Commission Operating License DPR-26.

Con Edison has substantial interest in the continued safe operation of its facilities at Indian Point, and believes that the siting considerations and standards applied in

connection with the licensing of its operating unit at Indian Point have contributed substantially to the unit's high level of safety, as recently confirmed by the Commission's "Interim Operations Task Force Report on Indian Point," dated June 12, 1980, SECY-80-283.

Con Edison has an obligation to supply reliable and economical electrical service to its service area, and has an interest in siting new facilities when they are needed. Certain of the siting initiatives which have been proposed may preclude the nuclear option to areas such as those served by Con Edison.

GENERAL COMMENTS

1. Comparisons of contemplated United States reactor siting criteria with foreign criteria. The Advance Notice of Rulemaking states, at 45 FR 50351, that other nations do not have the same flexibility in the siting of nuclear reactors as the United States. From a regional standpoint, this statement is false. There are large areas of the United States, particularly the industrialized Northeast (e.g., the Washington-Boston corridor), which closely resemble nuclear countries in Europe, and such countries as Japan, from the standpoint of demographics, industrialization and energy requirements. As observed by Commissioners Gilinsky and

Bradford, the Commission has not yet acquired any particular familiarity with foreign siting criteria.

The most economically important areas of the United States do in fact resemble other nations, and the siting policies adopted by the Commission will have a substantial effect upon the social and economic development of these areas of the United States. Prior to articulating new siting criteria the Commission should perform a comprehensive survey of siting requirements in other nations for guidance and comparison with present United States siting proposals. This is necessary to assure that the affected regions of the United States will not be handicapped by any siting policy under consideration, in comparison to analagous locations in other countries.

2. Consideration of the disadvantages of remote siting to reactor safety. The overall presumption of the Advance Notice of Rulemaking is that remote siting of reactors would be inherently safer than locating reactors near more populated areas. This conclusion has apparently been reached without any systematic evaluation of the safety disadvantages of remote sites. These disadvantages include the possibility of poorer communication systems, less developed governmental emergency response capabilities, and fewer or

less accessible exit pathways. In remote areas, it may be substantially more difficult to attract and maintain skilled reactor operating personnel. These and other considerations should be identified and an effort made to quantify their importance prior to the promulgation of new siting criteria favoring remote areas.

3. Consideration of the consequences of increased transmission facilities. The remote siting favored by the Advance Notice of Rulemaking would inevitably require substantial additional transmission facilities in order to convey energy greater distances from remote reactor sites to areas of demand. Surprisingly, there appears to have been no comprehensive consideration of the economic or safety consequences of greatly increased reliance on transmission facilities. Before proposing remote siting rules, the Commission should determine the costs, and also the risks (probability and consequences), of the manufacture, installation and lifetime maintenance of all additional transmission facilities necessary to accommodate all remote siting contemplated. The Commission should also consider all regulatory barriers to the installation of the new transmission facilities which would be required. The Commission should determine the extent to which the reliability of continuous electrical

service to demand centers would be affected by the additional transmission facilities necessary to accommodate remote siting and the risks of such reduced reliability, the economic costs of reduced reliability in the event of serious interruptions in service, and the extent to which national security would be affected by all such declines in reliability.*

The increased risk associated with the additional transmission facilities required to accommodate remote siting, together with the increased risk associated with reductions in systems reliability due to remote siting, should be quantified and compared with the incremental risks associated with beyond design basis accidents under present siting policies versus remote siting. This comparative analysis should be performed prior to articulating remote siting criteria.

4. Consideration of governmental borders as affecting siting alternatives. The Advance Notice of Rulemaking does not indicate that any consideration has been given to the extent to which state or local governmental boundaries may affect siting selection alternatives. The Commission

* Such an inquiry is in furtherance of the Atomic Energy Act, Section 182(a), 42 U.S.C. § 2232(a).

should conduct a comprehensive inquiry into whether there are at present significant regulatory, statutory or administrative (such as public service commission) barriers to the siting of reactors in one state or other governmental unit which are intended to supply significant amounts of energy to service areas in another jurisdiction. If such barriers are found, in promulgating any new siting standards the Commission should define and interpret exclusion parameters, distances from population centers, and especially the "best sites available in the region" standards on an intra-state basis.

