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Alternatives to the Use of Credit Ratings; Advance Notice of Proposed Rulemaking; Request for Comment

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General Comment

See attached file for comments and supporting attachments regarding Docket No. NRC-2017-0021, from the Environmental Protection Bureau of the New York State Office of the Attorney General.

Attachments

2021 03 04 NYAG Comments to NRC ANPR Credit Rating



STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

LETITIA JAMES
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

March 4, 2021

Email and U.S. Mail

Honorable Annette L. Vietti-Cook
Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Rulemakings and Adjudications

Re: State of New York Comments on Advance Notice of Proposed Rulemaking
for Decommissioning Credit Rating Compliance, 85 Fed. Reg. 82950
(December 21, 2020): Docket ID NRC-2017-0021.

Dear Secretary Vietti-Cook:

The Office of the New York Attorney General submits the following comments in response to the NRC's December 21, 2020 Advance Notice of Proposed Rulemaking (ANPR) as it relates to existing nuclear decommissioning trusts. We appreciate the opportunity to comment on this important issue. As discussed in more detail below, we support a number of the NRC's approaches here, and offer some additional information to support further decision-making.

Our involvement in the NRC's license transfer proceeding and related regulatory exemptions to facilitate the decommissioning of the Indian Point Energy Center in Buchanan, New York (Indian Point) informs our comments. See Docket Nos. 50-3, 50-247, 50-286, 72-051. As discussed in these comments, NRC should revisit its decommissioning docket and more comprehensively assess its dated decommissioning regulations in light of current industry trends in decommissioning and financing, particularly those that compound financial risk and place successful radiological decommissioning of nuclear power facilities in jeopardy. Moreover, in addition to Indian Point, New York has three Exelon nuclear power facilities that will be subject to radiological decommissioning in the future, so we have a compelling interest in effective and protective financial regulation by the NRC going forward.

Because states are responsible for oversight, but often lack the regulatory authority of federal law, without independent, third-party financial covenants (e.g. a

long-term investment grade credit assessment by a nationally recognized statistical rating organization or NRSRO), states are left with no ability to assure the financial viability of a privately held company. In our view, the NRC's ANPR too broadly interprets Section 939 of the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act or Dodd-Frank), which is specifically focused on issue credit ratings of specific financial obligations, e.g., long- and short-term bonds. Issue credit ratings are different than **issuer** credit ratings or corporate family ratings. The statute does not preclude or even address the use of issuer or corporate family credit ratings, either of which provide a forward-looking assessment of a company's overall financial health and credit worthiness. In our view, these are tools which the NRC should incorporate in its regulatory actions.¹

Background

As explained in the Federal Register notice, section 939A of the Dodd-Frank Act requires agencies to review their regulations for reliance on credit ratings, as such ratings rely on an assessment of a specific security or money-market instrument – as it pertains to a specific financial obligation. The NRC identified as relevant 10 C.F.R. part 30, appendices A, C, and E that provide financial assurance methods for licensees and applicants to demonstrate that a self-guarantee or parent company guarantee provides reasonable assurance of adequate funding for decommissioning. Under those existing provisions, the NRC and licensees may use specified bond ratings from Moody's or Standard and Poor's credit rating agencies. In the alternative, the NRC allows a working capital liability-based test. See 10 C.F.R. part 30, apps. A, D, E; *id.* §§ 30.35(f)(2), 40.36(e)(2); *id.* part 40, app. A, criterion 9; *id.* §§ 50.75(e)(1)(iii)(c), 70.25(f)(2), 72.30(e)(2). To comply with Dodd-Frank, the NRC now seeks to remove any reliance on credit ratings from its rules and instead establish financial criteria for its corporate self-guarantee mechanisms. In our view, the NRC would be better served by removing reference to specified bond ratings, and substituting a reliance on long-term issuer credit or corporate family ratings.

The State of New York has specific experience regarding issues of financial assurance for nuclear power plant decommissioning. In February 2020, the State filed a petition seeking party status and leave to intervene in the then-pending license transfer matter regarding Indian Point, including a sale of the facility and assets from Entergy to subsidiaries of Holtec International, a privately held corporation. ML20043E118. Although not included as a component of the November 2019 joint license transfer application, the cornerstone of Holtec's decommissioning plan was an exemption from 10 C.F.R. §§ 50.75(h)(1)(v) and 50.82 (a)(8)(i)(A) that would

¹ We point the NRC to the ratings definitions published by Standard and Poor's and Moody's Investor Services, as examples of the types and breadth of independent ratings available from NRSROs. See: https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352 and <https://www.moodyanalytics.com/-/media/products/Moodys-Rating-Symbols-and-Definitions.pdf>

allow Holtec to use the decommissioning trusts for otherwise prohibited non-decommissioning purposes (specifically, spent fuel management and site restoration). It was only after the State submitted its February 12, 2020 petition seeking party status and leave to intervene in the license transfer proceeding that Holtec filed a request for these exemptions. ML20043C539. We objected to that request. As explained in the State's intervention petition (including appended affidavits and exhibits) and its exemption comments, Holtec's request for exemptions—and in particular its request for permission to withdraw hundreds of millions of dollars from the Indian Point decommissioning trusts to foot the U.S. Department of Energy's bill for spent fuel storage—posed substantial financial risks for the project and State interests. NRC Staff ultimately approved the license transfer application and exemption on November 23, 2020, which was followed by the Commissioners' denial of the State's petition to intervene and for hearing on January 15, 2021. *See*, ML20297A325; ML20309A781; ML21015A201.

Comments

The December 21, 2020 Advance Notice posed four questions for public comment regarding potential directions for amendment of NRC regulations. Several of these financial assurance questions and related issues were addressed in the State's submissions to the NRC in the Indian Point license transfer proceeding, including in the expert affidavit of Chiara Trabucchi of Industrial Economics, Inc. in Cambridge, Massachusetts. Retained by the State for her deep experience in the economics and finances of environmental trusts, Ms. Trabucchi's expertise has been relied upon by government entities in regulatory and bankruptcy contexts, including among others the BP Gulf of Mexico oil spill, the Tronox and GM bankruptcies, and the Volkswagen diesel emissions fraud matter. Ms. Trabucchi's comprehensive financial assurance declaration is appended to, and incorporated by reference in, these comments.

Question 1:

Are there licensees that meet the current credit rating-based financial test for a guarantee that would not be able to meet the alternate working capital and liability-based financial tests currently presented in the 10 C.F.R. part 30 appendices? Would such licensees be able to meet the decommissioning funding assurance requirements using one or more other funding assurance methods allowed for by regulation (i.e., prepayment, surety bond, insurance, external sinking fund)?

Response 1:

The NRC's outdated decommissioning financial rules do not make sufficient provision for the economic reality of merchant plants that lack parental corporate support, particularly with respect to financial assurance. In the case of Indian Point, neither joint applicant offered third-party financial assurance, and a viable corporate guarantee by the privately-held purchaser Holtec would require other third-party verification of financial viability such as independently audited financial statements consistent with Generally Accepted Accounting Principles, attestation

and certification by the firm's Chief Financial Officer of financial covenants, as well as an investment-grade credit rating from an NRSRO. Instead, Holtec and the NRC relied exclusively on the decommissioning trusts as meeting the financial requirements for decommissioning, based on Holtec's decommissioning cost estimates, which the State believed were markedly underestimated. Moreover, because merchant plants lack a utility revenue stream, in the event of a funding shortfall, the NRC's only financing option to ensure completion of decommissioning would be to seek additional funds from the limited liability entities created by Holtec for the Indian Point decommissioning, as the parent would likely be insulated from such liabilities due to the tiered corporate hierarchy established as part of the facility transfer proceedings. Accordingly, in addition to the funding assurances in the existing regulations, the NRC should consider conditioning any license transfer and exemption approvals by requiring a licensee to designate a contingent source of funds, including a requirement that a decommissioning entity sequester federal payments or reimbursements in lieu of other revenue as dedicated financial assurance, especially to offset non-decommissioning costs charged to the ratepayer-funded NDTs. One example of potentially-available resources would be Department of Energy reimbursement of spent fuel management costs received in settlement of federal fuel management contract breaches. This approach would provide a safeguard against unexpected decommissioning cost exceedances. The NRC should not facilitate repurposing of decommissioning trust monies in exchange for unfettered windfalls of other taxpayer dollars, and should use available opportunities to provide for successful and complete decommissioning with designated contingent funds.

Question 2:

Modified or new financial metrics for assessing creditworthiness: Please provide your views on financial statement metrics or other quantifiable financial characteristics that could be reported by licensees to assess a licensee's creditworthiness and hence, its ability to use a parent company guarantee or self-guarantee mechanism for providing reasonable assurance that decommissioning funding will be available (see 10 C.F.R. § 50.75, "Reporting and recordkeeping for decommissioning planning"). Suggested metrics should differ from the current working capital and liability-based metrics currently presented in the 10 C.F.R. part 30 appendices cited in the Background to this notice and include pass or fail criteria limits.

Response 2:

Yes, timely and comprehensive financial reporting is a critical issue. The State's experience in the decommissioning context is that privately held companies are unwilling to share detailed information regarding their creditworthiness (i.e., solvency, liquidity, and profitability). Moreover, they lack the scrutiny to which the financials of publicly traded entities are subject, meaning that a self-guarantee based solely on the company's unaudited representations of its financials could be an empty gesture. Rather than relying solely on the decommissioning trust balances for this demonstration, as happened with the NRC review of the Indian Point

license transfer, the NRC must put in place requirements for licensee financial transparency and reliability, including requirements that licensees and all entities upon which licensees rely for guarantees submit regular (i.e., quarterly and annual) audited financial statements, along with the auditor's report on such financial statements. Attestation and certification by the Chief Financial Officer that the company meets established financial covenants, including without limitation no less than investment-grade long-term issuer and/or corporate family credit ratings by an NRSRO. Finally, the NRC should require that all licensees and entities upon which licensees rely for guarantees submit an itemized list of all guarantees and obligations for which the entity is providing financial assurance across all federal and state statutes and requirements, to evince that the entity has sufficient financial wherewithal to guarantee the full, broadly considered extent of its financial obligations.

By way of example, the State believes that the rapid decommissioning model offered by Holtec in several recent license transfer proceedings before the NRC—in addition to Indian Point—magnifies and compounds risk in two respects. First, aggressively private Holtec International failed to disclose reliable accounting information to evince the financial wherewithal necessary to safely and effectively conduct spent fuel management and site restoration absent its access to the \$2.1B held in the three nuclear decommissioning trusts. In fact, the trusts were the *only* funds for Holtec's decommissioning of Indian Point, to be held by unfunded limited liability shell corporations created just for the project. Second, the absence of independent, verifiable financial information increases the likelihood that Holtec and its related LLCs will be unable to secure additional (i.e., third-party) financial resources within the time frame and in the amounts necessary to comply with all statutory and regulatory obligations should the need arise through unanticipated costs or delays. As the State has argued, without reliable financial assurances in place, the State would be unable to fully protect the public's interests in the event Holtec faces financial distress and is forced to seek bankruptcy protection. Accordingly, we asked the NRC to mitigate risk by conditioning its approvals of the license transfer application and exemption request on Holtec's establishing third-party financial assurances satisfactory to the State. Our assessment, then and now, is that Holtec's plan, absent adequate financial assurance and disclosure, presents unacceptable levels of financial risk to the public interest, including that of the State.

