UNITED STATES

NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In re:	Docket Nos. 50-247-LR; 50-286-LR
License Renewal Application Submitted by	ASLBP No. 07-858-03-LR-BD01
Entergy Nuclear Indian Point 2, LLC, Entergy Nuclear Indian Point 3, LLC, and Entergy Nuclear Operations, Inc.	DPR-26, DPR-64 June 29, 2012

STATE OF NEW YORK'S REVISED STATEMENT OF POSITION REGARDING CONTENTION NYS-17B

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PRELIMINARY STATEMENT

In accordance with 10 C.F.R. Section 2.1207(a)(2) and the Atomic Safety and Licensing Board's ("Board") July 1, 2010 Memorandum and Order, the State of New York ("State") hereby submits this Revised Statement of Position on the State's admitted Contention NYS-17B concerning property values. This Statement is supported by the Declaration of Stephen C. Sheppard and responds to arguments made in Entergy's Statement of Position on Contention NYS-17B (Property Values) (ENT000131) ("Entergy SOP"); the Testimony of Entergy Witnesses Donald P. Cleary, C. William Reamer, and George S. Tolley Regarding Contention NYS-17B (Property Values) (ENT000132) and the exhibits thereto; NRC Staff's Initial Statement of Position on Contention NYS-17, 17A, 17B (Land Use) (NRC000080) ("NRC SOP"); and the NRC Staff Testimony of Jeffrey J. Rikhoff, Andrew L. Stuyvenberg, and John P. Boska Concerning Contentions NYS-17, 17A and 17B (Land Use) (NRC000081) and the exhibits thereto.

In its Initial Statement of Position, the State, supported by Dr. Sheppard, argued that the FSEIS failed to analyze the impact of license renewal or non-renewal on nearby property values. Dr. Sheppard's work shows definitively that the plant has an actual adverse impact on property values, which would continue if license renewal were granted, and shows further that the no-action alternative "would generate a recovery in property values that could add more than $1 billion to the value of residential property" within 5 kilometers of Indian Point. Dr. Sheppard's analysis shows that the value of removing the facility from the community is worth $1 billion more than the burden of replacing the property taxes and fees that the facility generates. NRC Staff's failure to analyze the impact on property values and land use of the proposed action and

the no-action alternative was arbitrary and capricious, violates the National Environmental Policy Act ("NEPA") and NRC regulations, and thus fails to provide the legally required environmental review that is a prerequisite to a decision on Entergy's application for license renewal.

In response, Entergy argues that any change in property values that would be caused by denial of the application is not directly related to physical impacts attributable to the facility and therefore NEPA does not require any analysis. Entergy SOP at 20-21, 29-32. Entergy also argues that any land use impacts that the facility might have are too remote and speculative to require analysis. *Id.* at 32-35. NRC Staff claims that there is no obligation to address the impact of license renewal on property values because the "issue to be determined is whether continued nuclear power plant operations will cause the use of the land to change; the issue is not whether continued operations will cause the value of the land to change." NRC SOP at 11; Stuyvenberg Testimony at 27-28.[1]

LEGAL FRAMEWORK

The State's Initial Statement of Position (NYS000223 at 6-9) contains a detailed discussion of the legal framework applicable to NYS-17B. The following discussion responds to Entergy and NRC Staff's presentation of the applicable legal framework in their Statements of Position ("SOPs").

[1] Entergy and NRC Staff also complain that New York makes incorrect assumptions about the time frames for decommissioning. Dr. Sheppard's testimony addresses that criticism. *See* Sheppard Rebuttal Testimony at 44-45.

A. As The Federal Agency Charged With Determining Whether To Relicense Indian Point, NRC Bears The Ultimate Burden To Comply With NEPA

Entergy and NRC Staff have presented the Board with an inaccurate legal standard under which the Board should evaluate this contention. Under NEPA, NRC Staff must ensure that the FSEIS takes a "hard look" at the environmental impacts of relicensing.[2] NRC Staff's "responsibility is not simply to sit back, like an umpire, and resolve adversary contentions at the hearing stage." *Calvert Cliffs' Coordinating Comm., Inc. v. U. S. Atomic Energy Comm'n*, 449 F.2d 1109, 1119 (D.C. Cir. 1971). Instead, NRC Staff bears the burden of complying with NEPA, which "insures the integrity of the agency process by forcing it to face those stubborn, difficult-to-answer objections without ignoring them or sweeping them under the rug" and serves as an "environmental full disclosure law so that the public can weigh a project's benefits against its environmental costs." *Sierra Club v. United States Army Corps of Eng'rs*, 772 F.2d 1043, 1049 (2d Cir. 1985) (citing *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973)).

NRC Staff cannot shift the burden of ensuring that its environmental analysis is adequate onto Entergy, intervenors, or any other entity. *See Harlem Val. Transp. Ass'n v. Stafford*, 500 F.2d 328, 336 (2d Cir. 1974) (An agency cannot be "content to place the burden on intervenors whose resources might be limited to challenge any environmental statements that the [applicants] might make in their applications . . . . [Such a] passive approach . . . shifts to intervenors a large

[2] *See, e.g., In the Matter of Progress Energy Florida, Inc.*, (Combined License Application, Levy County Nuclear Power Plant, Units 1 and 2), Nuclear Reg. Rep. P 31605, 2010 WL 87737, *5 (2010) (Commission recognizes that "the ultimate burden with respect to NEPA lies with the NRC Staff"); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 N.R.C. 1041, 1049 (1983) (as the proponent of the agency action at issue, an applicant generally has the burden of proof in a licensing proceeding, *see* 10 C.F.R. § 2.325, when NEPA contentions are involved, the burden shifts to the Staff, because the NRC, not an applicant, has the burden of complying with NEPA); 10 C.F.R. § 51.70(b) (NRC Staff must "independently evaluate and be responsible for the reliability of all information used in the draft environmental impact statement.").

part of the burden of evaluating environmental issues which Congress placed on agencies of the government . . . ."); *Greene County Planning Board v. FPC*, 455 F.2d 412, 419-20 (2d Cir. 1972), *cert. denied*, 409 U.S. 849 (1972) (a federal agency cannot abdicate its responsibility independently to evaluate federal actions proposed to it by other, non-federal entities).

