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OFFICE OF SECRETARY
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ADJUDICATIONS STAFF

**UNITED STATES**
**NUCLEAR REGULATORY COMMISSION**

**ATOMIC SAFETY AND LICENSING BOARD**

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| 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,<br>Entergy Nuclear Indian Point 3, LLC, and<br>Entergy Nuclear Operations, Inc. | DPR-26, DPR-64<br><br>March 18, 2010 |

# STATE OF NEW YORK'S RESPONSE TO ENTERGY'S MOTION FOR SUMMARY DISPOSITION ON NEW YORK CONTENTIONS 17 AND 17A

TEMPLATE=SECY-041

DS03

## PRELIMINARY STATEMENT

This is a motion for reconsideration dressed up as a motion for summary disposition. For the third time, Entergy essentially presses the same arguments and for the third time fails to challenge the substance or accuracy of the State of New York's (State's) expert witness, Dr. Stephen Sheppard, who has preliminarily concluded that if Indian Point were not relicensed, there would be an approximately $1 billion rebound in property values in the vicinity of the facility. For the third time, Entergy claims, wrongly, that a proposed action's potential impact on property value is beyond the scope of this proceeding and not cognizable under NEPA. For the third time, Entergy asks the Board to overlook the indisputable impact that license renewal would have on the property values of homeowners in Westchester County, New York. For the third time, the Board should reject Entergy's arguments.

## ARGUMENT

Entergy argues that NYS Contention 17/17A should be dismissed because (1) NEPA does not require consideration of Indian Point's impacts on property values; (2) NEPA does not require consideration of impacts that depend upon "speculative" future actions; and (3) in any event, the Draft SEIS renders Contention 17/17A moot. *See* Motion for Summ. Disp. at 2. Entergy errs.

### I

### NEPA REQUIRES CONSIDERATION OF THE ENVIRONMENTAL IMPACTS OF LICENSE RENEWAL OR NON-RENEWAL ON NEARBY LANDS, INCLUDING IMPACTS TO PROPERTY VALUES

"NEPA requires an EIS to disclose the significant health, *socioeconomic* and cumulative consequences of the environmental impact of a proposed action." *Baltimore Gas and Elec. Co. v. NRDC*, 462 U.S. 87, 106-07 (emphasis added). *Accord Society Hill Towers Assoc. v. Rendell*,

210 F.3d 168, 176-178 (3d Cir. 2000) (project opponents who alleged, inter alia, that "the impact of the proposed project on their neighborhood will decrease their property values" had standing); *Kelley v. Selin*, 42 F.3d 1501 (6th Cir. 1995) (residents who lived near nuclear power facility that proposed to use dry cask storage had standing to protest alleged diminution in property value); *Matter of Connecticut Yankee* (Haddam), 54 N.R.C. 33 (Jul. 9, 2001) at *44 (affidavits alleging impact to property values by nuclear facility that had contaminated groundwater and released radioactive waste established standing because alleged injuries were within NEPA "zone of interests"). Further, in the case of license renewals, the Commission has already included "socioeconomic" impacts within the "environmental impacts" that must be evaluated in an ER. *See* App'x B to Subpart A of Part 51 ("Table B-1 summarizes the Commission's findings on the scope and magnitude of environmental impacts of renewing the operating license for a nuclear power plant"); *see id.* ("Table B-1 . . . represents the analysis of the environmental impacts associated with renewal of any operating license"); *id.* (requiring analysis of "socioeconomics," including license renewal impacts on housing, public services, public utilities, education, offsite land use, historic and archaeological resources, and aesthetics); Ruling on Petitions to Intervene and Requests for Hearing (Jul. 31, 2008) (ASLBP No. 07-858-03-LR-BD01) (July 31 Board Order) at 82 (NEPA requires a license renewal applicant to provide "an ER which includes an assessment of the impact of the proposed action on 'land-use . . . within the vicinity of the plant'"). It is undisputed that Entergy must evaluate the potential impacts of license renewal on nearby land use, including property value.[1] The "determinants of the value of real property" are explained in the accompanying Third Sheppard Report (March 18, 2010).

[1] The gist of Contention 17/17A is that the major federal action proposed will prevent the full use of the land near the site for many years into the future, depriving the community, and the land owners, of the benefits of better land use and higher land values. One of the very socioeconomic impacts recognized by NRC in the GEIS and in Table B-1 of Appendix B of Subpart A of Part 51 is the impact of the proposed action on land use. In addition, Table B-1

Nor, as Entergy argues, does anything in NEPA limit a license renewal applicant's obligation to assess impacts on land use to a select subset of impacts. *See* Motion for Summ. Disp. at 11-14 (arguing that impacts to property values caused by "public aversion" or accident risk are not cognizable under NEPA without even attempting to demonstrate what, if any, portion of the value of land in the vicinity of Indian Point might be impacted by "aversion"). Indeed, the Board has already rejected the claim that "impacts" to land-use should be narrowly defined. In opposition to Contention 17 Entergy (and NRC Staff) argued that "the only Category 2 land-use issue that needs to be considered in license renewal proceedings is the potential for tax-driven land-use changes." July 31 Board Order at 82. The Board "disagree[d]," ruling that "NRC Regulations do not limit consideration [on real estate values] to tax-driven land-use changes." *Id.* at 83. Accordingly, the Board ruled that "Entergy should have considered the impact on *real estate values* that would be caused by license renewal or non-renewal" and "admit[ted] NYS-17 as a contention of omission." *Id.* (emphasis added). The Board's broad ruling, directing Entergy to evaluate "the impact on real estate values that would be caused by license renewal or non-renewal," resolves this matter and is law of the case.[2]

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and the GEIS recognize that one of the ways in which land use impacts may be recognized is in tax payments, which depend upon the value of the land being taxed. This land value is a critical component in the benefits that Entergy claims in its Environmental Report would flow from relicensing, just as the value of land is a factor in the advantages that Contention 17/17A and the three reports of Dr. Stephen C. Sheppard demonstrate would occur if relicensing were denied.