Question 3:

Independent agency determination: Please provide your views on the NRC performing an independent, risk-informed, performance-based determination of a licensee's credit-worthiness. The NRC would seek to determine the licensee's risk of default based on its review of financial data while providing some degree of flexibility on the part of licensees as to the type of financial data submitted. This could include evaluation of financial data available from the licensee, open-sources, and from third parties, including credit ratings.

Response 3:

Rather than develop a new regulatory construct for determining credit-worthiness out of whole cloth, we suggest that the NRC investigate and adapt existing federal agency approaches to its specific needs to ensure financially sound licensees for decommissioning. The EPA and the Justice Department have considered Dodd-Frank issues in their financial assurance regulations, as have other agencies that require remedial actions that implicate and require financial vitality. Rather than embark on a singular effort to develop a new set of financial assurance regulations, the NRC should consult with these agencies and consider adopting similar approaches. More consistency throughout the federal regulatory landscape would benefit agencies and the regulated community alike. EPA regulations currently rely on a series of financial assurance metrics and criteria in myriad contexts, such as 40 C.F.R. § 264.143(f) (financial assurance for closure of hazardous waste treatment, storage, and disposal facilities), 40 C.F.R. § 264.145(f) (financial assurance for post-closure of hazardous waste treatment, storage, and disposal facilities), 40 C.F.R. § 264.147(f) (financial assurance for liability coverage for hazardous waste treatment, storage, and disposal facilities), 40 C.F.R. § 280.95 (financial assurance for underground storage tanks) and, more recently, 40 C.F.R. § 146.85(a)(6)(v) (financial assurance for Class VI underground injection wells). In addition, the Justice Department has integrated investment-grade long-term issuer and corporate family credit ratings as acceptable financial covenants for certain aspects of financial guarantees in its consent decrees, including for example, *United States v. Mosaic Fertilizer, LLC*, Civil Action No. 15-cv-02286 in the Middle District of Florida and Civil Action No. 15-cv-04889 in the Eastern District of Louisiana, both of which were lodged in October 2015.

Question 4:

Should the NRC consider other alternative financial test criteria not presented above to assess an applicant's or licensee's use of a guarantee to provide reasonable assurance of funds for decommissioning? If yes, please provide details of the alternative criteria and the financial data needed for its use.

Response 4:

Yes, the NRC should consider alternative financial test requirements for applicants and licensees. We refer you to Ms. Trabucchi's declaration attached hereto. Should you find it useful, we can schedule a conversation with Ms. Trabucchi to discuss her opinions as they relate to the NRC's current charge.

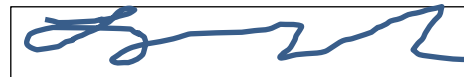
Again, the Indian Point example is useful. The transfer of licenses from Entergy to Holtec subsidiaries for decommissioning involves nested, closely-held limited liability entities. These Holtec subsidiaries will hold the licenses and conduct the decommissioning and have no funding source save for the NDTs, a substantial portion of which they plan to divert for non-decommissioning activities. The fact

that Holtec intends to simultaneously decommission six power reactors at four separate facilities, including Indian Point, underscores the need for the NRC to insist on a more robust showing that the Holtec subsidiaries are financially qualified within the meaning of 10 C.F.R. §§ 50.33 and 50.80, and that they will provide adequate decommissioning funding assurance as required under 10 C.F.R. §§ 50.33 and 50.75.

Conclusion

While Dodd-Frank compliance is important, the State believes that the NRC should consider changing its financial assurance regulations after a more thorough review of its decommissioning regulations, particularly those that relate to the financial viability of merchant and/or privately-held licensees. In our view, the NRC can meet the intent of Dodd-Frank without eliminating the use of NRSRO ratings altogether. To that end, we are willing to work with the NRC more closely on these issues, including offering the assistance of our financial expert. Given industry trends, we also suggest that the NRC take this opportunity to assess the function and purposes of ratepayer-derived decommissioning trust funds and put in place more protective regulations and guidance to ensure adequate resources for thorough and protective radiological decommissioning of former nuclear facilities.

Very truly yours,



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cc : (by email, with attachments)
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Office of Nuclear Material Safety and Safeguards
Division of Rulemaking, Environmental, and Financial Support
Washington, DC 20555-0001

Attachment 1

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE SECRETARY**

In the Matter of

ENTERGY NUCLEAR OPERATIONS, INC.;
ENTERGY NUCLEAR INDIAN
POINT 2, LLC; ENTERGY NUCLEAR
INDIAN POINT 3, LLC; HOLTEC
INTERNATIONAL; and HOLTEC
DECOMMISSIONING INTERNATIONAL,
LLC; APPLICATION FOR ORDER
CONSENTING TO TRANSFERS OF
CONTROL OF LICENSES AND
APPROVING CONFORMING LICENSE
AMENDMENTS

Docket Nos.:
50-3
50-247
50-286
72-051

(Indian Point Nuclear Generating Station)

DECLARATION OF CHIARA TRABUCCHI

I, Chiara Trabucchi, declare and state as follows:

1. I am a Principal with Industrial Economics, Incorporated (IEc), a 110-person financial economics and environmental policy consultancy located in Cambridge, Massachusetts. My expertise is in finance and economics, with specific focus on environmental risk management and the design of financial assurance frameworks tailored for the protection of the public trust. I submit this declaration in support of the State of New York's petition for leave to intervene and hearing request in the above-captioned matter.

2. I have been employed with IEc since 1995. I was elected to Principal in 2003. I served as Chief Financial Officer of the firm from 2010 to 2014, and as a

Director of the firm from 2005 to 2018. Prior to joining IEc, I was employed by the Cadmus Group, Inc. as an Associate. I received a Bachelor's degree in Government (Comparative Politics) and a Bachelor's degree in Foreign Languages (French) from Clark University (1991). I received a Master's in Business Administration with a focus in corporate finance from the Simmons School of Management (1999).

3. As a Principal with IEc, I provide consulting services and expert support in the assessment of corporate profitability, environmental financial assurance and long-term financial models. My clients include the U.S. Department of Justice, the U.S. Environmental Protection Agency, the U.S. Department of Energy, the U.S. Department of the Interior, and various U.S. states, non-governmental organizations, and private entities.

4. I have worked on analyses involving corporate entities of all types. During my tenure at IEc, I have analyzed the financial performance of approximately 1,000 corporate entities contributing to approximately \$10 billion in financial exposure associated with environmental obligations. I have provided expert support on aspects of financial management of public and private resources, including assessment of financial assurance trust models ranging in value from less than \$10 million to approximately \$5 billion. I have published papers on financial assurance and risk management, and have served as a peer reviewer for articles addressing these topics.

5. I have delivered presentations on finance and risk management at various professional conferences. I have testified before the U.S. Senate Committee on Energy and Natural Resources on issues related to financial risk management, and

before the U.S. Senate Permanent Subcommittee on Investigations, Committee on Homeland Security & Governmental Affairs on issues related to Wall Street Bank involvement in physical commodities. I have served as a member of the U.S. Environmental Protection Agency's Environmental Financial Advisory Board. I am a member of the American Institute of Certified Public Accountants member section for Forensic and Valuation Services. I am an Adjunct Professor at the Roger Williams University School of Law. I have been qualified in the Superior Court of the District of Columbia (Civil Division) as an expert in the field of financial management and the implementation of trusts to fund organizations in perpetuity.

6. A partial list of the projects in which I have been involved is included in my Curriculum Vitae (Exhibit A).

7. From September 16, 2019 to present, I have provided expert financial analysis on this case to the State of New York. The opinions contained in this declaration are based on my professional knowledge, training, and experience. I am competent to testify thereto at any trial or evidentiary hearing in this matter.

8. In forming my opinions, I relied on the following documentation:

- a. The financial assurance provisions incorporated in the publicly available version of the Entergy-to-Holtec license transfer application dated November 21, 2019 (ML19326B953) (hereinafter the Application);

- b. The financial assurance provisions incorporated in the redacted petition Entergy and Holtec filed with the New York State Public Service Commission on November 21, 2019 in case 19-E-0730 (hereinafter the Petition);
- c. The financial assurance provisions incorporated in Holtec's post-shutdown decommissioning activities report submitted in connection with the Indian Point license transfer application (ML19354A698) (hereinafter the PSDAR);
- d. The financial assurance provisions incorporated in the Code of Federal Regulations, title 10, part 50 (Domestic Licensing of Production and Utilization Facilities);
- e. The financial assurance provisions incorporated in the Code of Federal Regulations, title 10, part 72 (Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste);
- f. The financial assurance provisions incorporated in the Nuclear Regulatory Commission (NRC) final rule entitled "General Requirements for Decommissioning Nuclear Facilities," published in the Federal Register on June 27, 1988 at page 24,018 (hereinafter the 1988 Rule);
- g. The internal revenue statutes set forth at 26 U.S. C. § 468A (Special rules for nuclear decommissioning costs);

- h. NRC Regulatory Guide 1.159: Assuring the Availability of Funds for Decommissioning Nuclear Reactors, rev. 2 (Oct. 2011), (hereinafter, NRC Guidance 1.159);
- i. NRC Consolidated Decommissioning Guidance, Financial Assurance, Recordkeeping, and Timeliness Final Report, NUREG-1757, vol. 3, rev. 1, (Feb. 2012) (hereinafter, NUREG-1757);
- j. The letter submitted by Lisa M. Burianek, Joshua M. Tallent, and Channing Wistar-Jones, Assistant Attorneys General, State of New York to John Tappert, U.S. Nuclear Regulatory Commission, Office of Nuclear Material Safety and Standards (Oct. 16, 2019) (ML19362A001) (hereinafter, October 2019 Tappert Letter);
- k. U.S. General Accountability Office, GAO-12-258: Nuclear Regulation: NRC's Oversight of Nuclear Power Reactors' Decommissioning Funds Could Be Further Strengthened (April 2012) (hereinafter, GAO Report);
- l. The Master Decommissioning Trust Agreement between Entergy Nuclear Indian Point 2, LLC and Mellon Bank, N.A. as Trustee, for Indian Point Nuclear Generating Units 1 and 2, dated August 30, 2001 (hereinafter, NDT IP 1 & 2);
- m. The Master Decommissioning Trust Agreement between the Power Authority of the State of New York and the Bank of New York as

Trustee for the Indian Point 3 Nuclear Plant and the FitzPatrick Nuclear Plant, dated July 25, 1990 (hereinafter, NDT IP 3);

- n. The letter submitted by John T. Hernon, Senior Vice President and Chief Operating Officer, Entergy Nuclear Operations, Inc., “Re: Indian Point Unit 2 Docket No. 50-247 NL-06-007 Subject: Provisional Trust for Decommissioning Fund Assurance,” dated January 11, 2006;
- o. First Amendment to the Master Decommissioning Trust Agreement between Entergy Nuclear Indian Point 2, LLC and Mellon Bank, N.A. as Trustee, for Indian Point Nuclear Generating Units 1 and 2, dated September 4, 2001;
- p. First Amendment to the Master Decommissioning Trust Agreement between the Power Authority of the State of New York and The Bank of New York, as Trustee, for the Indian Point 3 Nuclear Plant and the James A. FitzPatrick Nuclear Plant, dated November 21, 2001;
- q. Second Amendment to the Master Decommissioning Trust Agreement between the Power Authority of the State of New York and The Bank of New York Mellon, as Trustee, for the Indian Point 3 Nuclear Plant and the James A. FitzPatrick Nuclear Plant, dated January 30, 2017;
- r. Third Amendment to the Master Decommissioning Trust Agreement between Entergy Nuclear Operations, Inc. and The Bank of New

York Mellon, as Trustee, for the Indian Point 3 Nuclear Plant and the James A. FitzPatrick Nuclear Plant, dated March 10, 2017;

- s. Fourth Amendment to the Master Decommissioning Trust Agreement between Entergy Nuclear Operations, Inc. and The Bank of New York Mellon, as Trustee, for the Indian Point 3 Nuclear Plant and the James A. FitzPatrick Nuclear Plant, dated August 15, 2018; and
- t. Fifth Amendment to the Master Decommissioning Trust Agreement between Entergy Nuclear Operations, Inc. and The Bank of New York Mellon, as Trustee, for the Indian Point 3 Nuclear Plant and the James A. FitzPatrick Nuclear Plant, dated September 27, 2018.