5. Retrospective application of revised siting criteria to operating facilities. The Advance Notice of Rulemaking states that possible additional safety features and changed operating procedure requirements for existing facilities will be considered in separate proceedings. The Notice does state, however, that the Commission has directed the staff to consider such measures for existing sites on a case-by-case basis. Before directing the staff to conduct such inquiries, the Commission should first consider whether the current siting policies (with which existing sites of course fully comply) have substantial shortcomings which would warrant additional "safety" measures. The fact that some new siting initiatives may be desirable for future

plants does not mean that existing standards are inadequate. An appropriate threshold inquiry might be whether reactors sited under existing policies pose unacceptable risks to the public. Unless this or a similar showing can be made, there would be insufficient justification for requiring additional measures due to siting reasons alone. A case-by-case approach to examining the safety implications of existing sites may create the appearance that decisions would be made arbitrarily, inconsistently, or without an adequate factual justification. Wherever possible, the consideration of additional measures for existing units should be conducted on the basis of generic standards that would be uniformly applied. Before any substantial hardware or operational modifications are required at any unit, the Commission should assemble data upon the actual risks posed by operation of that unit, such as was performed in the Commission's "Interim Operations Task Force Report on Indian Point," dated June 12, 1980, SECY-80-283.

COMMENTS ON SPECIFIC SITING POLICY TASK FORCE ITEMS

Item A. The Advance Notice of Rulemaking acknowledges that existing siting policies, whereby design features may compensate for site unattractiveness up to a certain point, has acted as a stimulus to the development of highly desirable

design features which have enhanced reactor safety. An increased emphasis upon site isolation and a de-emphasis upon design features would appear to diminish if not eliminate incentives for much of the safety-inspired design developmental work which has been fostered by existing siting policy. The Commission should consider this substantial disadvantage to greater reliance on remote siting prior to the promulgation of any new siting requirements.

The Advance Notice of Rulemaking acknowledges that any revised siting policies cannot be so stringent as to eliminate the siting option from "large regions" of the country. Given the increasing importance of energy economics and availability to all areas of our country, and particularly the industrialized Northeast, it is crucial that the Commission's siting policies not handicap nor practically eliminate the nuclear option for any region of the country. Any siting policy which placed a disproportionate energy cost burden upon any particular area of the country would represent an unfair and wholly unwarranted subsidization of the costs of society in one area, while simultaneously placing another region at a disadvantage. Any such policy would be an entirely inappropriate use of the Commission's powers, and would violate

Section 182(d) of the Atomic Energy Act, 42 U.S.C. § 2232(d), which statutorily requires the Commission to give preferred consideration in the issuing of any license to facilities "which will be located in high cost power areas in the United States."

In order to avoid nuclear disenfranchisement of any area of the United States, the Commission should adopt the concept of a maximum permissible area of interdiction, to which all demographic siting requirements would be subject. The Commission should map those areas of the country from which the siting of a reactor would be interdicted by any proposed siting requirement, and reject the application of siting rules which would interdict a plant for demographic reasons alone from an area larger than a set maximum. A reasonable limit might be a 35 mile radius, whereby no location in the country would be precluded from having a reactor at less than that distance in the most demographically favorable direction, with compensating design features. If governmental boundary barriers are found to be significant (see above), maximum interdiction distances should be determined on an intra-state basis.