[2] This is Entergy's third attempt to defeat Contention 17. In addition to opposing the admission of Contention 17, Entergy opposed the admission of 17A, and now moves for summary disposition of both. Had Entergy believed that the Board's ruling was erroneous it was bound to raise that argument in either a motion for reconsideration, 10 C.F.R. § 2.323(e), or by seeking relief from the Commission pursuant to 10 C.F.R. § 2.311(c) or § 2.311(f). Having failed to pursue these options, it is precluded from seeking reargument in the guise of this motion for summary disposition. Entergy's serial attacks on Contention 17/17A are inexcusable, especially in light of Entergy's self-serving claim that New York cannot now defend its contention by putting in additional proof, *see* Motion for Summ. Disp. at 14 & n.67. In fact, the use of additional supporting evidence for an admitted contention is clearly contemplated by Commission regulations. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi); *Louisiana Energy Servs., LLP*, CLI-04-35, 60 N.R.C. 619, 623 (2004) (under contention rule, intervenors need not prove their case or provide exhaustive list of possible bases, but must simply provide sufficient alleged factual or legal bases to support the contention when filed). Accordingly, the State submits in opposition to Entergy's motion the third Declaration and Third Report of Stephen C. Sheppard, dated March 18, 2010.

*Metropolitan Edison Co. Is Not in Conflict With Contention 17/17A*

Although Entergy has previously complained that Contention 17/17A only "vaguely attribute[d] this 'adverse' impact on property values to the 'continuation of an operating nuclear power generation facility and the associated increase in dry cask storage of spent waste," Answer of Entergy Opp. New and Am. Env. Contentions of NYS, March 24, 2009 at 22, it now claims to discern that "[s]tripped to its core, NYS-17/17-A is about the public's perception of risk," Motion for Summ. Disp. at 10. Accordingly, relying on *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766 (1983), Entergy argues that NEPA requires it to consider impacts to property value only if such effects are directly linked to impacts to the physical environment. Motion for Summ. Disp. at 11.

At issue in *Metropolitan Edison* was whether the NRC had an obligation to consider allegations by People Against Nuclear Energy (PANE) that the "risk of an accident at TMI-1 might cause harm to the psychological health and community well-being of residents of the surrounding area." 460 U.S. at 768. The Supreme Court concluded that the causal relationship between the psychological health of neighbors to a nuclear facility where a severe accident had occurred and the physical environment, which is NEPA's primary concern, was too attenuated. 460 U.S. at 777. Because the unrealized risk of a future accident was too far removed from "an event in the environment or . . . environmental concerns," it was not cognizable under NEPA. *Id.* at 775-777; *see id.* at 778 ("NEPA does not require agencies to evaluate the effects of risk, *qua* risk").

But Contention 17/17A does not depend upon the public's perception of risk. Contention 17/17A alleges that Entergy has failed to evaluate "(1) the presence of the HI STORM casks, or (2) the continued presence of an operating nuclear facility on adjacent landowners." NYS

Petition at 171 (¶ 19). In support, the State submitted an expert report that demonstrates that "the value of residential property within two miles of the Indian Point facility would increase by almost $600 million if the LRA was denied." July 31 Board Order at 82. Dr. Sheppard's report establishes that the scientific community agrees that "there [is] a clear and statistically significant impact of power plants on property values." *Potential Impacts of Indian Point Relicensing on Property Values* at 2 (Sheppard Report); *see also* NYS Petition at 172 (¶ 22).[3]

Dr. Sheppard's report plainly states that this impact is attributable to "nuisance and disamenity," Sheppard Report at 2, not the risk of an accident or even aversion. Dr. Sheppard's report makes clear that *all* power plants have a statistically significant impact on property values and that the impact of a nuclear power plant is likely to be even larger than the impact of a fossil fuel power plant. *See id.* at 2-3, 6 ("I have used a scientifically respected result based on analysis of power plants in general, while research suggests that the impact of nuclear power plants can be several times higher"); NYS Petition at 172 (¶ 22). Indeed, the State's argument that NEPA requires Entergy to evaluate the proposed action on surrounding property values would apply equally to a fossil-fuel fired power plant.

Dr. Sheppard's finding that the facility has an impact on property value is undisputed. NRC Staff has already conceded that denial of Entergy's license renewal application would trigger precisely the recovery in property values that the State anticipates. *See* DSEIS at 17 (shutdown of "IP2 and IP3 may result in increased property values of the homes in the communities surrounding the site") and Entergy apparently concurs. *See* Motion for Summ. Disp. at 4 (*quoting* DSEIS at 17). Unlike PANE, the State does not ask that the facility analyze "risk, *qua* risk." Contention 17/17A argues only that NEPA requires an evaluation of the impact

[3] Entergy disagrees with Dr. Sheppard's analysis and claims a net positive impact from the renewed licensing of the facility in the ER, which merely confirms the existence of factual disputes that the Board will need to resolve in order to resolve the issues raised by Contention 17/17A.

of a power plant -- in this case a nuclear power plant occupying 239 acres of prime real estate on the Hudson River in one of the nation's wealthiest counties -- on surrounding property values.

Residential property values are comprised of various factors, including property size and characteristics, the demographic composition of a neighborhood, supply and demand, and location. *See* Third Sheppard Report at 1, 5; Sheppard Report at 2; *see also How Estimates of Market Value are Determined for Residential Properties*, New York State Office of Real Property Services (December 2009), http://www.orps.state.ny.us/pamphlet/mv_estimates.htm. Contention 17/17A depends upon the premise that power plants "will be the source of modest to severe levels of nuisance and disamenity that could depress the market value of nearby properties." Sheppard Report at 2. In other words, Contention 17/17A postulates that the facility is a factor in the traditional "location, location, location" component of market value. PANE, by contrast, theorized that the "risk of a [nuclear] accident" would cause psychological health damage. Contention 17/17A has nothing to do with risk.

Entergy does not challenge Dr. Sheppard's conclusion. *See* July 31 Board Order at 82 ("Neither Entergy nor the NRC Staff has challenged Dr. Sheppard's conclusion regarding the increase in land value"); *see* Motion for Summ. Disp. at 1 and n.1 (motion supported only by Statement of Material Facts); *id.* at 14 & n.69 ("this issue raises no 'battle of the experts'"). Moreover, Indian Point's "direct effects on the environment," 460 U.S. at 775, would, of course, continue unabated if its licenses were renewed. These direct effects are substantial. *See, e.g.,* NUREG-1437, Vol. 1, Suppl. 38 (DSEIS) § 2.2.8.4 (Indian Point can be seen from Hudson River and Village of Buchanan); *id.* (superheater stack for IP1; and IP2 and IP3 buildings; and IP reactor containment structures "dominate the local landscape and can be seen from the Hudson River"); *id.* (noise from units is "detectable off site"); Environmental Report (ER), App'x E at 5-

4 to 5-5 (tritium, strontium, cesium and nickel, are leaking into groundwater and reaching Hudson River). Entergy cannot dispute that these traditional nuisance indices, established by its own filings, exist at Indian Point. *Cf. Metropolitan Edison*, 460 U.S. at 775 (noting that facility's direct effects include release of low-level radiation, increased fog, and warm water discharge into Susquehanna River).