Financial Due Diligence is Required by Rule

9. The U.S. has a history of legislating liability and financial risk management regimes.¹ These regimes require that businesses remain financially responsible for consequences arising at their facilities, including decommissioning and long-term stewardship consistent with their permit(s) and/or licenses(s). To that end, businesses are obligated to demonstrate the ability to manage such risks, both technically and financially.

¹ See, e.g., Oil Pollution Act § 1001(11), 33 U.S.C. § 2701(11); Oil Spill Liability Trust Fund, 26 U.S.C. § 9509; Atomic Energy Act (including Price-Anderson Nuclear Industries Indemnity Act), 42 U.S.C. § 2210; Comprehensive Environmental Response, Compensation, and Liability Act § 221, 42 U.S.C. § 9631; Superfund Amendments and Reauthorization Act § 517, 42 U.S.C. § 9601(11); Hazardous Substance Superfund, 26 U.S.C. § 9507.

10. Prudent risk management dictates consideration of who will finance the obligations arising from industrial activities before such risks result in injury to private and public sector interests. Traditional financial assurance models presume that the owners, operators, or licensees of industrial facilities are active business entities capable of setting aside the funds today to pay for future obligations.

11. The prescriptive financial assurance requirements that underpin U.S. environmental regulation, including those associated with the domestic licensing of production and utilization facilities, *see* 10 C.F.R. part 50, and those associated with the licensing requirements for the independent storage of spent nuclear fuel, high-level radioactive waste, and reactor-related greater-than-Class-C waste, *see* 10 C.F.R. part 72, necessitate a risk-informed approach. Consistent with NUREG-1757, a risk-informed approach is one in which regulatory decisionmakers consider insight about potential risks across an array of factors to better focus licensee and regulatory attention on issues commensurate with their importance to public health and safety.²

12. In my view, as the U.S. Nuclear Regulatory Commission (the Commission) considers the application to transfer: (i) control of licenses for Indian Point Unit 1 (IP1), Indian Point Unit 2 (IP2), and Indian Point Unit 3 (IP3) from Entergy Nuclear Operations, Inc. (Entergy) to Holtec Indian Point 2, LLC (Holtec IP2) and Holtec Indian Point, 3 LLC (Holtec IP3); and (ii) operating authority to conduct licensed activities from Entergy to Holtec Decommissioning International, LLC (HDI), robust fi-

² NRC, Consolidated Decommissioning Guidance: Financial Assurance, Recordkeeping, and Timeliness, NUREG-1757 at 31 (Feb. 2012).

nancial due diligence is required. The Commission should adopt its own stated philosophy and exercise a risk-informed approach when deciding whether Holtec International and its subsidiaries demonstrate the financial qualifications necessary to ensure adequate protection of public health and safety.

13. As the Commission recognized in the preamble to the 1988 Rule, firms are more likely to undertake operating and decommissioning decisions that minimize adverse impacts to public health and safety if they are held financially accountable and are not insulated from the consequences of their actions. Specifically, the Commission wrote: “Inadequate or untimely consideration of decommissioning, specifically in the areas of planning and *financial assurance*, could result in significant adverse health, safety, and environmental impacts.”³ In my experience, risk mitigation strategies that presume a limit of liability, whereby firms may be financially responsible but only for a discount on the dollar, contribute to moral hazard.⁴ If a firm believes itself insulated from risk, it may act less prudently with respect to the nature and scope of its involvement in physical commodity related activities, such as nuclear decommissioning. In some cases, financial impacts can exceed the available capital

³ 53 Fed. Reg. 24018, 24019 (June 27, 1988) (emphasis added).

⁴ Moral hazard refers to the specific situation where the risks of an unplanned event increase, because the responsible party is (partially) insulated from being held fully liable for resulting harm. If facilities are not held completely responsible for the consequences of their actions, arguably they will be less careful in their operating decisions, engaging in a less safe and less environmentally sound manner. Thus, the potential for environmental risk increases, because the chance of an unpredictable event occurring due to poor operating decisions increases.

and limited financial assurances of the businesses involved, resulting in bankruptcy.⁵

14. Firms that fail to maintain adequate financial wherewithal are less likely to be able to respond suitably to long-tailed responsibilities, such as those associated with radiological decommissioning, spent fuel management, and site restoration.⁶ In such cases the risk of corporate default increases, and the financial burden of satisfying the long-tailed responsibility may be left for the taxpayers to absorb.

15. I believe the Application, the Petition and the PSDAR fail to provide the necessary assurances to the Commission, and to the State of New York, that New York taxpayers will not be left with the burden to pay for decommissioning activities should Holtec International or its subsidiaries default on their obligations at the Indian Point Energy Center (Indian Point). My belief is predicated on: (i) the lack of transparency with respect to the financial qualifications of Holtec International and its subsidiaries, including but not limited to Nuclear Asset Management Company, LLC; Holtec IP2; Holtec IP3; and HDI; (ii) the use of corporate veils by Holtec International to mitigate financial risk and limit legal responsibility; (iii) the substantial concentration of portfolio risk associated with the fleet of nuclear-related acquisitions recently made by Holtec International and its subsidiaries; (iv) financial inconsistencies between the Application and the PSDAR, including the apparent co-mingling of financial assurance instruments associated with the radiological decommissioning of

⁵ See, e.g., *In re Tronox Inc.*, 429 B.R. 73 (Bankr. S.D. N.Y. 2010); *In re Asarco LLC*, Nos. 09-cv-177, 05-21207 (Bankr. S.D. Tex. Dec. 10, 2009); *In re Kaiser Aluminum Corp.*, No. 02-10429 (Bankr. D. Del. Aug. 22, 2003).

⁶ A long-tailed responsibility is a liability or obligation that materializes over a long period of time, and as such specific losses or expenditures arising from the responsibility may not be fully realized for some time into the future.

IP1, IP2, and IP3, and the decommissioning of the independent spent fuel storage installation (ISFSI); (v) the failure to use the actual compound annual growth rate realized on the existing nuclear decommissioning trusts (NDTs) to forecast future fund performance in the cash flow analyses; and finally, (vi) the stated intention to seek an exemption to allow the use of NDT funds for activities outside the stated scope of the NDTs, e.g., broadly-stated “site restoration activities.”

Holtec International and its Subsidiaries Fail to Evince Adequate Financial Qualification

16. Businesses involved with production and utilization facilities face specialty or nonstandard risks.⁷ Prudent risk management dictates that firms operating in this space demonstrate the ability to assume and manage risks inherent to their industry – for example, NRC regulations require licensees to proffer “information sufficient to demonstrate to the Commission the *financial qualification* of the applicant to carry out . . . the activities for which the permit or license is sought.” 10 C.F.R. § 50.33(f) (emphasis added). The licensee must evince that it “possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the period of the license,” *id.* § 50.33(f)(2), *and* demonstrate reasonable assurance

⁷ In general, a specialty or nonstandard risk is characterized by a premium size, unique exposure, and/or unusual circumstance. Such risks are not common or normal, and often necessitate specialized expertise to resolve. If realized, nonstandard risks tend to result in greater financial consequences than standard risks. Incidents documented in the public record evince that activities involving physical commodity activities, such as the extraction, storage, transport, or refining of non-renewable energy sources, can cause several types of injury including, for example, human health effects, fatality, ecological damage, property damage, business interruption, and/or surface/subsurface trespass. The means by which injury occurs often vary by commodity type; however, common pathways include pipeline rupture or explosion, impoundment failure, mine collapse, contaminant release, industrial accident, mechanical failure, transport accident, or explosive decomposition.

that “funds will be available to decommission the facility.”⁸ *Id.* § 50.33(k)(1).

17. Evincing financial qualification is *in addition to* demonstrating reasonable financial assurance that funds will be available for the decommissioning process. One is not a sufficient substitute for the other, as the Application seems to suggest.

18. For example, sole reliance on the proceeds of the NDTs for purposes of demonstrating Holtec IP2 and Holtec IP3 are financially qualified to hold the respective owner licenses for IP1, IP2, and IP3 fails to meet the intent of the regulations at 10 C.F.R. § 50.33, and conflates the section 50.33(f) requirement with the requirements at 10 C.F.R. § 50.75. The Application states that each company will “maintain the trust funds segregated from their other assets and outside their administrative control.”⁹ The question that presents itself to the Commission is whether other assets exist for Holtec IP2 and Holtec IP3 to cover their day-to-day operating expenses.

19. The Application’s representation that Holtec IP2 and Holtec IP3 “will be required to pay” for HDI’s costs of operation, including all decommissioning costs at Indian Point, using funds from each unit’s NDT, is insufficient demonstration that HDI, in and of itself, is financially qualified to be a decommissioning licensed operator.¹⁰ The Application’s premise that the financial qualification provisions apply only to Holtec IP2 and Holtec IP3 “because HDI will not be authorized under the facility licenses to operate or load fuel in the reactor” is false.¹¹ The transfer of Entergy’s

⁸ Comparable requirements exist for the licensing of independent storage of nuclear fuel, high-level radioactive waste, and reactor-related greater-than-Class-C waste. *See* 10 C.F.R. § 72.22(e).

⁹ *See* Application at 17.

¹⁰ *See id.* at 18.

¹¹ *See id.* at 17.

operating authority to HDI to conduct licensed activities at Indian Point, including radiological decommissioning of the site, clearly falls within the common standard set forth in 10 C.F.R. § 50.40(b), which necessitates that the applicant be technically *and financially qualified* to engage in the proposed activities. In this instance, the proposed activities for which HDI will be responsible are: “possession of radioactive material in connection with maintaining the safe condition of the plants, decommissioning of the [Indian Point] site (including the ISFSI), and maintaining the ISFSI until it can be decommissioned.”¹² Protection of public health and safety warrants representation that the entity responsible for these activities has the independent financial wherewithal to satisfy its obligations.

20. Further, HDI’s stated intention to seek an exemption from the Commission to use NDT funds to finance activities related to spent fuel management and site restoration activities, both of which are beyond the scope of the stated purpose of each master trust,¹³ presents the question as to what HDI assets exist to finance such activities if the Commission denies the exemption. The documentation available for public review provides no answer.