In their SOPs, Entergy (ENT000131 at 22) and NRC Staff (NRC000080 at 9) cite inapposite decisions discussing intervenors' burden at the contention admissibility stage. But there can be no question that New York, an intervenor party, previously satisfied the standards contained in 10 C.F.R. § 2.309 governing contention admissibility. At this point in the proceeding, as is to be expected, the State is presenting additional supporting evidence on the merits of its contentions.[3] For NEPA contentions, all parties appear to be in agreement that the relevant question for the Board is whether NRC Staff's analysis in the FSEIS is reasonable under NEPA.

B. NRC Bears The Burden Of Establishing That The FSEIS Adequately Analyzed The Proposed Action's Impacts, Including Its Impacts On Property Values

Throughout this proceeding, New York has explained, and the Board has repeatedly recognized, that "[i]n conducting its analysis of the impact of the license renewal on land-use," Entergy and NRC Staff "should have considered the impact on real estate values that would be caused by license renewal or non-renewal." Mem. and Order Ruling on Petitions to Intervene and Requests for Hearing, Docket Nos. 50-247-LR and 50-286-LR (Jul. 31, 2008) at 83; *see also*

[3] Where a party has introduced a contention, "that party has the burden of going forward with evidence to buttress that contention. Once he has introduced sufficient evidence to establish a prima facie case, the burden then shifts to the applicant who, as part of his overall burden of proof, must provide a sufficient rebuttal to satisfy the Board that it should reject the contention as a basis for denial of the permit or license." *In Matter of Louisiana Power and Light Co.*, 17 N.R.C. 1076, 1093 (*quoting Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB–123, 6 AEC 331, 345 (1973)).

Order Ruling on New York State's New and Amended Contentions (Jun. 16, 2009) at 8 ("this amended contention updates the original to reflect that New York contends that the NRC Staff erred in a similar manner to Entergy and that the original contention is now relevant to the Draft SEIS, as well as to the ER. We admit the amended contention as such and consolidate it into NYS-17"); *see also* Mem. and Order (Ruling on Pending Motions for Leave to File New and Am. Contentions (Jul. 6, 2011) at 16 ("there exists a genuine dispute of material fact regarding the socioeconomic environmental impacts of license renewal on property values adjacent to the IPEC").

Although a NEPA review "does not mean that the courts are to 'fly speck' environmental impact statements. . . . [,] the courts can, and should, require full, fair, bona fide compliance with NEPA." *Lathan v. Brinegar*, 506 F.2d 677, 693 (9th Cir. 1974) (affirming district court's ruling that an EIS did not satisfy the requirements of NEPA). Courts evaluate compliance with NEPA under a "rule of reason" but "implicit in this rule of reason is the overriding statutory duty of compliance with impact statement procedures 'to the fullest extent possible.'" *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973) (citation omitted); *cited in Dubois v. U.S. Dep't of Agriculture*, 102 F.3d 1273, 1287-88 (1st Cir. 1996) (holding that the agency could not claim its "failure to consider an alternative . . . was a de minimis or 'fly speck' issue" where "[t]he record indicates [the project entails] serious adverse consequences . . . ."). "[G]rudging, pro forma compliance [with NEPA] will not do." *Lathan v. Brinegar*, 506 F.2d 677, 693 (9th Cir. 1974) (en banc).

A reviewing court "must not reduce itself to a 'rubber-stamp' of agency action." *See North Carolina Wildlife Federation v. North Carolina Dept. of Transp.*, 677 F.3d 596, 601 (4th Cir. 2012) (citing *Fed. Mar. Comm'n v. Seatrain Lines, Inc.*, 411 U.S. 726, 745–46 (1973)). A

"conclusory statement unsupported by empirical or experimental data, scientific authorities, or explanatory information of any kind" is not reasonable under NEPA. *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973).

C. A NEPA Deficiency Must Be Cured Through A Supplement To The FSEIS That Is Circulated For Public Comment, Not Through The Adjudicatory Record

Under NRC's NEPA-implementing regulations, to cure a NEPA deficiency, NRC Staff should be directed to conduct a reasonable site-specific analysis, and to include an explanation of that analysis in a supplement to the FSEIS that is circulated for public comment before it is finalized. *See* 10 C.F.R. § 51.92(a) ("NRC staff will prepare a supplement to a final environmental impact statement . . . if . . . [t]here are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."); 10 C.F.R. § 51.92(d) ("The supplement to a final environmental impact statement will be prepared in the same manner as the final environmental impact statement except that a scoping process need not be used."). The regulations require that any FSEIS supplement should include whatever new and significant information was brought to light during the proceeding that was not analyzed or discussed in the FSEIS.

In its Statements of Position for Contentions 17B and 37, however, Entergy suggests that another method of curing a NEPA deficiency is available to NRC Staff. *See* ENT000131 at 16; ENT000478 at 15. Entergy's argument boils down to a claim that an Atomic Safety and Licensing Board may rule that an FSEIS is supplemented by submissions of NRC Staff, the applicant, and intervenors during the hearing process. *Id.* Entergy further argues that the determination of whether NRC Staff complied with NEPA is based on the entire hearing record as whole, as opposed to the FSEIS alone. *Id.* Therefore, Entergy argues, even if the FSEIS is

found deficient, the Board can find that the record as a whole remedies the deficiency so that NRC Staff need not prepare a supplemental analysis.