Notably, Entergy's objection to a full examination of the facility's impact on land use and property values extends only to the facility's potentially adverse impacts. Entergy eagerly embraces Indian Point's contributions to the local economy and its positive impacts on nearby communities. *See, e.g.,* Appx. E at 4-86 ("Continued operation of the plant through the license renewal term would provide a significant continuing source of tax revenues to the local community and beneficial economic impact to the surrounding counties and communities"); *see also* §§ 4.14, 4.15, 4.16, 4.19 (analyzing impacts of facility on housing, schools, transportation); 8-63 (predicting rise in market price of energy if IP2 and IP3 were retired before license expired, loss of revenue for vendors, loss of employment and "secondary impacts"); *see id.* (predicting continued employment, local spending and PILOT payments as a consequence of license renewal); *id.* at 8-67 ("the continued operation of IP2 and IP3 will have a significant positive economic impact on the communities surrounding the station. Positive impacts include, but are not limited to, reduced local unemployment, significant contributions to local property tax revenue, economic support of southeastern New York, and lower energy costs"); *see also* DSEIS at 8-29 to 8-30.

Entergy "cannot have it both ways." *See* Motion for Summ. Disp. at 16 & n.74 (complaining that "NYS cannot have it both ways" with respect to length of time spent fuel will remain on-site). These "benefits" reflect the alleged value added by Indian Point, a value that

exists as a consequence of the value that individuals -- local residents, employers, and tax appraisers, among them -- place on having Indian Point in their midst. Having taken credit for the facility's contributions to land use and the local economy, Entergy cannot be heard to argue that there is no obligation to analyze the burden that the facility places on the same "socioeconomic indicators," *see* ER at 4-86. Entergy's proposed double standard would allow it to take credit for the facility's positive impacts on socioeconomic indicators, including land use, without thoroughly analyzing (or indeed analyzing at all) the even more positive impacts on the same indicators that the State has shown would flow from denial of the application.

The Board has already agreed that a license renewal applicant must analyze the impact of license renewal on real estate values. The Contention does not depend upon public aversion. And Entergy cannot take credit for the facility's purported socioeconomic benefits without also assessing the benefits that would accrue if the facility were not relicensed. For these reasons, the motion for summary disposition should be denied.

## II

## CONTENTION 17/17A DOES NOT HINGE ON "SPECULATIVE" FUTURE ACTIONS

Entergy claims that the State has no "legal or factual basis" for the "assumption" that the Indian Point site would be available for redevelopment by 2025. Motion for Summ. Disp. at 14. But, as set forth in Contention 17, the Commission has decided by regulation that off-site storage will be available by 2025. 10 C.F.R. § 51.23. As Entergy helpfully points out, § 51.23 "is not subject to collateral attack in this proceeding. Absent a waiver, 'no rule or regulation of the Commission . . . is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding.'" Motion for Summ. Disp. at 13 (*citing* 10 C.F.R. § 2.335(a)).

Notwithstanding the improbability of the presumption, and Entergy's skepticism, the State is entitled as a matter of law to assume that off-site storage will be available by 2025.[4]

Entergy next criticizes the "attractive riverfront development" scenario mentioned by Dr. Sheppard, characterizing it as akin to the "industrial heaven" conjured by a project opponent in *Matter of USEC* (American Centrifuge Plant), 63 N.R.C. 451 (Apr. 3, 2006). Entergy's reliance on *Matter of USEC* is misplaced. There, the Commission agreed that a contention proposing that the "no action" alternative would be preferable to the uranium enrichment facility for which the applicant sought a license was inadmissible. The proponent hypothesized that the site could be an "industrial heaven," if it were cleaned up. The Board rejected the contention for several reasons, including that the applicant was required to consider only "alternatives that produce enriched uranium." 63 N.R.C. at 466. By ignoring the applicant's commercial needs and the "project's national security goal" of producing enriched uranium, the opponent was in effect, "proposing another objective altogether, its concept of an industrial heaven." *Id.* at 468. As Entergy points out, however, the "no action" alternative "'is most simply viewed as maintaining the status quo.'" Motion for Summ. Disp. at 15 (*quoting Matter of USEC*, 63 N.R.C. at 466-69.

In this case, of course, it is the State that is attempting to preserve the status quo and Entergy that seeks to alter it. But for the proposed action, Indian Point's operating licenses will expire in 2013 and 2015. Contention 17/17A is premised on that promise, which Entergy now seeks to retract: "Extended operation of IP2 or IP3 will deprive adjacent lands of the economic recovery that they would otherwise enjoy if IP2 and IP3 are not relicensed." Petition at 168 (¶

[4] As a result of the certification by this Board of the admissibility of Clearwater's proposed contention regarding the continued viability of 10 C.F.R. § 51.23, the Commission is currently considering that regulation's status. The State respectfully suggests that the Board wait to determine the extent to which Contention 17/17A depends on the future storage of spent fuel until the Commission has taken final action on the pending certified question. Following a ruling by the Commission, the parties will almost certainly seek to reframe, withdraw or otherwise amend their arguments and/or contentions.

5); *see, e.g., id.* at 169 (¶¶ 10, 13-15). It is Entergy that is seeking to upend the status quo by extending the facility's license.

Also unlike the unsuccessful *USEC* intervenor, the State's argument does not depend on speculative future actions. The State's argument does not even depend on the "attractive riverfront development" mentioned by Dr. Sheppard. 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." Sheppard Report 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 was not asked to make any finding as to the highest and best use of the site following decommissioning because his report does not depend upon such a finding, just as it does not depend on any particular development occurring post-decommissioning.[5]

Entergy also insists that it might take it an additional 20 years to remove the spent fuel and nearly four decades after that for the site to be available for redevelopment. *See* Motion for Summ. Disp. at 16. NRC do say that Entergy *may* take up to 60 years to decommission Indian Point once it ceases to operate. 10 C.F.R. § 50.82(a)(3). However, the regulations also require

[5] In any event, Entergy put forth no competent evidence to rebut Dr. Sheppard's indisputable finding that "the highest and best alternative use of the site where the nuclear power plant is located would certainly NOT be abandonment."

that a decision on whether decommissioning will be allowed to take that long, and the methodology to be used for decommissioning, is to be subjected to public comment and a decision by the NRC. *See* 10 C.F.R. §§ 50.82(4), (5), (6); *see also* NUREG-BR-0215 Rev. 2 at 5-6 (identifying decommissioning as one of the processes in which NRC assumes there will be public participation). Included among the factors in determining decommissioning process are whether proposed plan will: (1) foreclose release of site for possible unrestricted use; (2) result in significant environmental impacts not previously reviewed; or (3) result in loss of reasonable assurance that adequate funds will exist for decommissioning. 10 C.F.R. § 50.82(6). Preventing a property value increase that might approach $1 billion is certainly a major environmental impact that would strongly tip the scale in favor of decommissioning within the minimum time allowed rather than on the leisurely schedule that Entergy contemplates.[6]

But even if Entergy is correct, and the site is not available for redevelopment until 2073, NEPA still requires Entergy to analyze the impact of non-renewal on land use and property values around the facility. July 31 Board Order at 82. Entergy cites no authority for the proposition that a long decommissioning period somehow alleviates it of the responsibility of analyzing the impacts of relicensing on land use and property values.