Item A of the Advance Notice of Rulemaking states that a principal Commission objective is to require that sites be selected which will minimize the risk of energy

generation. In furtherance of this laudable objective, in any area where a reactor would be excluded by a proposed remote siting requirement, the Commission should make provisions for computing the comparative risk of siting a reactor in that area versus the risk of relying upon other available energy sources to service that area. Whenever the risk of the alternative energy source is determined to exceed the risk of a nuclear reactor in that vicinity, nuclear siting (with adequate engineering safeguards when appropriate) should not be interdicted. Such a policy would be completely in furtherance of the objective of minimizing the risk of energy generation in each area of the United States.

ACRS Comments on Item A (45 FR 50352, Col. 1). The ACRS recommends the formulation of new siting rules based upon preestablished Commission objectives for acceptable risk both to individuals and society. However, the objectives of equalizing individual risk and societal risk at each site are in tension, because of demographic differences from area to area. If equalizing societal risk at every reactor site is to be a new safety goal, then the result will be a greater disparity in individual risks around each site. The converse is true if the Commission policy would be to equalize individual risks. Other anomalous results would flow from increased

emphasis upon site isolation and a decreased emphasis on design. Remote plants would be relatively overdesigned, and remote sites would have a disproportionately low societal risk compared to average sites.

The Commission thus cannot simultaneously advance the normalization of both individual and societal risk. If the Commission determines that an equity criterion is necessary, the Commission must decide whether it is to be individually or collectively measured. The foregoing considerations point up the necessity of the Commission first developing an overall safety policy prior to the setting of new siting policies. If new siting requirements are to be promulgated in the near future, they should be interim ones only, pending the Commission's decision upon risk and safety objectives.

Additional Questions Relative to Item A (45 FR 50352, col. 2).

1. The present policy of permitting plant-specific design features to compensate for unfavorable site characteristics should be continued. This policy is of great benefit to the Northeastern United States, and may in some form be essential to avoiding regional discrimination. This policy is also the only means whereby the Commission can further the objective of making the aggregate societal risk posed by each site more equal.

2. Considerations of acceptable risk to the public should be included in siting policy, and the concept of acceptable risk should be construed in the context of other risks normally encountered in everyday life in modern, technological societies. The risks from other, alternative energy sources should also be considered in siting decisions (see above).

The ultimate basis for construing acceptable risk for siting purposes should be risk to individuals. An overall societal risk approach would create an unacceptable disparity in risk exposure between citizens living in remote areas versus citizens living in populous areas. There appears to be no adequate basis under the Atomic Energy Act for the Commission to determine that citizens living in remote areas are less deserving of protection from risk than citizens living in the Northeast. As noted above, there is an Atomic Energy Act prohibition against de facto nuclear disenfranchisement of any area of the country. The Commission should take this into account in complying with Section 108(c) of the 1980 Authorization Legislation, by setting thresholds which are not regionally discriminatory. It should be noted that the Conference Agreement discussion of Section 108 provides that "the NRC should develop these demographic standards, however, so as not to preclude further siting of nuclear reactors in any region of the United States." (Emphasis supplied.)

3. Site acceptability criteria must be regionally varying to the extent necessary to avoid making the nuclear option less attractive to any one region of the country compared to another region. As noted above, this objective may have to take into account state or other governmental unit boundaries. So long as the siting criteria are "regionally-neutral," the criteria should thereafter be as nationally uniform as possible.

Item B (45 FR 50352, col. 2). Were the Commission to abandon radiation doses in determining siting requirements (Alternative A, paragraph 4), the Commission would be eliminating the very basis for determining the actual safety implications of siting selection and approval. By de-emphasizing this aspect, the Commission would be saying in effect that site isolation was being sought for its own sake, regardless of safety implications. Dose assessment should be retained, because site evaluation criteria should ultimately be related to public health and safety only.