The opinion Entergy cites for this proposition, *La. Energy Servs.* (Nat'l Enrichment Facility), CLI-06-15, 63 NRC 687, 707 n. 91 (2006), was appealed to the District of Columbia Circuit, Court of Appeals ("D.C. Circuit"). While the D.C. Circuit ruled that a Board's supplementation of the FSEIS by the hearing record did not violate the Atomic Energy Act's requirement that the EIS be prepared before the hearing is completed, the court left open the question of whether this violates NRC's NEPA-implementing regulations. *See Nuclear Info. & Res. Serv. v. NRC*, 509 F.3d 562, n.1 (D.C. Cir. 2007) ("Petitioners have not argued that the NRC's method of supplementing the EIS violated its regulations implementing NEPA. *See* 10 C.F.R. § 51.92."). Here, such an action would violate NEPA and NRC regulations.

In addition to violating NRC's own NEPA regulations, Entergy's proposed method of evaluating NEPA compliance and curing NEPA deficiencies would undermine the very purpose of conducting an environmental analysis in an EIS that is circulated for public comment. First, it would not be clear to the decision-makers or the public which part of the "record as a whole" was curing the NEPA deficiency. Second, the information that was deemed to supplement the FSEIS would not have been analyzed in a meaningful way by NRC Staff. The purpose of preparing an EIS is to present all the pertinent environmental information in one document that contains the agency's analysis of that information. *See Minn. Public Interest Research Group v. Butz*, 541 F.2d 1292 (8th Cir. 1976) ("The detailed statement serves to gather in one place a discussion of the relative impact of alternatives so that the reasons for the choice of alternatives are clear.") If the public looks to the record as a whole, it will not be able determine what this pertinent information is or what information the agency based its decision on. Third, under

Entergy's proposed method, the public would not be given an opportunity to comment on the changes to the FSEIS, as NRC's NEPA-implementing regulations require. 10 C.F.R. § 51.92(f)(1) ("A supplement to a final environmental impact statement will be accompanied by or will include a request for comments . . ."). The purpose of providing an opportunity for public comment is both to allow the general public to be an active participant in the decisionmaking process and to inform agency decisionmaking. *Ohio Valley Environmental Coalition v. Hurst*, 604 F.Supp. 2d 860, 870 (S.D.W.Va. 2009) (NEPA requires that agencies "disseminat[e] . . . relevant environmental information for public comment so that the general public may be an active participant in the decisionmaking process."); *Custer County Action Ass'n v. Garvey*, 256 F.3d 1024, 1034 (10th Cir. 2001) ("[A]gencies must take a 'hard look at the environmental consequences of proposed actions utilizing public comment and the best available scientific information . . . '"). Furthermore, CEQ regulations state that "public scrutiny [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b). For these reasons, deeming the FSEIS "supplemented" by the hearing record is not a valid cure for a NEPA deficiency.

Despite Entergy's claim to the contrary, courts have consistently held that a supplemental NEPA analysis, prepared by agency staff and open to public comment, is the appropriate remedy for a NEPA violation. In particular, the Second Circuit held that "studies [prepared after the EIS was finalized] could not cure these particular inadequacies because they were [not included in an EIS supplement and were] not circulated for review and comment in accordance with procedures established to comply with NEPA." *I-291 Why? Ass'n v. Burns*, 517 F.2d 1077, 1081 (2d Cir. 1975). Likewise, the First Circuit has found "no indication in the [NEPA] statute that Congress contemplated that studies or memoranda contained in the administrative record, but not incorporated in any way into an EIS, can bring into compliance with NEPA an EIS that by itself

is inadequate." *Grazing Fields Farm v. Goldschmidt*, 626 F.2d 1068, 1072 (1st Cir. 1980) (Finding that even if agency staff made an informed, good faith decision to reject a proposed alternative, they had violated NEPA's procedural mandate by failing to explain that decision in the EIS).

In many instances, in addition to ordering a supplemental EIS, courts also enjoin the agency action at issue until the supplement is completed. In *Natural Res. Defense Council v. Callaway*, the Second Circuit held:

> The Navy should not be permitted to proceed with further dumping at the New London site until . . . the serious deficiencies in the EIS [are] remedied. ***Otherwise application of a "rule of reason" would convert an EIS into a mere rubber stamp for post hoc rationalization of decisions already made.*** If the spirit as well as the letter of NEPA is to have any real meaning in this case, the Navy should prepare and circulate for consideration and comment a supplemental statement . . . .

524 F.2d 79, 94-95 (2d Cir.1975) (emphasis added). If the FSEIS is found to be deficient, NRC Staff must complete a supplement to the FSEIS to remedy the deficiency before Indian Point can be relicensed.

ARGUMENT

POINT I

PROPERTY VALUES WILL REBOUND AS THE RESULT OF A CHANGE IN THE PHYSICAL ENVIRONMENT

In arguing that any impacts to property values are beyond NEPA's reach, Entergy and NRC misapprehend both relevant NEPA law and the relationship between property values and land use. Entergy also misconstrues the "status quo."

NEPA requires a comprehensive analysis of any "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). The definition of "human environment" is further explained by CEQ regulations.

> Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of "effects" (§ 1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

40 C.F.R. § 1508.14. "Whether an impact on the 'human environment' must be addressed depends on "the closeness of the relationship between the change in the environment and the 'effect' at issue." *Hammond v. Norton*, 370 F. Supp. 2d 226, 243 (D.D.C. 2005) (*quoting Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 771-72). NEPA requires an analysis of "indirect effects," including "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." 40 C.F.R. § 1508.8(b); *see also id.* § 1502.16(b) (EIS shall include discussion of "Indirect effects and their significance"); *id.* § 1502.16(g) (EIS shall include discussion of "Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures").

Because neither Entergy nor NRC Staff can cite any authority for the radical notion that NEPA does not require consideration of the impact of a proposed action on property values, they instead argue that there is no obligation in this proceeding to consider the impact of relicensing on property values because those impacts "are not 'directly related to the physical

environment.'" *See* Entergy SOP at 20-21 (*quoting* Final Rule, Changes to Requirements for Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 64 Fed. Reg. 48,496, 48,502); *id.* at 26-29. Entergy implies that any property value impacts that may occur are due to the unfortunate public perception of the risk of living near a nuclear facility rather than an actual impact to the physical environment. *See* Entergy SOP at 20-22; *id.* at 29 ("Simply put, some people may not like living near certain types of facilities for reasons unrelated to physical changes to the environment that those facilities cause"); Tolley Testimony at 64. Entergy then argues that NEPA does not "require any further consideration of property value impacts in this proceeding because NYS has not demonstrated a 'reasonably close causal relationship' whereby changes to the physical environment resulting from either license renewal or the no-action alternative cause an alleged property value impact." *Id.* at 30; *see also* 64 Fed. Reg. 48,496, 48502 (Environmental Review for Renewal of Nuclear Power Plant Operating Licenses) (Sept. 3, 1999).

It is undisputed that power generating facilities may impact property values. Scholars have conducted "several scientific studies of the impacts of power generating plants, in general and nuclear fission power plants in particular." November 2007 Report of Dr. Stephen Sheppard (*Potential Impacts of Indian Point Relicensing on Property Values*) (NYS000226) ("*Potential Impacts"*) at 2. Power plants can be "the source of modest to severe levels of nuisance and disamenity that could depress the market value of nearby properties." *Id.* (*citing* Blomquist, *The Effect of Electric Utility Power Plant Locations on Area Property Value*, Land Economics, Vol. No. 50, No. 1 (Feb. 1974) at 97-100). The effect exists for conventional and nuclear power plants alike. *Potential Impacts* at 3 (citing Clark and Nieves, *An Interregional Hedonic Analysis of Noxious Facility Impacts on Local Wages and Property Values*, Journal of Environmental

Economics and Management, Vol. 27 (1994) at 235-253). Indeed, Entergy expert George S. Tolley acknowledges the potential impact of "disamenities" including "noisy freeways or polluting facilities" on home prices. Tolley Testimony at 62; *see also id.* at 63-64 (citing "extensive literature" identifying "relatively large property values impacts" from power plants).

The evidentiary record in this case demonstrates that Indian Point is a "polluting facility" of the sort that both Professors Sheppard and Tolley agree could negatively impact nearby property values.[4] Tritium and strontium in the groundwater, offsite noise, traffic and the facility's fortress-like presence, are precisely the kind of traditional nuisance indicia that impact property values. *See* Sheppard Rebuttal Testimony at 13; Tolley Testimony at 62; *see also id.* at 63-64 (citing "extensive literature" identifying "relatively large property values impacts" from power plants). Entergy and NRC Staff have amply established the facility's physical effects on the environment.

In the ordinary course of NEPA compliance, these physical effects on the environment trigger an obligation to examine a proposed action's impact on property values. *See, e.g., Lee v. U.S. Air Force*, 354 F.3d 1229, 1241 (10th Cir. 2004) (United States Air Force considered impact on property values of stationing and use of additional training aircraft at base in New Mexico); *Britt v. U.S. Army Corps of Eng.*, 769 F.2d 84, 91 (2d Cir. 1985) (FSEIS for possible bridge removal discussed property values); *Town of Norfolk v. U.S. E.P.A.*, 761 F. Supp. 867, 887-888 (D. Mass. 1991) (EIS related to sewage residuals landfill considered impact on property

[4] *See, e.g.*, FSEIS § 2.2.8.4, GEIS § 4.3.7, ER § 2.1 (noise generated at IPEC is detectable offsite); ER § 4.19.5, FSEIS § 2.2.8.2 (more than 3,500 vehicles traverse the stretch of Broadway immediately outside the IPEC complex daily while nearly 68,000 vehicles travel US-9 near the site every day]; FSEIS at A-136 (transportation impacts of SNF); FSEIS § 4.5, ER § 5.1 (spent fuel leaking into groundwater); *id.* (strontium-90 has been detected in groundwater around the site); FSEIS § 4.8.5 (tritium, radioactive forms of cesium, cobalt, nickel, and strontium); FSEIS §§ 2.1, 2.1.1, 2.2.1, 2.2.6.1, A-116 (security measures include armed guards, perimeter fence, and multiple security stations).

values), *aff'd*, 960 F.2d 143 (1st Cir. 1992). Here, however, Entergy claims that the State must establish that it is the facility's physical impacts that are responsible for its adverse impacts, rather than public fear and aversion. *See* Entergy SOP at 21-22. This argument improperly attempts to shift to the State the burden of demonstrating NRC Staff's compliance with NEPA. The fact that the facility is nuclear and may trigger fear or apprehension is not an affirmative defense to NEPA obligations. The argument also fundamentally misconstrues *Metropolitan Edison* and its progeny.