Nor has Entergy countered the factual findings of Dr. Sheppard, who has concluded that "the burden caused by the additional delay in restoration due to the period of extended plant operation plus the longer period required for site reclamation is reasonably estimated as between $300 and $340 million." Supplemental Sheppard Report (Feb. 26, 2009) at 1. Dr. Sheppard's

[6] This seems particularly likely given that Entergy's principal reason for delaying decommissioning is the company's desire to avoid having to fully fund its decommissioning fund, which is almost $40 million short. By keeping the facility in SAFSTOR for 50 years, Entergy hopes to cover the shortfall with accumulating interest on the principal. *See* Dec. 28, 2009 letter from John Boska to Entergy (copy attached as Exh. 1). Increasing the value of real estate in the vicinity of Indian Point by almost $1 billion would substantially outweigh the relatively small benefit to Entergy of avoiding its $40 million decommissioning funding obligation.

preliminary estimate is cumulative and must be added to the $576 million diminution in current property values that he estimated in his initial report, which was also unchallenged by Entergy. *See* Sheppard Report at 4-7; Supplemental Sheppard Report at 1. The undisputed expert evidence before the Board is that the facility will have an impact on property values of nearly $1,000,000,000 by the time decommissioning is complete, if Entergy correctly predicts that process's likely length.[7]

## III

## THE DSEIS DOES NOT MOOT CONTENTION 17/17A

Entergy also argues that Contention 17/17A is moot because the DSEIS contains a section discussing socioeconomics. Motion for Summ. Disp. at 17-19. Entergy's claim exaggerates what actually is contained in the DSEIS. The DSEIS, without any quantification, makes, at best a passing reference to the now admitted fact that denial of relicensing would produce an increase in property values. DSEIS at 8-29 – 8-30. Contention 17/17A does not merely seek some recognition of this fact but rather, as NEPA requires, a full exploration of the magnitude of the increase in property value and a comparison of the benefits of the no action alternative to the alleged benefits, some of which include claims about property value and increased taxes from such property value, of the proposed license renewal.

Where a contention alleges the omission of particular information or an issue from an application, it is mooted only when the information is later supplied by the applicant or considered by the NRC Staff in an environmental impact statement. *See Matter of USEC*, 63

[7] New York has already responded to Entergy's complaints, reiterated here, that Contention 17A raises issues that are outside the scope of the proceeding. *See* Entergy Answer Opposing New and Am. Contentions (March 24, 2009) at 22-26; *see also* State of New York Combined Reply to Entergy Nuclear Operations, Inc. and NRC Staff in Support of Contentions 12-A, 16-A, 17-A, 33, and 34 (Mar. 31, 2009) (New York Reply). Moreover, the viability of 10 C.F.R. § 51.23 is now pending before the Commission.

N.R.C. 433. Because the DSEIS does not supply the information that was lacking from the ER, the DSEIS does not moot these contentions.[8]

It is Entergy's position that the following statement in the DSEIS – the only mention in the entire document of the possible benefit to surrounding communities with regard to property values of a shut down Indian Point – renders the State's Contention moot:

> The shutdown of IP2 and IP3 may result in increased property values of the homes in the 42 communities surrounding the site (Levitan and Associates, Inc. 2005). This would result in some increases in tax revenues.

DSEIS at 8-29 – 8-30. The DSEIS offers none of the detail offered by the State's expert, and in fact NRC Staff admit in the DSEIS that the report on which Staff relies in making this statement "did not indicate the magnitude of this effect and whether the net effect would be positive or negative." DSEIS at 8-30 (referencing Levitan & Associates, Inc. 2005). Indeed, NRC Staff offers no idea of what "some increases in tax revenues" may mean; in this high-value county, "some increases in tax revenues" could be substantial. In contrast, the State's expert calculated, using Census data, the value of owner-occupied and rental-occupied properties within Census Block Groups whose center is within 2 miles of the Indian Point facility, the current market value of which, within 2 miles of the Indian Point plant, he determined to be approximately $4,327,380,959 (over $4.3 billion). *See* Declaration and Report of Stephen Sheppard (Nov. 29, 2007) at 4-5. Dr. Sheppard also considered empirical evidence showing more pronounced impacts within 11,500 feet of a power plant, appropriately adjusted his analysis, and concluded that that removal of the impacts of the Indian Point Nuclear plant would increase property values in that area by $576,026,601 (over $500 million). *Id.* at 6. Entergy's ER contained no such

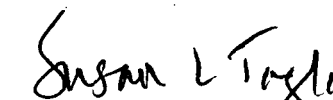
[8] Further, Entergy attempts to have its cake and eat it, too. It cannot argue on the one hand that Contention 17/17A is not cognizable under NEPA and also that the DSEIS has, apparently gratuitously, mooted it. *See* Motion for Summ. Disp. at 17-19 (arguing that DSEIS's treatment of property values moots Contention 17/17A); *id.* n.85 ("[a]lthough not material to resolution of NYS-17/17-A, the Draft SEIS also discusses offsite land use trends").

examination (*i.e.*, "hard look") and Staff's DSEIS provided none either. As Dr. Sheppard has detailed, the tools with which Entergy and Staff could perform this analysis exist and are readily available using publicly available information, empirical studies, economic principles, and other available resources. *See generally* Report and Declaration of Stephen Sheppard (Nov. 29, 2007); Report and Declaration of Stephen Sheppard (Mar. 15, 2010). Without this information, the DSEIS contains the same flaws as Entergy's ER, remains inadequate, and does not moot the State's contentions.

## CONCLUSION

Because the issues addressed in Points I and II either have already been raised or should previously have been raised, they are not a proper basis for summary disposition. For this reason, and the others set forth, the Board should deny Entergy's motion for summary disposition.