¹² See *id.*

¹³ “The exclusive purpose of this Master Trust is to accumulate and hold funds for the contemplated Decommissioning of the Units and to expend funds for that purpose (NDT IP3, Section II, 2.01 Master Trust Purpose); and NDT IP 1&2 states: “The exclusive purposes of this Master Trust is to accumulate and hold funds for the contemplated Decommissioning of the Units and to use such funds, in the first instance, for expenses related to the Decommissioning of the Units...” (NDT IP1&IP2, Section II, 2.01 Master Trust Purpose).

21. In my experience, information to demonstrate financial qualification includes, at a minimum, complete, audited fiscal-year end financial statements, including audit opinion, balance sheet, income statement, statement of cash flows, consolidating schedules, accompanying notes, and attachments for the most recent three fiscal years, or since inception, if incorporated within the last three fiscal years.

22. As part of its due diligence, and to ensure that the transfer of licenses and operating authority at Indian Point are not “inimical” to the health and safety of the public,¹⁴ the Commission should request and review such statements, including all consolidating schedules, for: Holtec International; Holtec Power, Inc.; Nuclear Asset Management Company, LLC; Holtec Decommissioning International, LLC; Holtec Indian Point 2, LLC; Holtec Indian Point 3, LLC; and Comprehensive Decommissioning International, LLC.¹⁵ Attachment B lists the information that, in my view, the NRC should review to inform their assessment of financial qualification and adequacy of financial assurance.

23. Upon receipt of such documentation, the Commission should assess the solvency of each entity (i.e., the comparative strength of its assets to satisfy its debts), the profitability of each entity (i.e., the comparative strength of its revenues to cover its cost structure), and the liquidity of each entity (i.e., its ability to convert assets into cash to pay for expenses as and when they become due). On the basis of these

¹⁴ See 10 C.F.R. § 50.40(c).

¹⁵ As set forth in 10 C.F.R. § 50.33(f)(3)(iii), the Commission has the authority to request “any other information [it] consider[s] necessary . . . to enable it to determine the applicant’s financial qualification.”

assessments, the Commission can make an informed judgment as to financial qualification, consistent with a risk-informed approach. In my view, it is insufficient to rely solely on the cumulative value of the NDTs as proof of financial solvency, just as it is equally insufficient to ignore the independent profitability and liquidity—or lack thereof—of Holtec IP2, Holtec IP3, and HDI.

24. Unlike Entergy, for which audited financial statements are readily available via the Securities and Exchange Commission, the members of the Holtec corporate family are closely held. There is a notable dearth of financial information about the Holtec family; my research did not reveal the data necessary to ascertain the solvency, profitability, and/or liquidity of any member of the Holtec family. Further, any information contained in the Application and the Petition that might inform an understanding the Holtec corporate family’s financial qualifications has been redacted.

25. The lack of publicly available financial information places the taxpayer and the Commission at extraordinary disadvantage. The taxpayer is forced to rely solely on the limited representations of the company, and the thorough review thereof by the Commission. For these reasons, the importance of the aforementioned reviews for purposes of affirming financial qualification cannot be overstated.

Pervasive Use of Corporate Veils Contributes to a Lack of Financial Accountability

26. Firms with business ventures involving specialty or nonstandard risks often employ risk mitigating strategies to avoid the need for, or minimize the amount

of, third-party financial assurances or committed capital. One strategy involves reliance on the corporate veil as a legal shield.

27. This strategy often involves spinning off the liabilities of a specialty or nonstandard business into a shell corporation to shield assets from financial exposure. The top-tier parent company believes itself shielded from the actions of its lower level subsidiary by virtue of successive layers of corporate veils. In so doing, the parent company attempts to insulate itself from financial exposure. In the event a lower level subsidiary faces financial distress, it can be surgically excised from the corporate family (through Chapter 7 or Chapter 11 bankruptcy protection) in an attempt to limit adverse impact to its parent(s).¹⁶

28. In its Application, Holtec International affirms the use of corporate veils by recognizing its use of “special purpose” entities, limited liability companies, and indirect wholly-owned subsidiaries. The net effect of these corporate forms is to create a corporate structure that insulates the higher-tiered parents from the liability, and attendant financial risks, of its subsidiaries. The fact that all of these entities are closely held, and therefore financial information is not publicly available, places an even greater burden on the Commission to conduct a targeted and thorough review

¹⁶ A timely example involves Kerr-McGee’s separation of its chemical business (and legacy environmental liabilities) from its oil and gas business. Through a series of corporate transactions, Kerr-McGee *restructured* its operations such that the chemical business with its attendant legacy liabilities were aggregated in an undercapitalized shell company: Tronox Incorporated. Incapable of satisfying the environmental obligations associated with Kerr-McGee’s discontinued legacy businesses, Tronox filed for Chapter 11 bankruptcy protection in January 2009. *See In re Tronox Inc.*, 429 B.R. 73 (Bankr. S.D. N.Y. 2010).

of the financial qualifications of Holtec International and its subsidiaries both on a consolidated and on an unconsolidated basis.

29. It is not self-evident that the special purpose limited liability companies formed by Holtec International have the financial wherewithal to independently meet the NRC financial assurance requirements in the event the NDT balances do not accrue as the Application and the Petition suggest. It also is not self-evident that the special purpose limited liability companies have the financial wherewithal to procure a surety bond, insurance or other third-party financial instrument (e.g., letter of credit) to guarantee that decommissioning costs will be paid in the timing and amounts required, particularly if decommissioning costs exceed those estimated in the PSDAR.¹⁷

30. Firms relying on the corporate veil as a risk mitigation strategy to avoid liability arising from nonstandard or specialty risks, as it would appear Holtec International and its subsidiaries are doing, adversely impact the public in several ways. First, the assignment of liability as it relates to specialty event risks informs the risk premium applied by firms when assessing whether a decision represents a reasonable course of action. Generally, the greater the belief in one's legal shield, and attendant insulation from financial exposure, the lower the risk premium that is attached to the decision and the greater the likelihood that unreasonable (or risky) courses of

¹⁷ It also is not self-evident that Holtec International itself has the independent financial wherewithal to meet the requirements of financial assurance, i.e., to procure a surety bond, insurance or other third-party financial instrument (e.g., a letter of credit) that guarantees payment of decommissioning costs in the timing and amounts required, if its subsidiaries or the NDTs fall short of the funding necessary.

action will be selected.

31. Second, firms may limit disclosure of the contingent liability associated with a specialty or nonstandard risk, if they assume that they are legally shielded from the attendant financial consequences. As a result, in the case of the decommissioning of a nuclear power reactor, the Commission (and the public) may be deprived of important information regarding the ability of the company to meet its financial responsibilities in the timing and amounts forecasted. The degree to which such information is omitted from the companies' financial statements will impact the financial qualifications of the firm.

32. Third, by relying on the strength of its legal shield, the firm also may believe that it can act with impunity, avoiding or delaying necessary expenditures and maintaining insufficient financial assurance to adequately protect the health and safety of the public. As I stated previously, if a firm believes itself insulated from risk, it may act less prudently with respect to its environmental obligations. In so doing, the financial consequences of its actions can exceed the available capital and limited financial assurances of the business involved, resulting in bankruptcy.¹⁸

33. For these reasons, consistent with the Appendix attached to the October 2019 Tappert Letter, I believe the Commission should request and review all documents itemized therein to inform its understanding of the financial qualifications and financial wherewithal of the Holtec corporate family collectively, and the special purpose, limited liability companies individually. In the context of the Application, such

¹⁸ See *supra* ¶ 13.

review is necessary for the Commission to conduct appropriate due diligence, meet its fiduciary responsibility to the public, and render a decision consistent with its oversight authority.

Substantial Concentration of Position Contributes to Taxpayer Risk

34. When considering whether or not to invest in a business venture, financiers seek value creation. Returns on investment in physical-commodity ventures will reflect the cash flows generated by the project, attendant legacy environmental liabilities, and the terminal value of the assets comprising the project, i.e., either salvage, or sale. Investments with positive cash flows, minimal costs, and high terminal values represent attractive value propositions.

35. When considering the Application and the Petition in connection with Indian Point, the value proposition to Holtec International and its subsidiaries appears to be access to the \$2.1 billion held in trust for the radiological decommissioning of IP1, IP2, and IP3. These funds were financed in large measure by New York ratepayers. The ratepayers should be afforded assurances that these funds will be used for their intended purpose and not for the profit maximization of closely-held, special purpose, limited liability companies.

36. To that end, traditional financial assurance models require that risks be bounded, quantified, and accounted for either directly as an expense or indirectly through third-party financial instruments (such as letters of credit, surety bonds, or insurance, to name a few). The financial assurance models at 10 C.F.R. § 50.75 and 10 C.F.R. § 72.30 are consistent with these standards. Many third-party financial

assurance instruments establish limits of liability and, in some cases, exclusions for certain types of cost reimbursement. These exclusions are designed to ensure that financial assurance monies are available in the timing and amounts needed, consistent with their intended purpose.

37. The substantial concentration of portfolio risk associated with the fleet of nuclear-related acquisitions recently made by Holtec International and its subsidiaries poses particular concern. In the Application, Holtec International represents that its subsidiaries are financially qualified and maintain sufficient financial assurances to simultaneously decommission six power reactors at four separate sites.

38. With regard to Indian Point, this representation rests on the design and execution of a financial structure wherein Holtec IP2 will hold the owner licenses for IP1 and IP2, and Holtec IP3 will hold the owner license for IP3. In addition, these LLCs will “own” each unit’s corresponding NDT, the cumulative value of which is represented to be \$2.1 billion.¹⁹

39. Holtec IP2 and Holtec IP3 will enter into a “Decommissioning Operator Services Agreement” with their affiliate, HDI, which will act as their “agent.” Using funds from the NDTs, Holtec IP2 and Holtec IP3 will pay HDI for costs associated with “post-shutdown operations, including decommissioning costs and spent fuel management costs.”²⁰

¹⁹ See Application at 17. Corroborating valuation statements from each NDT’s Trustee do not appear to have been included in the Application. Or, if they are included, they have been redacted. Therefore, independent corroboration of the precise valuation of each NDT is not possible.

²⁰ See *id.*, cover letter at 2.

40. The simultaneous decommissioning, spent fuel management, and site restoration of six power reactors at four separate sites constitutes a substantial degree of concentrated portfolio risk. Success presumes that HDI is able to consistently manage its concentrated position over an approximate forty-year time horizon, generating sufficient reimbursements from its affiliates for each reactor at each site, independent of the others. To do otherwise suggests a pyramid scheme wherein the first site may achieve success, but the last site may be left short to the degree NDT reimbursements are comingled as one revenue stream within HDI and cash outflows exceed cash inflows over time.

41. The Application states that HDI's "funding plan for spent fuel management and site restoration relies on the use of NDT funds."²¹ Such activities fall outside the stated purpose of the NDTs, and therefore HDI requires an exemption from the Commission to use a portion of the NDT funds accordingly.

42. Given the redactions in the Application and the Petition, the State and its taxpayers are left to rely on the Commission: (i) to conduct a robust review of the financial qualifications of HDI, its subsidiaries, and its affiliates; (ii) to understand the anticipated expenditure stream across the six power reactors over time; and (iii) to weigh whether adequate financial assurances exist to offset the degree of concentrated specialty risk facing the Holtec corporate family and, by extension (or by default), the taxpayer.

²¹ Application at 18.