In *Metropolitan Edison*, the Supreme Court rejected the claim that NEPA imposed on the NRC an obligation "to consider whether the risk of an accident at [Three Mile Island] might cause harm to the psychological health and community wellbeing of residents of the surrounding area." *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 768 (1983). The Court of Appeals held that NEPA required the NRC "to evaluate 'the potential psychological health effects of operating' [Three Mile Island]-1 which have arisen since the original EIS was prepared." *Id.* at 771. Those potential health effects were the alleged consequence of a "serious accident" at TMI's Unit 2. The Supreme Court reversed, on the ground that the Court of Appeals had failed to "consider the closeness of the relationship between the change in the environment and the 'effect' at issue." *Id.*

The "effect" at issue in *Metropolitan Edison* was the alleged psychological health damage posed by the risk of another nuclear accident at TMI while the "change in the environment" was the proposed action: renewed operation of TMI-1. *See* 460 U.S. at 771, 775. The Supreme Court held that "a *risk* of an accident is not an effect on the physical environment." *Id.* at 775 (emphasis original). Because "[a] risk is, by definition, unrealized in the physical world," the "causal chain from renewed operation of TMI-1 to psychological health damage"

was too attenuated to be cognizable under NEPA. *Id.* In this license renewal proceeding, the State alleges that relicensing will preclude the rebound in property values that would occur if relicensing were denied. The "effect" alleged is that already-diminished property values will not recover. Entergy may not use *Metropolitan Edison* as a shield to protect NRC Staff and itself from the obligation NEPA imposes on it to analyze indirect impacts, including property values. [5]

Entergy essentially suggests that *Metropolitan Edison* relieves it of the obligation to analyze property value impacts because of the unsubstantiated *possibility* that the facility's adverse impact on property values *might* be caused by aversion or apprehension. First, nothing in Dr. Sheppard's testimony suggests that in fact the diminution in property values is due to public apprehension. Second, *Metropolitan Edison* does not shift the evidentiary burden to an intervenor. If Entergy or Staff believes that the diminution in property values around the facility is due in whole or part to public apprehension, they were free to try to prove that some share of the diminution in value shown by Dr. Sheppard was not attributable to the facility's physical impacts. In this way, they might have succeeded in showing, for instance, that the facility's impact on property values was 80% due to its physical impacts on the environment and 20% due to public aversion. But Entergy and Staff did not take that approach. Having failed to carry their evidentiary burden, they may not now claim that the facility's impacts on property values are due to the community's hypothetical alleged distaste for the facility.

Nor does *Metropolitan Edison* relieve a project proponent of its obligation to analyze "indirect effects," including "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air

[5] *See also Olmsted Citizens for a Better Comm. v. United States*, 606 F. Supp. 964 (D. Minn. 1985). *Olmsted,* upon which Entergy also relies, held that the "psychological and sociological effects upon individuals from having prisoners nearby are not recognized under NEPA in the circumstances presented by this case."

and water and other natural systems, including ecosystems," as NRC Staff and Entergy claim. *See* 40 C.F.R. § 1508.8(b); *see also id.* § 1502.16(b) (EIS shall include discussion of "Indirect effects and their significance"); *id.* § 1502.16(g) (EIS shall include discussion of "Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures").

In addition to trying to obfuscate the parties' respective burdens, as well as the straightforward law that requires the analysis of indirect effects, including property values, Entergy ignores altogether, and NRC muddles, the relationship between property values and land use.

NRC Staff and its experts appear to be simply confused about the relationship between property values and land use. They postulate that the "issue to be determined is whether continued nuclear power plant operations will cause the use of the land to change; the issue is not whether continued operations will cause the value of the land to change." NRC SOP at 11 (*citing* NRC Staff Testimony at 7-8). There are two problems with Staff's view of the "issue to be determined."

First, Staff ignores New York's contention that the no-action alternative would result in increased offsite property values. *See, e.g.*, Mem. and Order Ruling on Pending Motions for Leave to File New and Amended Contentions (Jul. 6, 2011) at 18 ("NYS-17B as limited permits an analysis of the putative positive property value impact of the no-action alternative compared to the property value impact of the proposed action"). The issue is *not* whether continued operations would cause impacts to land use; the issue is what impacts to offsite land use would occur if license renewal is denied.

Second, Staff complains that Dr. Sheppard's assertion "that the issue of offsite land use is driven by changes in land values" is wrong. *See* NRC SOP at 17 ("that assertion reflects his opinion only"). Staff errs. It has long been understood that property values are the critical driver in determining land use patterns. As set forth in Dr. Sheppard's *Potential Impacts* report, "it is the market value of property that is the most significant determinant of its use and maintenance." *Potential Impacts* at 2. "If the presence of the nuclear power generating plant has a significant impact on property values, then it logically follows that extending the license will have a significant impact on property values which in turn will affect land use by affecting the decisions made by thousands of property owners and developers. Whether this significant impact exists is a scientifically testable question." *Id.* As set forth in Dr. Sheppard's Rebuttal Testimony, NRC staff's "understanding of what 'would cause offsite land use to change' is flawed." Sheppard Rebuttal Testimony at 12. Dr. Sheppard testified that it is not possible to evaluate whether plant operations would cause offsite land use to change without evaluating whether plant operations would alter off-site property values. *Id.*