Respectfully submitted,



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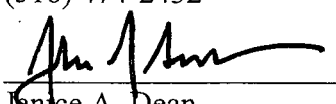

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Dated: March 18, 2010

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 28, 2009

Vice President, Operations
Entergy Nuclear Operations, Inc.
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
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SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NO. 2 - DECOMMISSIONING FUNDING STATUS REPORT (TAC NO. ME0528)

Dear Sir or Madam:

By letter dated March 30, 2009, Agencywide Documents Access and Management System (ADAMS) Accession No. ML090920576, Entergy Nuclear Operations, Inc. (Entergy), submitted the Biennial Decommissioning Funding Report required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.75, "Reporting and recordkeeping for decommissioning planning" for the nuclear power plants operated by Entergy. Based on the Nuclear Regulatory Commission (NRC) staff's analysis of the report, the NRC staff estimated a projected shortfall in decommissioning funding assurance of $38.6 million for Indian Point Nuclear Generating Unit No. 2 (IP2). See ADAMS Accession No. ML091940387 for details on that calculation. By letter dated June 18, 2009, ADAMS Accession No. ML091630533, the NRC informed Entergy that there may be a shortfall in the decommissioning trust fund (DTF) for IP2 and asked Entergy to provide more information on the DTF. On June 29, 2009, NRC staff held a conference call with Entergy to discuss the DTF. See ADAMS Accession No. ML091890807 for a summary of the call. On July 22, 2009, NRC staff held a second conference call with Entergy. See ADAMS Accession No. ML092100643 for a summary of that call.

By letter dated August 13, 2009, ADAMS Accession No. ML092260736, Entergy provided additional information on the decommissioning funding. The NRC staff has reviewed the submittal, which outlines Entergy's plan of action to cover shortfalls in providing decommissioning funding assurance and/or decommissioning funding realized in the report for IP2 that was submitted on March 30, 2009.

Based on the information provided by Entergy on August 13, 2009, the NRC staff finds that IP2, as of July 31, 2009, has a DTF balance of $326.9 million. Entergy proposes the use of safe storage (SAFSTOR) from IP2's license termination in 2013 through 2063, with 10 additional years through to 2073 dedicated towards decommissioning activities. This allows the DTF to increase during the SAFSTOR years. The NRC staff has reviewed the licensee's plan and determined that the licensee, as of August 13, 2009, provides reasonable assurance of adequate decommissioning funding at the time of permanent termination of operations with the proposed use of SAFSTOR. Accordingly, the NRC staff concludes that no further action is required at this time to demonstrate adequate decommissioning funding assurance, according to NRC standards, for IP2.

Please contact me at (301) 415-2901 if you have any questions on this issue.

Sincerely,

John P. Boska, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-247

cc w/encl: Distribution via Listserv

Please contact me at (301) 415-2901 if you have any questions on this issue.

Sincerely,
/RA/

John P. Boska, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-247

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

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|---|---|
| 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,<br>Entergy Nuclear Indian Point 3, LLC, and<br>Entergy Nuclear Operations, Inc. | DPR-26, DPR-64<br><br>March 18, 2010 |

# THE STATE OF NEW YORK'S COUNTER-STATEMENT OF MATERIAL FACTS

The State of New York respectfully submits the following counter-statement of material facts in response to Entergy's February 26, 2010 Statement of Material Facts. The State of New York (State) responds as follows:

## GENERAL OBJECTIONS

1. A large portion of what Entergy has submitted as statements of material fact consist of either quotes or summaries of the contents of documents, statements of law, or legal argument. The referenced documents, laws and arguments are the best evidence of their content and speak for themselves. The State has below disputed only facts; it has largely reserved its counterarguments, including interpretations of documents, for its accompanying memorandum of law. The State disputes any statement of fact that it has not specifically addressed below.

## SPECIFIC RESPONSES AND COUNTERSTATEMENTS

1. *Entergy submitted an Environmental Report ("ER") with its initial License Renewal Application ("LRA") on April 23, 2007. Letter from Fred Dacimo, Entergy, to NRC Document Control Desk (Apr. 23, 2007), available at ADAMS Accession No. ML071210512; LRA App. E, available at ADAMS Accession No. ML071210530 (Applicant's Environmental Report, Operating License Renewal Stage, Indian Point Energy Center).* Undisputed.

2. *On November 30, 2007, New York State ("NYS") filed NYS-17 as part of its petition to intervene, contending that the ER improperly ignores the supposed positive impact on land-use and land values flowing from the denial of the LRA.* Undisputed except that the State affirmatively notes that Entergy has offered no evidence to counter the evidence submitted by the State thus the word "supposed" is inappropriate. *NYS alleged that, in case the LRA is denied, properties adjacent to the Indian Point Energy Center ("IPEC") site would experience economic recovery upon the availability of the IPEC site for unrestricted use by 2025.* Undisputed. *New York State Notice of Intention to Participate and Petition to Intervene at 167-169 (Nov. 30, 2007) ("NYS Petition").*

3. *In its Memorandum and Order of July 31, 2008, the Atomic Safety and Licensing Board ("Board") admitted NYS-17 as a contention of omission. Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating, Units 2 & 3), LBP-08-13, 68 NRC 43, 115-16 (2008).* Undisputed.

4. *In December 2008, the NRC Staff issued NUREG-1437, Supplement 38, Draft Supplemental Environmental Impact Statement for License Renewal of Nuclear Plants*

*Regarding Indian Point Nuclear Generating Unit Nos. 2 and 3 (Dec. 2008) ("Draft SEIS").* Undisputed.

5. *Within the context of the no-action alternative, the Draft SEIS discusses potential impacts on nearby property values that might result from non-renewal of the Indian Point Unit 2 and Unit 3 ("IP2" and "IP3") operating licenses. Draft SEIS at 8-29 to 8-30.* Disputed. The Draft SEIS does not "discuss" potential impacts. In its entirety, it says "The shutdown of IP2 and IP3 may result in increased property values of the homes in the 42 communities surrounding the site (Levitan and Associates, Inc. 2005). This would result in some increases in tax revenues." These two sentences neither satisfy NEPA nor meet the objection that forms the basis of Contention 17/17A, which is that NEPA requires a thorough evaluation of the extent to which denial of relicensing will positively impact land values in the vicinity of the facility.

6. *The NRC Staff discussion of impacts to property values relies on a study conducted by Levitan and Associates that evaluates various economic issues associated with retiring IPEC. Draft SEIS at 8-29 to 8-30 (citing Levitan & Assocs., Inc., Indian Point Retirement Options, Replacement Generation, Decommissioning/Spent Fuel Issues, and Local Economic/Rate Impacts (June 9, 2005)).* Disputed. *See* ¶ 5.