43. Granting HDI an exemption to use NDT funds for any activity other than the stated original purposes of the Indian Point master trust(s) without conducting the aforementioned reviews is not in the public interest. The result of doing so may be an inappropriate risk transfer to the public in the event Holtec International and its subsidiaries are unable to meet their financial obligations.

**Holtec’s “Promise to Pay” Does Not Satisfy the Prepayment
Method of Financial Assurance**

44. The Application affirms that Holtec International and its subsidiaries will rely on the “prepayment method” to demonstrate financial assurance pursuant to 10 C.F.R. §§ 50.75 *and* 72.30.²²

45. The regulations at 10 C.F.R. § 50.75 address the financial assurance requirements associated with radiological decommissioning at production and utilization facilities. The regulations at 10 C.F.R. § 72.30 address the financial assurance requirements associated with the storage of spent nuclear fuel and waste. Although the requirements at each section are similar, they are not identical. Each section warrants separate and distinct demonstration of financial assurance.

46. The financial representations in the Application do not acknowledge such distinction. Rather, the Application conflates the separate requirements for financial assurance under the precept that HDI’s “financial projections” indicate that the balance of funds in the NDTs “projected at the time of transfer will be adequate

²² See *id.* at 17-18.

to fund the costs of decommissioning IPEC, spent fuel management, and site restoration including the eventual costs for decommissioning the ISFSI.”²³ Based solely on these financial projections, the Application asserts that Holtec International and its subsidiaries satisfy all requirements for financial assurance.²⁴

47. In my view, Holtec’s representation of a promise-to-pay does not comport with the financial assurance requirements set forth at 10 C.F.R. § 50.75(e)(1)(i), insofar as the regulations state: “Prepayment is the deposit made preceding the start of operations into an account segregated from licensee assets such that *the amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected*” (emphasis added). Because operations will have been terminated at IP2 and IP3 at the time the licenses transfer and there are immediate plans to decommission the site, the NDTs must be fully funded to satisfy the requirements of prepayment as an acceptable means of demonstrating financial assurance. Holtec’s representation of adequate financial assurance is predicated on the accretion of a two percent annual real rate of return, such that the NDTs *will grow over time*—beyond the point in time that operations have terminated—to meet the total cost of decommissioning, spent fuel management, and site restoration. By virtue of this representation, Holtec acknowledges that it does not meet the requisite prepayment requirements established by rule.

²³ See *id.* at 18; see also *id.*, attach. D.

²⁴ See *id.* at 18.

Relying on a Two Percent Real Rate of Return Contributes to Taxpayer Risk

48. Notwithstanding the stated ability of a licensee to take “credit for projected earnings” consistent with a two percent annual real rate of return under certain circumstances, the regulations also state that “actual earnings on existing funds may be used to calculate future fund needs.” 10 C.F.R. § 50.75(e)(1)(i). As such, regardless of the fact that Holtec (albeit incorrectly) relies on the two-percent credit to satisfy the prepayment method, the Commission retains the right to ensure a licensee’s adequate accumulation of decommissioning funds, including as necessary, review of the rate of accumulation of funds, pursuant to 10 C.F.R. § 50.75(e)(2).

49. A financial practitioner reviewing the strength of Holtec’s financial projections and cash flow analyses against the projected growth of the NDTs would assess the compound annual growth rate (CAGR) actually realized by each NDT from fund inception to present day.²⁵ The CAGR provides insight into the past earnings growth of each NDT, and informs whether such growth is commensurate with the funds needed to meet the future anticipated expenditures associated with IP1, IP2, and IP3.

50. In my view as a financial practitioner, the Commission should review the CAGR of each NDT. Doing so will allow the Commission to benchmark the *actual* earnings growth of each NDT as compared to the theoretical application of a two percent real rate of return. This exercise also will bring transparency to the assumptions

²⁵ Compound annual growth rate (CAGR) is the rate of return required for an investment to grow from its beginning balance to its ending balance, assuming earnings are reinvested at the end of each year during the life of the fund.

underpinning the Application's representation of funds sufficiency in each NDT. To that end, the Commission should request copies of all fund valuation statements for each NDT, ideally since inception, but in the absence thereof consistent with the reporting requirements of the master trust agreements and the regulations at 10 C.F.R. part 50.

51. The Commission should be mindful of the fact that the two percent real rate of return is presumed to be net of inflation and net of taxes. In fact, to account for sufficient earnings to pay all taxes imposed pursuant to 26 U.S.C. § 468A, and offset inflationary pressure consistent with the adjustment factors set forth at 10 C.F.R. § 50.75(c), each NDT will need to earn a CAGR in excess of the stated real return of two percent. The precise rate depends on the degree to which the NDT continues to satisfy the statutory and regulatory qualifications for tax abatement, given the stated intention to seek an exemption to use NDT funds for non-decommissioning activities. As such, the Commission should review all IRS private letter rulings obtained by the parties as relevant to the transfer of the Indian Point NDTs. On the basis of such review, the Commission should assess whether the projected growth of the NDTs, consistent with actual past earnings performance, is commensurate with the glide path proposed for anticipated expenditures and associated fund withdrawals for cost reimbursement. Importantly, the Commission should retain authority to approve all requests for reimbursement of expenditures that will be financed with NDT funds, prior to the drawdown of such monies from the NDTs.

52. In my experience, any assurance afforded by the prudent investor rule exists only insofar as the underlying investment guidelines informing the actions of the Trustee are tailored to the risk tolerance of the beneficiaries. The Trustee is obligated to manage its investment activities according to the guidelines established under the Trust. In general, the more broad the investment guidelines the greater the risk tolerance of the beneficiary—that is, the greater the willingness of the beneficiary to tolerate greater market volatility in return for greater rewards. Although greater market volatility can yield higher highs in terms of investment returns, it also can result in lower lows. In the case of long-tailed NDTs, such lows could compromise the availability of NDT funds.²⁶

53. For this reason, before approving any exemption with regard to the use of NDT monies or accepting at face value the cash flow projections proffered in the Application, the Commission should review the investment guidelines of each NDT. In so doing, the Commission should understand: (i) the breadth of investment flexibility afforded to the Trustee; (ii) whether such flexibility meets the objectives of the beneficiary; and (iii) whether such objectives are reasonably suited to the purpose of the NDT. Importantly, the Commission should retain authority to approve any changes to the NDT investment guidelines, as well as exercise its oversight authority

²⁶ See GAO Report, 17–18 “NRC officials told us [GAO] that their staff resources are limited and that they lack the financial expertise to evaluate compliance with investment restrictions. . . . Without awareness of the nature of licensees’ investments, NRC cannot determine whether it needs to take action to enforce the standards.”

to actively and regularly review licensees' compliance with stated investment guidelines.²⁷

54. The Indian Point master trust agreements, and specifically the trusts' Exhibit A, Permitted Investments, are different. Specifically, review of these documents suggests that the permitted investments for NDT IP3 apply a lower risk premium, contributing to a risk-weighted investment mix that maps closer to a risk-free rate, than the permitted investments associated with NDT IP1 & IP2.²⁸ In other words, the investment portfolio of NDT IP3 appears to be weighted in favor of less "risky" investments than the NDT IP1 & IP2 portfolio. Without copies of the NDTs' respective valuation statements, it is difficult to assess the financial impact of these differences. The Commission should undertake the necessary review to determine whether these differences are material to the CAGR of each fund. The financial implications of failing to do so are significant, particularly if the corpus of the NDTs is allowed to erode due to risky investment and consequentially the costs of decommissioning exceed the amount of NDT funds available.

Conclusion

55. The very long time horizon associated with nuclear decommissioning—one which may extend beyond the natural life of the corporate entity undertaking the decommissioning—demands a financial assurance structure that ensures funds are

²⁷ See *id.* at 17.

²⁸ A risk premium is the return in excess of the risk-free rate of return an investment is expected to yield. A risk-free rate is the theoretical return of an investment with zero risk; generally calculated as the yield associated with U.S. Treasury instruments matching the duration of the investment.

readily accessible and adequate when needed. NUREG-1757 defines financial assurance as: “A guarantee, or other financial arrangement, provided by a licensee that funds for decommissioning will be available when needed. *This is in addition to the licensee’s regulatory obligation to decommission its facilities.*”²⁹ NRC Guidance 1.159 affirms: “Estimating the minimum amount of funds needed for decommissioning is important to prevent funding shortfalls that could adversely affect public health and safety.”³⁰

56. If accelerated withdrawals by Holtec IP2 and Holtec IP3 erode the corpus of the NDTs such that they are unable to generate sufficient earnings to meet the approximate forty-year financial responsibilities attendant with decommissioning the nuclear power reactors at the Indian Point Energy Center, then some or all of the burden for completing the work may ultimately rest with the New York taxpayers. Further, to the degree the Holtec subsidiary facilities are insufficiently capitalized to meet their day-to-day financial responsibilities, then New York taxpayers may be required to bear the financial burden associated with unfunded portions of the residual long-tailed liability at IP1, IP2, and IP3.

57. Simply stated, the failure to recognize the breadth of potential exposure arising from Holtec International and its subsidiaries’ involvement in nuclear decommissioning activities at multiple sites, coupled with the failure to maintain sufficient financial assurances to adequately hedge such exposure, compromises the financial soundness of Holtec International and its subsidiaries. The consequential impact

²⁹ NUREG-1757 at 27 (emphasis added).

³⁰ NRC Guidance 1.159 at 5.

may be an inappropriate risk transfer to the public in the event Holtec International and its subsidiaries are unable to meet their financial obligations. This risk is compounded if the Commission: (i) fails to exercise appropriate financial due diligence during the Application phase; (ii) fails to ensure that all financial assurance representations reflect on-the-ground conditions at Indian Point; and (iii) fails to act in a timely fashion with respect to notices provided by the Trustee regarding funds withdrawal and/or funds valuation. Failure in any of these instances increases the probability of an inappropriate transfer of financial risk to the public.

58. I, Chiara Trabucchi, have read the above declaration, consisting of 29 pages, and certify under penalty of perjury that the foregoing is true and correct to the best of my knowledge. Executed this 7th day of February, 2020.



CHIARA TRABUCCHI

DECLARATION OF CHIARA TRABUCCHI
LIST OF EXHIBITS

- | | |
|-----------|--|
| Exhibit A | Curriculum Vitae for Chiara Trabucchi |
| Exhibit B | Information Necessary to Affirm Financial Qualification and Adequate Financial Assurance |

CHIARA TRABUCCHI

PRINCIPAL

Ms. Trabucchi's areas of expertise are corporate finance and economics. As a Principal with Industrial Economics, Incorporated, Ms. Trabucchi is a nationally recognized expert in financial risk management and the design of financial settlement frameworks tailored for the protection of the public trust.

She is an expert in evaluating the financial integrity of business, non-profit and governmental organizations, including financial damages associated with lost profits, property diminution, economic benefit of noncompliance, fraudulent conveyance, and natural resource damages. She often is asked to apply her expertise in the context of rigorous verification and auditing standards. She regularly consults to public- and private-sector clients, assisting in the design and implementation of financial frameworks to hedge market and catastrophic risk.

Congressional Testimony & Hearings

U.S. SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS, COMMITTEE ON HOMELAND SECURITY & GOVERNMENTAL AFFAIRS. Wall Street Bank Involvement with Physical Commodities. November 2014.