Indeed, the 1996 GEIS expressly contemplated that relicensing might affect property values. "Possible impacts to housing include changes in the number of housing units, particularly the rate of growth of the housing stock; changes in occupancy rates; changes in the characteristics of the housing stock; and changes in rental rates and property values." 1996 GEIS § C.4.4.2 (case study of Indian Point). Further, each of the seven case studies included in the 1996 GEIS addressed the impact of relicensing on property values. *See id.* § C.4.1.2 (impacts on property values of relicensing Arkansas Nuclear One); *id.* § C.4.2.2 (D.C. Cook Nuclear Plant); *id.* C.4.3.2 (Diablo Canyon); *id.* C.4.5.2 (Oconee Nuclear Station); *id.* § C.4.6.2 (Three Mile Island); *id.* § 4.7.2 (Wolf Creek Generating Station). In conformity with 40 C.F.R. § 1508.14,

and contrary to the argument of Entergy and NRC Staff here, the 1996 GEIS case studies each examined the potential "changes in rental rates and property values." *See, e.g.,* 1996 GEIS § C.4.4.2 (Indian Point); *id.* C.4.3.7.2 (Diablo Canyon) ("If the private land holdings that surround the site were to be developed, there could be extensive public visual access to the site, raising the potential for an adverse impact. Such an impact could be reflected in property values not reaching their full potential"). This is consistent with NEPA's mandate to study the potential "effects" of a proposed action on the "human environment." 40 C.F.R. §§ 1508.8, 1508.14. It is also consistent with NUREG 1555, Suppl. 1, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Environmental Standard Review Plan for Operating License Renewal" (Mar. 2000) (ENT00019B), which Entergy cites for the proposition that property values are not a significant driver of offsite land use. *See* Entergy SOP at 27-28.

Contrary to Entergy's suggestion that NUREG 1555 endorses the exclusion of property values as a driver of land use, Entergy SOP at 26-27, that guidance document in fact makes clear that the site- and station-specific information necessary to support an application for license renewal is wide. *See* NUREG 1555, Suppl. 1 § 2.2.8-3. In the lengthy list of information that may be necessary, the guidance document includes "housing information, including the sales and rental market in the region, number and types of units, turnover and vacancy rates, and trends in addition to housing stock, adequacy of structures, and location of existing and projected housing (from the ER and consultation with Federal, State, regional, local, and affected Native American tribal agencies),"[6] and "local plans concerning land use and zoning that are relevant to population growth, housing, and changes in land-use patterns (from the ER and consultation with Federal, State, regional, local, and affected Native American tribal agencies)." *Id.* NUREG

[6] As set forth in the March 2010 Supplemental Sheppard Declaration, NYS000229, at 6, these factors are commonly used by property appraisers in determining property value.

1555, Suppl. 1, describes an *inclusive* approach aimed at determining what information is necessary and relevant to each environmental review.

Finally, Entergy argues that "NYS and Dr. Sheppard still are incorrect to equate property value impacts with offsite land use impacts." Entergy SOP at 32; Cleary Testimony at 49. After criticizing Dr. Sheppard's method, Entergy advocates a "more appropriate method" that would "consider historic land use patterns, current land use regulations and zoning ordinances, tax rates and incentives, population growth trends, and pending and proposed development plans" together with site specific data that dates back to at least 1996. *See id.* In fact, Entergy propounds no alternate "method." Instead, it urges "consideration" or "evaluation" of a list of land use drivers that is notable because it *omits* property values. *See* Entergy Testimony § VII at A74; *see* Entergy SOP at 32. Entergy's own experts have testified that "property values may influence land use." Entergy Testimony at A74 (Cleary, Tolley). Even if "consideration" were a "method," which it is not, and even if it were scientifically testable, which it is not, the apparently purposeful omission of property values is indefensible.

Entergy again relies on *USEC, Inc.* (*American Centrifuge Plant*), CLI-06-10, 63 N.R.C. 451, 466-69 (2006) to support its contention that any offsite land use changes that might occur "would not be significant" because they are too remote and speculative. Entergy SOP at 33.[7] Entergy is wrong. Unlike the unsuccessful *USEC* intervenor, New York in NYS-17B proposes no alternate use for the applicant's site. Here, it is Entergy that is proposing an "alternate" use: the alternate use of continuing to operate an electric generating facility. Counterintuitively, the status quo here is not IPEC in operation; the status quo in a license renewal proceeding is denial.

[7] Entergy first relied on *USEC* in its answer opposing the State's first proposed amendment of then NYS-17. *See* Mar. 24, 2009 Answer at 28-29 (ML090930204). Entergy raised it again in its February 26, 2010 motion for summary disposition at 2, 7, and 15 (ML101100474).

In *USEC, Inc.*, the Commission found inadmissible a contention proposing that the "no action" alternative would be preferable to the uranium enrichment facility for which the applicant sought a license. 63 N.R.C. 451. The proponent hypothesized that if the application were denied and the contaminated site cleaned up, it could become an "industrial heaven." 63 N.R.C. at 466. In addition to failing to provide evidentiary support for its proposal, the proponent "[i]n effect," proposed "another objective altogether." 63 N.R.C. at 468. Here, however, the status quo is license denial, which, by definition, means that onsite land use will change by 2015. Moreover, unlike the *USEC* intervenor, of course, New York has already met the contention admissibility standard.