7. *The Draft SEIS states that shutdown of "IP2 and IP3 may result in increased property values of the homes in the communities surrounding the site." Draft SEIS at 8-29 to 8-30.* The DSEIS speaks for itself.

8. *The Draft SEIS states that an increase in property values would cause some increase in tax revenues, but it notes that increased tax revenues might not be sufficient to offset the loss of tax revenues resulting from the shutdown of IP2 and IP3. Draft SEIS*

*at 8-29 to 8-30. Disputed. The DSEIS predicts that taxing jurisdictions would have to increase property taxes to compensate for the shut-down. The Draft SEIS further states that that [sic] "[t]he combined increase in property values and increased taxes could have a noticeable effect on some area homeowners and business." Draft SEIS at 8-30.* Undisputed. But the State of New York affirmatively states that the sufficiency of the "discussion" in the DSEIS is inadequate pursuant to NEPA.

9. *On February 27, 2009, NYS filed contention NYS-17-A, contending that the Draft SEIS improperly ignores the supposed positive impacts on land-use and land values flowing from the denial of the LRA. Undisputed. NYS repeated its assertion that properties adjacent to the IPEC site would experience economic recovery upon the availability of the IPEC site for unrestricted use by 2025 in case the LRA is denied. State of New York Contentions Concerning NRC Staff's Draft Supplemental Environmental Impact Statement at 14-15 (Feb. 27, 2009) ("NYS Draft SEIS Contentions").* Undisputed.

10. *In its Memorandum and Order dated June 16, 2009, the Board admitted NYS-17-A to update NYS-17 "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." Board Order (Ruling on New York State's New and Amended Contentions) at 8 (June 16, 2009).* The Board's July 31 Order speaks for itself.

11. *NYS bases NYS-17/17-A on its assertion that, under the no-action alternative (i.e., assuming the IP2 and the IP3 licenses were not renewed), the plants would be decommissioned in six years, and all nuclear waste would be removed and the site would*

*be available for unrestricted use by 2025. NYS Draft SEIS Contentions at 15.* Undisputed.

12. *As support for NYS-17/17-A, NYS references two reports by Dr. Stephen C. Sheppard (Potential Impacts of Indian Point Relicensing on Property Values ("Sheppard Report") and Potential Impacts of Indian Point Relicensing with Delayed Site Reclamation ("Supplemental Sheppard Report") in which he concludes that properties adjacent to the IPEC site would experience economic recovery under the no-action alternative and denial of the LRA. NYS Draft SEIS Contentions at 18-20.* Undisputed.

13. *Dr. Sheppard assumes that the denial of the LRA will result in decommissioning the site, removing all spent fuel, and then putting the remediated site to its "highest and best alternative use," which would involve "a combination of attractive riverfront development that would be likely to include employment and other attractive locations." Sheppard Report at 3.* Disputed: Dr. Sheppard's report speaks for itself. See Memorandum of Law at 11. Affirmatively state that Dr. Sheppard made no finding as to the highest and best use and that his conclusions do not depend on any such finding.

14. *In addition, Dr. Sheppard assumes that the denial of the LRA "involves operating the power plant at present levels until 2015, and then commencing a process of site reclamation so that by 2025 the site can be developed to its most efficient use." Supplemental Sheppard Report at 2.* Undisputed.

15. *As further support for NYS-17/17-A, NYS and Dr. Sheppard rely on a journal article entitled An Interregional Hedonic Analysis of Noxious Facility Impacts on Local Wages and Property Values, which attributes potential property value impacts near nuclear power plants to the "risk" of an accident and "public aversion" to nuclear*

*plants. David Clark and Leslie Nieves, 27 J. of Env'l Econ. & Mgmt. 235, 236 n.4 & 250 (1994), excerpt attached hereto as Exhibit 1.* Disputed: The article speaks for itself. New York State affirmatively objects to Entergy appending only a portion of the article to its motion.

16. *Dr. Sheppard also relies on a journal article entitled Externalities of Nuclear Power Plants: Further Evidence, which concludes that the author's "data support the proposition that a public perception of nuclear risk causes a change in land prices." Sherman Folland and Robin Hough, 40 J. of Reg'l Sci. 735, 749 (2000), excerpt attached hereto as Exhibit 2.* Disputed: The article speaks for itself. New York State affirmatively objects to Entergy appending only a portion of the article to its motion.

17. *Council on Environmental Quality ("CEQ") regulations state that an environmental impact statement must discuss economic or social impacts if they are interrelated with physical environmental effects. 40 C.F.R. § 1508.14.* New York State disputes that the meaning or applicability of the regulations can be an undisputed fact. *See also* 64 Fed. Reg. 48502 (Sept. 3, 1999) ("Effects that are not directly related to the physical environment must have a reasonably close causal relationship to a change in the physical environment").

18. *The Generic Environmental Impact Statement ("GEIS") contains the NRC's generic findings regarding the environmental impacts of onsite spent fuel storage. The GEIS covers both radiological and non-radiological impacts (including land use and socioeconomic impacts) from spent fuel storage and rejects the need for further consideration of mitigation alternatives at the license renewal stage. NUREG-1437,*

*Generic Environmental Impact Statement for License Renewal of Nuclear Plants at 6-84 to -86 (May 1996).* Disputed. The GEIS speaks for itself.

19. *The GEIS finding regarding the environmental impacts of onsite spent fuel storage is codified in NRC regulations and provides that the "expected increase in the volume of spent fuel from an additional 20 years of operation can be safely accommodated on site with small environmental effects through dry or pool storage at all plants." 10 C.F.R. pt. 51, subpt. A, app. B, tbl. B-1.* Disputed. The GEIS speaks for itself.

20. *The Draft SEIS states that "[f]ull dismantling of structures and decontamination of the site may not occur for up to 60 years after plant shutdown." Draft SEIS at 8-25.* Disputed. The DSEIS speaks for itself.

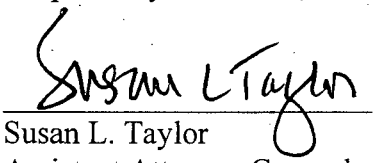
21. *NRC regulations require that decommissioning be completed within 60 years of permanent cessation of operations. 10 C.F.R. § 50.82(a)(3).* Undisputed but New York states affirmatively that NRC regulations (a) do not require that decommissioning take 60 years, (b) recognize that before any decommissioning is allowed it must meet certain criteria, including an evaluation of the environmental impacts of the proposed plan, and alternatives to it, and (c) do not preclude other regulators from shortening the decommissioning period for reasons related to economic considerations, among others.