The concept of incorporating specific population density and distribution limits, outside the exclusion area but within the 10 mile emergency planning distance, that are dependent on the average population of the region is a useful mechanism for avoiding regional discrimination

in siting policy, and should be adopted by the Commission. One acceptable approach to setting formulae as set forth at numbered paragraphs 1 and 2, at pages 49-50 of NUREG-0625 (Report of Siting Policy Task Force). The Commission should not, however, adopt demographic criteria to be applied at greater than 10 miles from a proposed site. This distance has been found fully acceptable for emergency planning purposes and the adoption of a different position for siting is unwarranted. The low societal and individual risks at distances beyond 10 miles from a site have been fully documented by the Commission in NUREG-0396. The application of more rigorous standards for siting would be inevitably hostile and discriminatory to the more populous regions of the country, even when computed in comparison to the average population density of the region, since it would severely limit site selection alternatives.

Alternative B (45 FR 50352, col. 3). The desirability of the "three-tier" approach is entirely dependent upon the thresholds set. The fact that nationally uniform thresholds are contemplated creates grave risks of regional discrimination. The acceptance limit for any three-tier provision must be set so as not to practically exclude the nuclear option from wide areas (see discussion of maximum permissible area of

interdiction, above). If such a three-tier approach were adopted, a plant proposed for a "middle ground" site should be accepted if the risk of that plant were determined to be equal to or less than the risk of the most risky acceptable plant design at a site with "acceptance floor" demographic characteristics.

Additional Questions Relative to Item B (45 FR 50343, col. 2).

1. As suggested by the ACRS, minimum exclusion distance criteria should be interim, pending the formulation of an overall Commission safety policy.
2. Population density and distribution limits must be set so as to be regionally-neutral and nondiscriminatory against the industrialized Northeastern United States. Basing demographic limits on a formula relating to average population of the region is a useful approach, so long as interdiction areas are not large, or site alternatives unduly limited.
3. Siting criteria should apply to reasonably projected populations over plant lifetime. However, they should have no in futuro application, that is, if actual demographic shifts experienced in later years differ from initial projections made at the time of siting, this should be of no regulatory concern. This is consistent with the general land

use policy of the United States, whereby new uses are accommodated to existing uses, not vice versa.

4. The regions to be considered for purposes of determining site acceptability should be drawn in light of the cost and regulatory barriers to constructing and operating transmission facilities from alternate sites. However siting regions are defined, they should include the concept of maximum permissible areas of interdiction described above. If site alternatives are found to be limited by virtue of governmental boundaries (see general comment 4, above), then siting regions should be intra-state.

5. The regionally-varying population density and distribution limits offer the possible advantage of being regionally neutral, however a risk analysis should be performed to determine if this (or the "three-tier") approach would bring about a safety improvement over current practice.

Item C (45 FR 50353, col. 3). Rational minimum standoff distances may only be determined in conjunction with a complete risk analysis of each potential hazard, analyzed in conjunction with plant-specific characteristics. Arbitrary fixed distances are not in the interest of safety, but only in the appearance of safety. Following comprehensive risk analysis to determine

which potential hazards are significant, distances could then be set premised upon the least safe plant design. Applicants should thereafter be permitted to overcome such siting limitations by demonstrating that through engineering safeguards, their plant meets the safety criterion used in setting the applicable standoff distance.

Item F (45 FR 50354, col. 2). Specific provision for post-licensing changes in offsite activities are unnecessary, since the Commission always retains the authority to modify or suspend a license if there is an immediate threat to health and safety.

Additional Questions Relative to Item F (45 FR 50354, col. 3).

1. The Commission should not seek to control population movement in any way. Experience has shown that sufficiently reliable estimates of future demographic characteristics may be made at the design stage to permit informed and prudent siting decisions.

2 and 3. Such matters should be considered as part of the Commission's normal mission to prevent immediate threats to public health and safety, and no specific provisions are necessary. The mere possibility of "plant shutdown" (paragraph 3), for example, due to circumstances beyond the control of the plant operator would have a chilling

effect upon the financing of new units that would be, in today's energy climate, exceedingly unfortunate and unwise.

Dated: New York, New York
September 29, 1980