U.S. SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES. SENATE BILL 699, Department of Energy Carbon Capture and Sequestration Program Amendments Act of 2011. May 2011.

U.S. SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES. SENATE BILL 1013, Department of Energy Carbon Capture and Sequestration Program Amendments Act of 2009. May 2009.

Hearings before the **U.S. FEDERAL INTERAGENCY TASK FORCE ON CARBON CAPTURE AND STORAGE** established by President Obama on issues related to financial investment, indemnification, and financial responsibility. May 2010.

Invited expert on financial risk management related to the deployment of climate mitigation technologies before the **US SENATE ENERGY & NATURAL RESOURCES COMMITTEE** and the **US SENATE COMMERCE, SCIENCE, AND TRANSPORTATION COMMITTEE**. June 2010.

Expert Witness Support

United States / New Mexico Environment Department v. Chevron Mining, Inc., D.N.M., Civ. No. 1:16-cv-00904-WPL. 2017.

Environmental & Recycling Services, Inc. v. Commonwealth of Pennsylvania, Department of Environmental Protection No. 350 M.D. 2005. Settlement lodged 2016.

Arbona et al. v. Trustees of the Corcoran Gallery of Art CA 0003745B. 2014.

Marilley, Kevin, et al. v. Fish & Game, CA Dept., John McCamman, et al. No. 43151 420 SF2011201820. 2013.

Hackensack Riverkeeper, Inc. v. Honeywell International Inc., D.N.J., Civ. No. 06-cv-0022. 2010.

United States / Philadelphia Housing Authority v. Sun Refining, Atlantic Richfield Refining Company, et al. No. 06-1635. 2010.

Selected Engagements

- Providing expert financial analysis to support the design of a banking framework for Natural Resource Damage Restoration in the Gulf Coast region. Analyses involve assessment of financial assurance provisions, design of financial instruments to hedge the risk of nonperformance, and review of banking prospectus.
- Providing expert financial analysis in a private litigation involving lost revenues associated with higher incidence of natural disasters in the Gulf Coast region. Analyses involve design of settlement frameworks that leverage private-public financing models, including the use of compensatory mitigation credits, and consideration of federal and state appropriations law.
- Providing expert financial analysis to a team of federal attorneys in a litigation matter associated with unjust enrichment and illegal competitive advantage associated with the sale of after-market devices in violation of the Clean Air Act. Analyses involve assessment of economic benefit of non-compliance, unjust enrichment, and restitution by disgorgement of excess profits.
- Providing financial settlement support to a financial institution serving as Trustee. Support involves design of allocation algorithms to inform trust payments associated with an environmental mitigation trust. Financial exposure and mitigation actions at issue span 568 federally-recognized Indian Tribes with total funds in excess of \$50 million.
- Provided financial settlement support expert economic and financial analysis in support of settlement negotiations for the State of New York Office of the Attorney General and by extension the National Association of Attorneys General. Support involves design of allocation algorithms to inform trust payments associated with a companion environmental mitigation trust. Financial exposure and mitigation actions at issue span more than 40 states with total funds in excess of \$2.5 billion.
- Provided expert economic and financial analysis, including the design of a long-term environmental trust, in support of settlement negotiations involving the phosphate and nitrogen fertilizer industries for the U.S. Department of Justice and the U.S. EPA. Financial exposure and environmental obligations at issue span properties in Florida, Mississippi, Louisiana, and Texas, with total exposure in excess of \$2 billion.
- Provided expert support associated with the design of a long-term indemnity model of a phosphate fertilizer company in Chapter 11 bankruptcy for the U.S. Department of Justice and the U.S. EPA. Financial exposure and environmental obligations total in excess of \$100 million.
- Provided expert support in a private litigation associated with the lost profit damages realized by claimants arising from damages in the Gulf Coast region.
- Provided expert analysis to the State of California in a litigation case involving the assessment of differential fees and tax expenditures charged to nonresidents for four California fishing permits, licenses and registrations.
- Provided expert analysis in a private, civil litigation case involving alleged environmental contamination in connection with the redevelopment and reuse of waterfront property. Designed a financial indemnity framework to address near, medium and long- investigation, remediation and long-term care of property parcels.
- Provided expert analysis in a private, civil litigation case involving alleged property damages in excess of \$50 million. Derived estimates of economic damages associated with lost profits, property

diminution and natural resource damages. Designed companion financial assurance framework, including a long-term environmental trust.

- Provided expert financial analysis in the context of the Water Infrastructure Improvement for the Nations Act of 2018 (WRDA). Analyses involve assessing the potential market size for WRDA environmental banks, including the market for coastal Louisiana wetland and stream mitigation, and the demand for coastal Louisiana conservation bank credits.
- Directed a team supporting federal efforts to design financial instruments, including analysis of associated macro- and micro-economic impacts of various expenditure options. Efforts include designing a suite of financial mechanisms applicable to the mining, oil and gas and electric power generation sectors, including analysis of economic impacts to the hard rock mining and electric power sectors.
- For myriad public- and private-sector clients directed the review of approximately 1,500 financial instruments. Reviews spanned 40 states, myriad federal agencies, and approximately 1,000 corporate entities for an estimated total face value of \$6.2 billion in financial exposure. Reviews spanned a range of industry sectors, including chemical manufacturing, waste management, energy and utility, air travel, auto manufacturing, oil and gas, pulp and paper, pharmaceutical, mining, lumber and wood products, agricultural, and metals mining. Reviews address myriad statutory requirements and legislative proposals.
- Directed a compliance and improper payments audit related to funds appropriated under the American Recovery and Reinvestment Act. Efforts involved designing and implementing a compliance audit framework to validate and verify management integrity and fiscal accountability associated with \$7.18 billion in activities funded under ARRA. Structured audit verification protocols to align with established GAO Internal Control Standards and OMB ARRA accountability criteria. Audit objectives focused on identifying areas of fraud, waste and abuse with respect to appropriated funds across federally funded programs, including U.S.EPA's multi-billion State Revolving Funds.
- Directed an assessment of the economic impacts associated with the Securities and Exchange Commission's proposed proxy access rule for the CFA Institute. Analyzed the degree to which proxy access reform would be beneficial to market performance, stock performance and board performance.
- Provided expert analysis to the U.S. Department of Energy in support of the financial responsibility provisions established under the Class VI financial responsibility regulations at 40 CFR 146.85.
- For DOE's NETL, supported efforts to develop a financial assurance module aligned to its FE/NETL CO2 Saline Storage Cost Model. Efforts included completion of a financial responsibility pricing foundations white paper.
- For University of Illinois, CarbonSAFE Illinois, providing expert economic and financial analysis in service of business and financial case studies related to the East Basin and Macon County sites. Efforts include assessment of carbon storage incentives, including 26 USC 45Q tax incentives.
- Directed a team to design, develop and implement a risk-based probabilistic model (CCSvt) to evaluate the potential financial consequences of CO2 migration at three candidate carbon capture and storage sites involving coal-fired power plants. Clients include a consortium of funding sponsors from firms in the electric power generation and oil and gas sectors, non-governmental organizations, the Government of Alberta, and the Global CCS Institute.

Professional Societies/Affiliations

- Adjunct Professor, **ROGER WILLIAMS UNIVERSITY, SCHOOL OF LAW**
- Member, **AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS**, Forensic and Valuation Services
- Advisory Member, **U.S. DOE'S NATIONAL RISK ASSESSMENT PARTNERSHIP (NRAP)**
- Advisory Member, **INTERNATIONAL ENERGY AGENCY (IEA)/GREENHOUSE GAS R&D PROGRAMME**
- Peer Reviewer, *International Journal of Greenhouse Gas Control*
- Director, **MASSACHUSETTS COLLEGE OF ART AND DESIGN**, Foundation Board *Retired*
- Member, **U.S. EPA'S ENVIRONMENTAL FINANCIAL ADVISORY BOARD (EFAB)** *Retired*

Selected Publications

Trabucchi, Chiara, Michael Donlan, Vadim Spirt, Scott Friedman and Richard Esposito. "Application of a Risk-Based Probabilistic Model (CCSvt Model) to Value Potential Risks from Carbon Capture and Storage," *Energy Procedia*, Volume 63, 12th International Conference on Greenhouse Gas Control Technologies, GHGT-12 (2014) Pages 7608-7618, doi:10.1016/j.egypro.2014.11.795.

Trabucchi, Chiara, Ellen Fitzgerald, Matthew Orsagh, Robert W. Dannhauser, James Allen. "Proxy Access in the United States: Revisiting the Proposed SEC Rule." CFA Institute. Vol. 2014. No. 9. August 2014.

More, Jeffery, The Honorable Sherwood Boehlert, Ben Harper, Lindene Patton and Chiara Trabucchi. 2012. "Commercialization of Carbon Sequestration Projects; Scaling from Research to Reality." *2012 International Pittsburgh Coal Conference*.

Trabucchi, Chiara, Michael Donlan, Michael Huguenin, Matthew Konopka and Sarah Bolthrunis. "Valuation of Potential Risks Arising from a Model, Commercial-Scale CCS Project Site." Global CCS Institute. June 2012.

Donlan, Michael and Chiara Trabucchi, Valuation of Consequences Arising from CO2 Migration at Candidate CCS Sites in the U.S., *Energy Procedia*, Volume 4, Proceedings of the 10th International Conference on Greenhouse Gas Control Technologies (GHGT-10) (2011) Pages 2222-2229.

Dooley JJ, C Trabucchi, and L Patton. 2010. "Design Considerations for Financing a National Trust to Advance the Deployment of Geologic CO2 Storage and Motivate Best Practices." *International Journal of Greenhouse Gas Control* 4(2):381-387. doi:10.1016/j.ijggc.2009.09.009.

Trabucchi C, M Donlan, and S Wade. 2010. "A Multi-Disciplinary Framework to Monetize Financial Consequences Arising from CCS Projects and Motivate Effective Financial Responsibility." *International Journal of Greenhouse Gas Control* 4(2):388-395. doi:10.1016/j.ijggc.2009.10.001.

Trabucchi, C., and L.E. Patton. 2008. "Storing Carbon: Options for Liability Risk Management, Financial Responsibility." *World Climate Change Report The Bureau of National Affairs*.

Selected Presentations

Invited Presenter at Greenhouse Gas Control Technologies (GHGT-12) Conference. *Application of a Risk-Based Probabilistic Model (CCSvt Model) to Value Potential Risks from Carbon Capture and Storage*. October 7-10, 2014.

Invited Speaker at *Hydraulic Fracturing Disclosure Laws: Are We Getting the Information We Really Need?* Sponsored by Harvard Law School, Environmental Law Program. 2013-2014 Environmental Policy Speaker Series.

Invited Speaker at *Platts 7th Annual European Carbon Capture & Storage Conference*. January 31-February 1, 2013.

Invited Speaker at *Global CCS Institute International Members' Meeting*. October 2012

Invited Speaker at *Emerging Technologies Committee* sponsored by the U.S. Chamber of Commerce. October 2010.

Invited Presenter at GHGt-10. *Valuation of Environmental, Human Health and Financial Consequences Arising from CO2 Migration at a Candidate CCS Site to Motivate Sound Public Policy and Financial Investment*. September 19-23, 2010.

Invited Expert at *Carbon Capture and Sequestration (CCS) Liability Workshop*. U.S. Senate Energy & Natural Resources Committee & U.S. Senate Commerce, Science and Transportation Committee. June 18, 2010.