22. *Entergy adopted a 60-year decommissioning timeframe for its site-specific program for managing spent fuel following permanent cessation of operations and its preliminary decommissioning cost estimate. J. E. Pollock, Entergy, to NRC Document Control Desk attach. 1, Table 7 (Oct. 23, 2008) (Unit No. 1 and 2, 10 CFR 50.54(bb) Program for Maintenance of Irradiated Fuel), available at ADAMS Accession No.*

*ML083040378; id. encl. 2, fig. 1, at 26 (Preliminary Decommissioning Cost Analysis for the Indian Point Energy Center, Unit 2).* Disputed to the extent that Entergy means to imply that "adoption" constitutes "approval" of its plans. *See* Statement in ¶ 21, supra.

23. *NYS states that "it is no longer realistic to assume that any wastes previously generated or to be generated at the Indian Point facility will be removed from the site within 30 years after the operation of the reactors." Answer of the State of New York to Hudson River Sloop Clearwater, Inc.'s Petition Presenting Supplemental Contentions EC-7 and SC-1 Concerning Storage of High-Level Radioactive Waste at Indian Point at 11 (Nov. 19,2009).* Undisputed.

Respectfully submitted,



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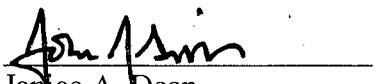

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Dated: March 18, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

| | |
|---|---|
| In re: | |
| License Renewal Application Submitted by | Docket Nos. 50-247-LR and 50-86-LR |
| | 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 |

# SUPPLEMENTAL DECLARATION OF STEPHEN C. SHEPPARD

Stephen C. Sheppard, hereby declares under penalty of perjury that the following is true and correct:

1. I have been retained by the New York State Office of the Attorney General to provide expert services in connection with the application by Entergy Nuclear Operations, Inc. and its affiliates (collectively Entergy) for a renewal of the two separate operating licenses for the nuclear power generating facilities located at Indian Point.

2. I am a Professor of Economics at Williams College where I teach in the Economics Department. In addition to teaching, I also conduct research on issues that include environmental and natural resources economics, public finance, and

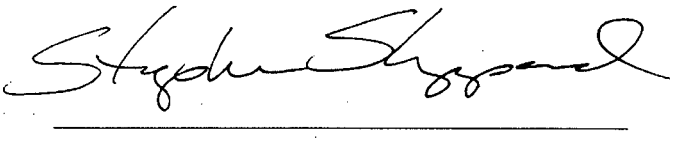
land use economics. In 2006 I was a Fellow at the Weimer School of Advanced Studies in Real Estate and Land Economics. Before that, I was the Herman H. Lehman Fellow at the Oakley Center for the Humanities and Social Sciences at Williams. In 2004 I shared with a colleague the Royal Economic Society Prize. My CV, which is attached and was also included with my original declaration submitted in this proceeding, includes a list of my published papers and other work.

3. I received a B.S. from the University of Utah in 1977, and received from Washington University (St. Louis) an A.M. in 1979 and a Ph.D. in 1984.

4. Attached to this Declaration is a Supplemental Report I have prepared. This document was prepared by me and is true and correct to the best of my personal knowledge.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Dated: March 15, 2010
Williamstown, Massachusetts



# Determinants of Property Values

**Overview**

Professional property appraisers and economists sometimes use differing terms of art to refer to similar concepts, and this can lead to confusion or misinterpretation by others in reading and understanding their opinions. In this document I will survey the scientifically accepted perspectives on the determinants of the value of real property, and discuss how these values can be estimated to a reasonable degree of scientific certainty.

The economic approach to determining the value of a property or object rests on three distinct perspectives or sources of information. These are the *value in exchange* of the property, the *cost of production* of the property, and the *value in use* of the property. Each of these ideas can be employed in understanding the value of a property, and each has a substantial pedigree in the history of economic ideas.

From both a practical and scientific view, the most appropriate concept of the economic value of an object or piece of property is the *fair market value* or the amount that a willing buyer would give to a willing seller in exchange for the object or piece of property. In order to be considered fair market value, this exchange should be an "arms-length" transaction (meaning that the welfare and interests of the buyer are distinct from those of the seller so that the economic well-being of the seller is not a significant factor influencing the price the buyer is willing to pay, and the price the seller is willing to accept is also independent of the economic welfare of the buyer). The exchange should also have taken place after a "proper period" of marketing to ensure that the seller has located the buyer with the highest willingness-to-pay, and that they buyer and seller have acted "knowledgeably, prudently, and without compulsion." This concept of fair market value was and in some circumstances still is known to economists as *value in exchange*.

In addition to this source or representation of the value of an object or property, economists also recognize the cost of production as a source of information about property value. Economists often refer to the *marginal cost of production,* denoting the cost of producing an additional unit of the good or property. Any buyer who is contemplating the amount he or she would be willing to offer in exchange for a property, and for any seller who is making a decision about the amount that must be paid in order for them to willingly part with the property, the cost of reproducing or replacing the property is a material consideration. The cost of acquiring vacant land that is similarly situated to the property under consideration, and constructing an identical building on the property would provide a reasonable upper bound on the amount a buyer is willing to pay for an existing property. It also provides a reasonable starting point for negotiating from the seller's perspective, although many circumstances may arise in which a property owner has difficulty obtaining the full replacement costs of a property even if fair market value is obtained. Further difficulties in using the production cost may arise in connection with finding a vacant or usable

parcel of land that is similarly situated. These land costs cannot be ignored because typically such costs account for at least 5 to 10 percent of the costs of a property, and in many circumstances this cost share can rise to 40 percent or even more.

There is a third source of information about the value of an object or property that relates to the value of the stream of benefits that the owner or possessor receives from the property. This relate to what economists call the *value in use* of an object or property, and this source of information can be of particular importance with land, real estate and other durable property. Again, the logic for considering this source of information arises from determination of the general principles that might determine the amount that a prospective buyer would be willing to pay for a property. If the owner of a property can rent it for a particular amount each year and thus receive a stream of income, then a reasonable buyer will realize that a choice exists between depositing funds in a bank (or making some suitable investment) and thus receiving a stream of interest payments as income, or giving the funds in exchange for the property and receiving the stream of rental payments. It seems reasonable for the buyer to determine the amount of funds that would need to be deposited at the bank to generate a stream of interest payments that is identical to the stream of rental payments that might be obtained through property ownership, and to regard this amount as a reasonable ceiling on the amount that should be paid for the property. Economists refer to this amount as the *present value* of the stream of benefits obtained from the property. Economists generally regard this source of information as useful even if the property is not actively rented to a third party, but is used directly by the owner. This use by the owner generates a stream of benefits over time whose monetary value could be calculated. For example, an owner of a home who occupies that home is realizing a benefit in the form of a residence for which they do NOT have to pay rent to a landlord. These values (which economists refer to as *imputed rents*) are the major source of benefits to the home owner.