Contrary to Entergy's view, New York has also provided ample evidence that property value-induced changes to offsite properties will materially impact decisions taken by homeowners. *See* Entergy SOP at 34 ("NYS has provided no evidence that the current '*status quo'* industrial land use pattern along the Hudson River in Buchanan is likely to be converted to an 'attractive riverfront development' or some other 'beneficial' use simply as a result of the no-action alternative").[8] Dr. Sheppard testified that his

[8] The State's argument does not depend on the "attractive riverfront development" mentioned by Dr. Sheppard and again criticized by Staff and Entergy. *See* NRC SOP at 14; Entergy SOP at 34-35. Dr. Sheppard was simply pointing out a flaw in the analysis of Clark, Michelbrink, Allison and Metz, which was cited in the 1996 Generic Environmental Impact Statement (GEIS). *See* NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants (1996) at 3-28, 3-29, 3-164. That analysis was flawed because it conflated job accessibility and the impact of a nuisance associated with proximity to a nuclear facility. As Dr. Sheppard noted, this would only be appropriate where the alternative being evaluated was "complete removal of the plant and abandonment of the land." Nov. 29, 2007 Sheppard Report, NYS000226, at 3. In pointing out the significance of the error--the assumption that Indian-Point's 239 acres located on the Hudson River only 24 miles north of New York City would remain abandoned--Dr. Sheppard mentioned the much more likely prospect that the highest and best use of the facility would be some combination of mixed use riverfront development. *Id.* Dr. Sheppard made no finding as to the highest and best use of the site following decommissioning

> analysis suggests that denial of the license renewal application and reclamation of the site for alternative uses would generate a recovery in property values that could add more than 27% to the value of residential property located within 5 kilometers. This increase, which would total $1,070,074,312, would significantly increase the wealth of many individuals living in the community. The FSEIS contained no analysis of the impact of license renewal on property values, which must be an integral part of any discussion of the socioeconomics of land use.

Sheppard Pre-Filed Testimony, NYS000224, at 7. He further explained that the approximately 27% increase in wealth that would accrue to homeowners was enough to "clearly have noticeable effects on land use decision making." *Id.* at 39.

> It is certainly sufficient to result in very significant impacts. These include economic impacts such as the value of residential property and the associated wealth of property owners. They also could include environmental land use impacts that will arise because the increased values of residential property will cause owners to make more careful use of land and allocate the land to different types of uses. This is why I disagree so strongly with the assertions made in the FSEIS that land use would experience "no noticeable . . . change."

Id. at 40. By comparison, a nationwide diminution in residential property values of approximately 16% profoundly affected the national economy. *Id.* Plainly, a 27% increase in wealth would have "LARGE" impacts on adjacent land uses and housing.

Despite their efforts to obfuscate, *see, e.g.,* Entergy SOP at 22 (relying on contention admissibility standard), NRC Staff and Entergy concede, as they must, that Staff bears the burden of establishing NEPA compliance. Staff SOP at 9; Entergy SOP at 23. This burden, shared with Entergy, *id.*, requires Staff to show by a preponderance of the evidence, that the FSEIS complies with NEPA. *See Harlem Val. Transp. Ass'n*; *Greene County Planning Board*, 455 F.2d at 419-20. They have not carried their burden. "The FSEIS fails to address the impact of the continued operation of IP2 and IP3 for another 20 years on offsite land use, including real

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because his conclusions depend on no such a finding, just as they do not depend on any particular development occurring post-decommissioning.

estate values in the surrounding area in violation of 10 C.F.R. §§ 51.71(a), 51.71(d), 51.95(c)(1), and 51.95(c)(4)." *See* NYS-17B.

POINT II

THE EVIDENCE SHOWS THAT THE NO-ACTION ALTERNATIVE WOULD HAVE LARGE POSITIVE IMPACTS ON PROPERTY VALUES

Entergy argues that both the 1996 GEIS and more recent economic modeling demonstrate that IP2 and IP3 have had and will have no adverse impacts on property values.[9] Entergy first claims that the GEIS found "that at all case study sites—including Indian Point—only small impacts on housing value and marketability are projected during the license renewal term." Entergy SOP at 35. Entergy reasons that because the GEIS found no adverse property value impacts in 1996, "the no-action alternative will not result in significant property value impacts" and therefore, it concludes, no property value-driven land use impacts could occur. *See* Entergy SOP at 35. Entergy then points to the GEIS case study of Indian Point to bolster its claim that changing property values in the wake of relicensing could not trigger substantial offsite land use impacts. Entergy and NRC Staff claim that the case study demonstrates that the facility has not depressed housing values in adjacent neighborhoods. Entergy SOP at 35; NRC SOP at 12-13. In fact, the case study says no such thing.

> Most local planners and realtors believe that the operation of the Indian Point plants has not inhibited residential growth in neighboring

[9] NRC Staff claims that it cannot "confirm" Dr. Sheppard's conclusions because he did not produce his data. NRC SOP (NRC00080) at 18. Dr. Sheppard's data were disclosed to both Entergy and NRC Staff. As is clear from his 63-page report, however, Entergy's expert obtained and used Dr. Sheppard's data. March 2012 Property Value Effects of Indian Point License Renewal (Tolley Report) (ENT000144) at 48 ("I directed the assembling of a dataset based on Assessor's property cards. Using the information in Dr. Sheppard's December 2011 dataset and the Assessor's property cards used by Dr. Sheppard, a dataset was assembled giving a sample of sales of 283 single family residential properties in Buchanan, Cortlandt, and Peekskill, within 5 kilometers from the IPEC site").

> communities of Buchanan, Peekskill, and Verplank, and the town of Cortlandt. Rather, the low property taxes and good school district have served to encourage residential development and facilitate the quick sale of existing housing. *Local residents express no reluctance about living near the plants, although occasionally an outside buyer is deterred from the area because of the plants. However, there are always other buyers for the property, so the housing market has not slowed. Conversely, one realtor maintains that more development in communities neighboring Indian Point would have occurred had it not been for Indian Point.* Local realtors agree that housing values in communities neighboring the plant have not been deflated because of the presence of Indian Point. *Homes in the immediate area are moderately priced and are currently selling very fast on the market. Developments within 3 km (2 miles) of the plant include homes in the $400,000 to $600,000 range. Representatives of the Westchester County Office of Community Development believe otherwise, however, and indicated that the presence of the plant had perpetuated the image of these communities being low to middle class.* In summary, it appears that neither construction nor operation of the Indian Point plants has considerably affected housing in the communities neighboring the plants or in the whole of Westchester and Dutchess counties.