Invited Panelist at *American Bar Association Section of Environment, Energy and Resources' Environmental Issues*. June 14-15, 2010.

Invited Expert at U.S. Federal Interagency Task Force on Carbon Capture and Storage's Working Group on Legal and Regulatory Issues. *Design Considerations for Liability Management Related to the Deployment of Carbon Capture and Storage Technologies*. April 2010 (closed hearing), May 2010 (public hearing).

Invited Panelist at *Carbon Capture and Storage: Bridging the Commercial Gap*, sponsored by the International Energy Agency (IEA), the Coal Industry Advisory Board (CIAB), the Carbon Sequestration Leadership Forum (CSLF) and the Global Carbon Capture and Storage Institute (GCCSI). September 2009.

Invited Speaker at The George Washington University. *GHG Technology, Public Policy and the Law*, April 2009.

Invited Panelist at Harvard Law School Environmental Law & Policy Clinic. *Overcoming Legal and Financial Obstacles to CCS*, March 2009.

Invited Speaker at International Energy Agency (IEA) CCS Regulators' Network. *CCS: Regulatory Approaches to Address Liability*, January 2009.

Professional Experience

Industrial Economics, Incorporated, 1995-Present

Principal, 2003-Present

Director, 2005-2018

Chief Financial Officer, 2010-2014

The Cadmus Group, 1991-1995

Education

Masters Business Administration with Honors, Simmons University, 1999

Bachelor of Arts, Cum Laude, Clark University, 1991

Exhibit B Information Necessary to Affirm Financial Qualification and Adequate Financial Assurance

1. A current corporate map, including names and addresses, of Holtec International, including its immediate corporate family, all subsidiaries, all affiliates, all related parties, all predecessors, all successors, all entities in which Holtec International or its subsidiary, affiliate, or related party maintains a controlling interest, all entities in which Holtec International or its subsidiary, affiliate, or related party is a principal owner, all entities over which Holtec International or its subsidiary, affiliate, or related party has the ability to exercise significant influence (or control) over the operating or financial policies, and all entities with which Holtec International or its subsidiary, affiliate, or related party has a substantial business relationship, as these terms are defined above. Hereinafter, unless otherwise specified, the term Holtec shall mean the above-listed entities.
2. A list of Holtec shareholders, including shareholder name, company affiliation(s), and percentage equity interest by company.
3. Holtec International's complete, audited fiscal year-end financial statements, including audit opinion, balance sheet, income statement, statement of cash flows, consolidating schedules, accompanying notes, and attachments. If Holtec International does not have audited financial statements, reviewed statements, including all accompanying notes, attachments, and consolidating schedules are acceptable.
4. Holtec Decommissioning International's complete, audited fiscal year-end financial statements, including audit opinion, balance sheet, income statement, statement of cash flows, consolidating schedules, accompanying notes, and attachments for most recent three fiscal years. If Holtec Decommissioning International does not have audited financial statements, reviewed statements, including all accompanying notes, attachments, and consolidating schedules are acceptable.
5. All documents concerning estimation of asset retirement obligations or loss contingencies associated with Holtec's nuclear plant operations, including but not limited to its radiological decommissioning activities; such documentation shall be organized by nuclear plant and include the nature of the loss contingency or asset retirement obligation, potential magnitude of loss or retirement obligation, potential timing of loss or retirement obligation, maximum exposure to loss or maximum estimable retirement obligation, and the person within Holtec responsible for satisfying the loss contingency or asset retirement obligation.

- a. To the extent the asset retirement obligation or loss contingency is offset by assets held within one or more decommissioning trust funds, identify the value of the offset, the trust fund used to finance the offset, and the contractual or legal basis for the right of setoff.
6. All documents concerning financial assurance(s) associated with Holtec's asset retirement obligations, including but necessarily limited to the following fleet of nuclear plants:
 - a. Oyster Creek (New Jersey)
 - b. Pilgrim Nuclear Power Station (Massachusetts)
 - c. Palisades Nuclear Generating Station (Michigan)
 - d. Big Rock Point Independent Spent Fuel Storage (Michigan)
7. All documents sufficient to show any transfer of money, assets, real property, or any other consideration from the decommissioning trust fund(s) of any nuclear power plant wherein Holtec is the licensee, including but not limited to:
 - a. Oyster Creek (New Jersey)
 - b. Pilgrim Nuclear Power Station (Massachusetts)
 - c. Palisades Nuclear Generating Station (Michigan)
 - d. Big Rock Point Independent Spent Fuel Storage (Michigan)
8. All documents concerning estimation of loss contingencies associated with potential litigation to which Holtec is a party, including the nature of the loss contingency, potential magnitude of loss, potential timing of loss, the entity's maximum exposure to loss, and a table with an accounting of all litigation to which Holtec is a party, inclusive of the Court in which the complaint is filed, Case Number, and plaintiffs.
9. All documents and communications concerning any dividends or return to capital paid from Holtec to Holtec shareholders.
10. Complete, audited fiscal year-end financial statements, including audit opinion, balance sheet, income statement, statement of cash flows, consolidating schedules, accompanying notes, and attachments for the most recent three fiscal years for the person that will serve as licensee of the Indian Point Energy Center. If this person does not have audited financial statements, reviewed statements, including all accompanying notes, attachments, and consolidating schedules are acceptable.

11. All documents that have been provided, or will be provided, to evince financial protection, including demonstration of financial qualification or proof of adequate financial resources, in support of Holtec's application for license transfer of the Indian Point Energy Center.
12. All documents that have been provided, or will be provided, to evince financial protection, including demonstration of financial qualification or proof of adequate financial resources, in support of Holtec's request for exemption to access the Indian Point decommissioning trust fund.
13. Unredacted versions of the Equity Purchas and Sale Agreement or similar agreements between Holtec and Entergy, as such documents relate to the Indian Point Energy Center.
 - a. All documents regarding Holtec's assumption of liabilities pursuant to any of the aforementioned agreements.
 - b. All documents relating to or reflecting the estimation of potential liabilities associated with Holtec's acquisition of the Indian Point Energy Center.
 - c. Any communications or agreements with any financial institutions, state or federal regulatory agencies, or any other third parties regarding potential liabilities, including but not limited to asset retirement obligations, associated with the Indian Point Energy Center.
14. An unredacted copy of any IRS private letter ruling(s) obtained by any party relevant to the transfer of the Indian Point decommissioning trust fund(s) from Entergy and/or its subsidiaries to Holtec and/or its subsidiaries.
15. Unredacted copies of all fund valuation statements for each NDT, ideally since inception, but in the absence thereof consistent with the reporting requirements of the master trust agreements and the regulations at 10 C.F.R. part 50.

Attachment 2



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Exelon Says It Will Separate Generation And Utility Assets

By Michael Phillis

Law360 (February 24, 2021, 7:40 PM EST) -- Exelon Corp. announced Wednesday it plans to separate the company into two publicly traded entities, one that would focus on regulated electric and gas utilities and another that would handle unregulated power generators, continuing a trend of traditional utilities breaking apart.

In a call with investors Wednesday, the company's president and CEO Christopher M. Crane said the separation "better positions each business within its peer set."

"It will support business strategies tailored to the distinct business, investment profiles and meeting unique customer needs," Crane said.

Exelon is one of the last integrated utilities that had not separated its regulated utility business from deregulated power plants, said Shar Pourreza, managing director of North American power and utilities at financial services firm Guggenheim Partners.

"Predominantly, the reason why they went through [with] it is the two businesses have completely different risk profiles," Pourreza said.

Investors in regulated utilities are concerned with issues like the regulatory landscape and rate of returns. Exelon has said it expects a 6% to 8% rate base growth over the next few years for its regulated utilities business. On the other hand, investors in unregulated generators are worried about power prices and federal policy, Pourreza said.

"[The unregulated generator business] is much more commodity-sensitive and much more volatile as you think about the company's earnings ... than regulated utilities," Pourreza said.

The regulated utility, referred to for now as RemainCo, will deliver power to 10 million customers across Washington, D.C., and five states. It plans on investing \$27 billion over the next four years into grid improvements, Exelon said.

Exelon also emphasized the low-carbon nature of its generation, saying that an entity referred to for now as SpinCo. will provide 31,000 megawatts of generating capacity that consists of nuclear, natural gas and renewable energy. The company said the clean nature of its power will be important for states that have aggressive climate change goals.

Exelon has previously fought for state subsidies for its nuclear plants and **pushed to protect** those subsidies at the Federal Energy Regulatory Commission.

The trend of companies like Exelon breaking up **is long**. Back in 2014, Duke Energy sold its Midwest merchant generation and retail business, retreating from the unregulated space. Analysts said at that time that utility investors tend to be conservative, while merchant power investors are more willing to take higher risks for better returns.

Pourreza said the separation process can be complicated. Synergies are typically lost, and leaders must worry about how ratings agencies will react and whether the company will receive the right approvals from various federal and state regulatory agencies, including the New York Public Service Commission.

He added that some investors don't want the exposure of a big nuclear power plant operator, adding the generating business isn't doing much to lift the company's stock price. Some investors "don't want to deal with that fleet of assets," he said.

--Additional reporting by Keith Goldberg. Editing by Philip Shea.

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Attachment 3

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

BEFORE THE COMMISSION

In the Matter of

ENTERGY NUCLEAR OPERATIONS, INC.;
ENTERGY NUCLEAR INDIAN
POINT 2, LLC; ENTERGY NUCLEAR
INDIAN POINT 3, LLC; HOLTEC
INTERNATIONAL; and HOLTEC
DECOMMISSIONING INTERNATIONAL,
LLC; APPLICATION FOR ORDER
CONSENTING TO TRANSFERS OF
CONTROL OF LICENSES AND
APPROVING CONFORMING LICENSE
AMENDMENTS

Docket Nos.:

50-3

50-247

50-286

72-051

(Indian Point Nuclear Generating Station)

SUPPLEMENTAL DECLARATION OF CHIARA TRABUCCHI

I, Chiara Trabucchi, declare and state as follows:

1. I am a Principal with Industrial Economics, Incorporated. My expertise is in finance and economics, with a specific focus on environmental risk management and the design of financial assurance frameworks tailored for the protection of the public trust. I incorporate the full description of my qualifications and experience as set forth in my February 7, 2020 declaration in paragraphs one through seven and Exhibit A to that document.

2. I have been asked to supplement my declaration, dated February 7, 2020, to address the recent volatility in the U.S. securities market, and to the degree possible comment on the impact such volatility may have had on the Indian Point

Unit 1 (IP1), Indian Point Unit 2 (IP2), and Indian Point Unit 3 (IP3) nuclear decommissioning trust funds (NDTs).