As with the accurate determination of marginal costs of production of the property, there are some natural difficulties that arise in calculating the present value of the stream of benefits. What interest rate do we think the prospective buyer imagines will be paid by the bank? How durable will the property be (which will determine the time period over which the benefits are received). If we are considering a property like real estate that must be used at a fixed location, then the prospective buyer must envision the various possible conditions that might characterize the neighborhood in the future in order to have a well-informed value of the range of benefits that could be obtained through ownership of the property. This will necessarily involve some uncertainty on the part of the prospective buyer, and it underscores something economists have understood for literally hundreds of years: uncertainty about future events is a natural part of the process of determining the value of a durable property. This is to be distinguished from abstract factors that might in some circumstances affect property values such as a general climate of "fear" surrounding a property or a vague and difficult-to-measure psychological value of risk. Rather, the economic perspective is to consider the variability in future returns that is linked to real, measurable outcomes that will or will not occur in the future. The range in possible benefits that will be realized in the future is a natural and reasonable factor to consider in determining the

value of a property. It must be considered when determining the present value of the benefits received from a property and can be expected to influence the fair market value of a property.

**Real Property**

In valuing real estate, each of the economic ideas discussed above has a counterpart in an accepted methodology applied by professional property appraisers in the United States and elsewhere. For example, property appraisers in the US and the textbooks from which they learn their craft frequently identify three approaches to appraisal. The first is the *comparative market value approach*, also called the *sales comparison approach*, in which a number of "comparable" properties that have sold under contemporary market conditions in arm's length transactions are identified. Adjustments are made to the observed sales prices to account for differences between the properties whose prices are observed and the subject property, and the results are either averaged over the small number of properties to produce an estimated value or the group of properties is used to provide a range of possible values for the subject property. Since the approach is based on observed market transactions of similar properties, this comes close to an estimate of fair market value and is clearly motivated by the concept of *value in exchange*.

A second approach to property appraisal is often referred to as the *cost approach*, and is recommended in circumstances when values are required for unique properties for which no comparable sales exist. This approach requires use of engineering data and construction cost estimates to determine the replacement cost of any building on the property. To these values are added values for the land itself (which might be difficult to obtain with accuracy because of factors discussed above). Adjustments may be made to land costs and occasionally to building cost estimates to reflect local market conditions or other special circumstances. The result is an estimate of the cost of the property and this is put forward as its appraised market value. This approach is clearly motivated by considerations of the costs of production that would be familiar to any economist.

Finally, property appraisers sometimes employ the *income approach* when seeking to estimate the value of a property. They collect data on leases and rental rates, occupancy rates and local market conditions. Using an interest rate or rate of return selected to reflect the uncertainty in market outcomes and associate risks of property ownership, they calculate the present value of the income that could be generated from the property. This approach is based on the economic idea of value in use, modified (as it should be) by considerations of uncertainty regarding future property markets, neighborhood conditions and potential nuisances or amenities that may affect the property in times to come.

**Estimating Values under Counterfactual Conditions**

In considerations that arise under civil law, and arise frequently in policy making deliberations that must weigh costs and benefits, it is sometimes necessary to evaluate property values under

*counterfactual conditions*. For example, decision makers may want to know what the value of a property **would** be if a bridge (that does not now exist) is built or if a building (that does exist now and has existed for some time) is removed, or even both of these things happening at the same time. These are sensible questions to ask. Changes in property values are part of the panoply of costs and benefits that reasonable and representative decision makers would want to evaluate before moving forward with bridge building, demolition or other significant changes to the community or the environment.

Estimating the value of real estate property under counter-factual conditions is possible to do to a reasonable degree of scientific certainty, but it poses a special challenge for many of the methods traditionally employed by property appraisers. These methods require obtaining samples of comparable properties being sold under comparable market conditions. If the appraiser is asked to evaluate properties under counter-factual conditions, then it may be impossible to find comparison sales even if modest adjustments are to be permitted.

While the appraiser in such circumstances might apply one of the other methods, these also run into difficulties. The cost approach provides an upper bound on value, but as mentioned above the contribution of land values must also be considered as a component of costs, and land values are heavily influenced by nuisances and environmental factors.

Similarly, application of the income approach is difficult because the counter factual case may present a different combination of nuisances and amenities in the community. This will affect both the value of the income stream and the variability of income. A property in an industrial community, for example, is affected by nuisance of heavy transportation, noise, and there is uncertainty in the income stream because of the potential for future accidental release of toxic elements into the environment. These cannot simply be valued by looking at a set of comparable properties.

**Conclusion**

In summary the standard approaches of property appraisers are motivated by the central ideas of economics concerning the determinants of the value of property. These central ideas tell us that nuisances and amenities are important considerations in determining property values because affect the income that can be earned from the property and affect what a willing buyer would give a willing seller in an arm's length transaction. Finally, these ideas tell us that the range of possible nuisances that might occur in the future in the neighborhood of the property is a factor that must be considered. If a neighborhood contains activities that increase the range of possible use values, then that increases the uncertainty in the flow of benefits and diminishes the value of the property.

**UNITED STATES OF AMERICA**
**NUCLEAR REGULATORY COMMISSION**

**ATOMIC SAFETY AND LICENSING BOARD**

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| In re: | Docket Nos. 50-247-LR and 50-286-LR |
| License Renewal Application Submitted by | ASLBP No. 07-858-03-LR-BD01 |
| Entergy Nuclear Indian Point 2, LLC,<br>Entergy Nuclear Indian Point 3, LLC, and<br>Entergy Nuclear Operations, Inc. | DPR-26, DPR-64<br><br>March 18, 2010 |

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CERTIFICATE OF SERVICE

I hereby certify that on March 18, 2010, copies of the State of New York's Response to Entergy's Motion for Summary Disposition on New York Contentions 17 and 17A, Counter-Statement of Material Facts, and third Supplemental Declaration of Stephen C. Sheppard were served upon the following persons via U.S. Mail and e-mail at the following addresses:

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Dated at Albany, New York
this 18th day of March 2010