C.4.4.2 (emphasis added); *see also* Entergy Testimony at A81.

As set forth in Dr. Sheppard's Rebuttal Testimony, the "evidence" put forth in the summary does not support its conclusion that "neither construction nor operation of the Indian Point plants has considerably affected housing in the communities neighboring the plants." Sheppard Rebuttal Testimony at 17 (*quoting* 1996 GEIS, Appx. C (C.4.4.2)). First, this anecdotal evidence is at best ambiguous. The fact that the houses have sold, even "very fast," says nothing at all about whether they have sold for less than they would have if IPEC were not there. *Id.* at 18. Similarly, the fact that some houses were selling in the $400,000-$600,000 says absolutely nothing about how the market would value those same properties in IPEC's absence. *See id.* at 18 ("What matters is what price the house would sold for with the plant and in the plant's absence"). The relevant question for purposes of GEIS § C.4.4.2 is whether the facility has depressed property values, *not* whether it caused the abandonment of houses in the vicinity. The anecdotal evidence that some buyers are deterred and that local government leaders believe

"that the presence of the plant had perpetuated the image of these communities being low to middle class" is proof that the facility has depressed property values. Entergy and NRC Staff utterly ignore this evidence. The 1996 GEIS case study of Indian Point does not sustain NRC Staff's burden to show that the facility has not depressed property values. And even if the GEIS did show that the facility had not depressed property values in 1996, which it does not, it does not show that property values would not increase upon denial of the relicensing application.

Just as the GEIS does not show that property values would not rise following plant shut-down, neither does the testimony of Dr. Tolley. As set forth in Dr. Sheppard's Rebuttal Testimony, there are several problems with Dr. Tolley's testimony. Sheppard Rebuttal Testimony at 21-45. First, his residential property sample is too small to be scientifically valid. *Id.* at 25. Comprised of "residential properties actively listed for sale on that date in zip codes falling in a 5-mile radius of Indian Point," the sample totaled just under 300 properties. Tolley Testimony (ENT000132) at A100. Dr. Sheppard's sample, by comparison, included more than 1,500 parcels. Sheppard Rebuttal Testimony at 25. In addition, in July 2011 the national real estate market, including Westchester County, was depressed. *Id.* at 27. Further, because he obtained his sample from the Multiple Listing Service, Dr. Tolley necessarily relied upon asking price, not sale price. *See id.* at 28. As anyone who has ever sold a house knows, the asking price, particularly in a depressed market, is rarely the price obtained. There is moreover no way to know whether the houses in Dr. Tolley's sample were, in fact, sold. *Id.* These weaknesses in Dr. Tolley's sample render it at best ambiguous.

Dr. Tolley criticizes Dr. Sheppard's "control group" on the ground that it is "unrealistic." Entergy Testimony at A142; *see also* Tolley Expert Report, ENT000144, at 38-42. But Dr. Tolley's work has *no* demonstrable control group. Sheppard Rebuttal Testimony at 29-30. Dr.

Tolley's "control" group is nothing more than houses beyond the geographic limits of his "test" group. *See id.* at 29. As Dr. Sheppard explains

> It is generally unacceptable to simply assume this as the control group, since it is equivalent to assuming that there is no disamenity impact of IPEC at a distance of 5 miles. The existence, or not, of a disamenity is precisely what the analysis is trying to discover, so to assume that none exists at some distance makes the analysis invalid, or at least contingent on the accuracy of the assumption, which then remains untested.

Id. at 29. In other words, Dr. Tolley has not demonstrably proven anything.

In addition, Dr. Sheppard explains a major inconsistency in Dr. Tolley's work. Dr. Tolley includes as a factor in his analysis the distance to Indian Point and that distance squared. He also includes the distance to the nearest rail station (an amenity). He does not, however, include the distance squared to the nearest rail station. *Id.* at 31. Dr. Tolley thus treats the appeal of proximity to a likely amenity as linear but the distaste for proximity to a likely disamenity (IPEC) as quadratic. There is no explanation or justification for this disparate treatment. *Id.* at 31-32.

Finally, and most significantly, Dr. Sheppard takes issue with the functional relationship between home price and distance from IPEC upon which Dr. Tolley's analysis depends. *See* Sheppard Rebuttal Testimony at 33-38. Dr. Tolley's own analysis reveals that IPEC may be a source of disamenity, potential evidence that he dismisses as "unexpected" and "anomalous." *See* Tolley Report at 21 (ENT000144); *see also* Sheppard Rebuttal Testimony at 22. Dr. Tolley explains the ambiguity of his results by mentioning the "difficulty of controlling for all relevant influences in a spatial context." Tolley Report at 22 (ENT000144). Dr. Tolley's finding—that house values increase as distance from IPEC increases—is in fact *consistent* with Dr. Sheppard's conclusion: that IPEC depresses property values. *See* Sheppard Rebuttal Testimony at 35-39. Dr. Tolley's work has many problems, the biggest of which is that it does not demonstrate that

Dr. Sheppard's conclusion is wrong. To the contrary, Dr. Tolley's study corroborates Dr. Sheppard's central finding.

The no-action alternative would cause a 27% increase in property values, which in turn would have a LARGE effect on offsite land use and housing. The FSEIS should have considered the impact of both the proposed federal action and the no-action alternative on property values; its failure to do so violates NEPA and the NRC's own regulations.

CONCLUSION

For the foregoing reasons, Entergy's application to renew the operating licenses for Indian Point Unit 2 and 3 should be denied.

Respectfully submitted,

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