3. In forming my supplemental opinion, I relied on the following documentation:

- a. The financial assurance provisions incorporated in the publicly available version of the Entergy-to-Holtec license transfer application dated November 21, 2019 (ML19326B953) (hereinafter the Application);
- b. The financial assurance provisions incorporated in the Code of Federal Regulations, title 10, part 50 (Domestic Licensing of Production and Utilization Facilities);
- c. The financial assurance discussion incorporated in the Commission decision entitled *North Atlantic Energy Serv. Corp.* (Seabrook Station, Unit 1), 49 N.R.C. 201 (1999);
- d. The Master Decommissioning Trust Agreement between Entergy Nuclear Indian Point 2, LLC and Mellon Bank, N.A. as Trustee, for Indian Point Nuclear Generating Units 1 and 2, dated August 30, 2001 (hereinafter, IP1 & IP2 NDT);
- e. The Master Decommissioning Trust Agreement between the Power Authority of the State of New York and the Bank of New York as Trustee for the Indian Point 3 Nuclear Plant and the FitzPatrick Nuclear Plant, dated July 25, 1990 (hereinafter, IP3 NDT);

- f. First Amendment to the Master Decommissioning Trust Agreement between the Power Authority of the State of New York and The Bank of New York, as Trustee, for the Indian Point 3 Nuclear Plant and the James A. FitzPatrick Nuclear Plant, dated as of November 21, 2000 (hereinafter, First Amendment IP3 NDT);
- g. Fifth Amendment to the Master Decommissioning Trust Agreement between Entergy Nuclear Operations, Inc. and The Bank of New York Mellon, as Trustee, for the Indian Point 3 Nuclear Plant and the James A. FitzPatrick Nuclear Plant, dated September 27, 2018 (hereinafter, Fifth Amendment IP3 NDT).

The Impact of Market Volatility on the Indian Point NDTs

4. In recent weeks, the U.S. securities market has faced extreme volatility, resulting in substantial downward pressure on investment returns. In response to a request by the State of New York, I examined the potential impact of recent market contractions on the performance of the IP1 & IP2 NDT and the IP3 NDT fund balances. As I discuss below, the results of my examination suggest it is possible that the three NDTs collectively have realized an erosion in fund balances of approximately -9.73 percent to -11.35 percent, which equates to an approximate erosion of \$213.5 million to \$248.9 million on an assumed total NDT fund balance of \$2.193 billion.¹ The former estimate assumes a benchmark date of October 31, 2019; the

¹ See the Application, Enclosure 1, Attachment D. Assumed total NDT fund balance is based on the collective starting NDT fund balances (“2021 Beginning of Year NDT balance”) for IP1, IP2, and IP3, adjusted to reverse deductions for estimated ENOI and HDI pre-closure costs.

latter estimate assumes a benchmark date of December 31, 2019.² Both estimates examine performance through March 20, 2020. The precise impact depends on the actual composition of the NDT portfolios, and the types of investments therein.

5. As I stated in my declaration, dated February 7, 2020, benchmarking the actual earnings growth of each NDT, as compared to a theoretical application of a two percent real rate of return, is necessary to ensure that the assumptions underpinning the Application's representation of funds sufficiency in each NDT is both practicable and realistic. My view remains unchanged that such analysis, in the context of the Application and associated materials, including the PSDAR, DCE and any regulatory exemption requests, is essential given the likely negative impact recent market volatility has had on the respective NDT fund balances, and the lack of transparency which exists with respect to the independent financial qualifications of Holtec International and its subsidiaries, including but not limited to Nuclear Asset Management Company, LLC; Holtec IP2; Holtec IP3; and HDI.

6. To the extent the NDTs have experienced erosions in fund balances similar to, or worse than, the scenarios I illustrate below, there now may be insufficient funds to cover all the decommissioning costs anticipated at IP1, IP2, and IP3. If so, the NDTs may no longer satisfy the prepayment requirements established by rule. I discuss the bases for my opinions in more detail below.

² The benchmark date of October 31, 2019 corresponds to the fund balance date disclosed in the Application, and a baseline index level as of the market close on October 31, 2019. See the Application, Enclosure 1, Attachment D. The benchmark date of December 31, 2019 examines year-to-date performance (through March 20, 2020), and corresponds to a baseline index level as of the market close on December 31, 2019.

7. Volatility is a measure of the movement, both up and down, of investments. Uncertainty in forecasting the probability of future events occurring, and the attendant consequences of such events, can lead to market volatility. A period of high volatility tends to reflect inconstant swings in the performance of an investment or index when compared to a benchmark.³ High volatility can be an indicator of a possible bear market—a bear market is generally accepted to be a period when one or more major indexes drop by 20 percent or more. A bear market can be accompanied by an economic recession.⁴

8. The Standard & Poor's 500 (S&P500) stock index is generally accepted as a proxy for the overall U.S. stock market.⁵ The performance of the S&P500 Index informs one's understanding of the general performance of the U.S. stock market; substantial swings in the S&P500 Index can indicate a period of high market volatility. As shown in Table 1, I calculate a 24.12 percent decline in the S&P500 Index from October 31, 2019 (the NDT starting fund balance date disclosed in the Application) through March 20, 2020. Year-to-date, through March 20, 2020, I calculate a 28.66 percent decline in the S&P500 Index. By these performance measures, the U.S. is potentially at the point of a bear market.

³ An index is a hypothetical basket or portfolio of securities designed to represent a market. The S&P500, the Dow Jones Industrial Average, and the NASDAQ are examples of established market indexes.

⁴ In general, an economic recession is characterized by two or more quarters of declining growth as measured by the gross domestic product.

⁵ The S&P500 index tracks the stocks of 500 large-cap U.S. companies, wherein "large-cap" denotes the stock of a company with large capitalization in terms of the debt and equity used to finance its overall operations and growth.

9. The investment guidelines of the IP3 NDT reference the S&P500 Index as a performance benchmark.⁶ The investment guidelines of the IP1 & IP2 NDT refer more generally to “market indexes,” without specific mention of the S&P500 Index.⁷

10. The permitted investments of the IP1 & IP2 NDT are described as: “any investments in Investment-Grade Securities permitted by Applicable Law Permitted investments include investments tied to market indexes, mutual funds or common trust funds which may hold securities issued by Entergy Corporation, its affiliates and subsidiaries.”⁸ The investment guidelines for the IP1 & IP2 NDT stipulate certain portfolio restrictions, including: “subject to clarification, if any, by the NRC,” the NDT may not be invested in the securities of Entergy Corporation or its affiliates, subsidiaries, or successors. Further, “except for investments tied to market indexes or non-nuclear sector mutual funds or common trust funds, investments in any entity owning one or more nuclear power plants is prohibited.”⁹ The stated guidelines appear to be silent as to the percentage allocation targets of the different mixes of securities in which the IP1 & IP2 NDT can be invested—that is, the proportions of the IP1 & IP2 NDT portfolio that can be invested in fixed income securities, money market securities, and/or equity securities do not appear to be restricted. In general, unrestricted investment in equity securities tends to yield a less conservative portfolio mix.

⁶ See First Amendment IP3 NDT, exhibit A, Permitted Investments.

⁷ See IP1 & IP2 NDT, exhibit A.

⁸ See *id.* at exhibit A.

⁹ See *id.* at exhibit A.

11. With regard to the IP3 NDT, the guidelines are more specific in terms of establishing the nature and composition of permitted investments. Notably, the guidelines establish parameters for investing in asset-backed securities, corporate bonds, municipal bonds, U.S Government obligations, money market securities, and equity securities.¹⁰ The guidelines also delimit percentage allocation targets for the different mixes of securities in which the IP3 NDT can be invested. The proportion of the IP3 NDT portfolio that can be invested in fixed income securities, money market securities, and/or equity securities is subject to restrictions by type, rating, and/or composition.¹¹

12. The Trustee of each NDT is obligated to manage investment activity according to the guidelines established for the respective NDT. In general, the more broad the investment guidelines, the greater the risk tolerance of the beneficiary—that is, the greater the willingness of the beneficiary to tolerate greater market volatility in return for greater rewards. Although greater market volatility can yield higher highs in terms of investment returns, it also can result in lower lows.¹² In the case of long-tailed NDTs, such lows could compromise the availability of NDT funds.

13. To assess the possible impact of the recent market volatility on the NDT fund balances, I assume a target portfolio allocation similar to that delineated in First

¹⁰ I believe it is improbable that the NDTs are substantially invested in money-market securities as a long-term portfolio investment strategy. In general, such securities are used to provide a glide-path to liquidity when funds are needed for disbursement. In general, the greater the investment in money-market securities, the more conservative the portfolio returns.

¹¹ See First Amendment IP3 NDT, exhibit A, Permitted Investments.

¹² See Trabucchi decl. ¶52.

Amendment IP3 NDT. Specifically, as shown in Table 2, I assume a hypothetical portfolio distribution across three types of securities—45 percent allocation to investment grade fixed income securities; 20 percent allocation to municipal bonds, rated A; and 35 percent allocation to equity securities. In general, these percentage allocations are consistent with the target parameters established in the IP3 NDT guidelines.¹³ Because I have not been provided an investment valuation statement for the NDTs, I use three established market indexes to benchmark the portfolio performance for each type of security.

14. Specifically, as illustrated in Table 1 attached hereto, I rely on: (1) the S&P U.S. Aggregate Bond Index as a benchmark measure for fixed income securities, (2) the S&P Municipal Bond A Rating Band Index as a benchmark measure for municipal bonds, rated A, and (3) the S&P500 Index as a benchmark measure for equity securities.¹⁴ In addition, because the investment guidelines for the IP1 & IP2 NDTs

¹³ See First Amendment IP3 NDT, exhibit A, Permitted Investments.

¹⁴ Exhibit A to the First Amendment to the IP3 NDT Master Trust Agreement, dated November 21, 2000, states: "Fixed income securities must be managed to track the Lehman Brothers Aggregate Bond Index." The Lehman Brothers Aggregate Bond Index was renamed the Barclays Capital Aggregate Bond Index in 2008, following Barclays PLC's purchase of Lehman's North America operations. Following Barclays PLC's sale of its index and risk analytics business to Bloomberg, it became known as the Bloomberg Barclays Aggregate Bond Index. Presently, Bloomberg lists a series of aggregate bond indices at <https://www.bloomberg.com/markets/rates-bonds/bloomberg-barclays-indices>, rather than a sole Aggregate Bond Index. ; however, there are a number of exchange-traded funds (ETFs) that seek to track the Aggregate Bond Index, such as the iShares Core U.S. Aggregate Bond ETF (ticker: "AGG"; <https://www.bloomberg.com/quote/AGG:US>). As a conservative assumption, I examine the performance of fixed income securities by means of the S&P U.S. Aggregate Bond Index, which is designed to measure the performance of publicly issued U.S. dollar denominated investment grade debt. This index has outperformed the iShares Core U.S. Aggregate Bond ETF across the time horizons examined. Substituting the iShares Core U.S. Aggregate Bond ETF for the S&P U.S. Aggregate Bond Index would place additional downward pressure on the NDT fund balances.

are broadly described, and do not offer percentage allocation targets of the different mixes of securities in which the IP1 & IP2 NDT can be invested, I apply the same hypothetical portfolio allocation to these NDTs as I do for the IP3 NDT. This assumption likely is conservative with regard to the IP1 & IP2 NDT investment structure, because the associated guidelines for IP1 & IP2 NDT place far fewer restrictions on the type, rating, and/or composition of the investment portfolio.

15. As shown in Table 2 attached hereto, I align the change in the performance of each benchmark index for two time periods—(1) from October 31, 2019 through March 20, 2020; and (2) Year-to-date, through March 20, 2020—to the portfolio allocations aligned with each benchmark index.¹⁵ I illustrate the impact of the changes in the benchmark indexes according to the portfolio allocations in percentage terms. A negative percent change indicates a decline in performance. Overall, my examination suggests a negative impact on the hypothetical composite portfolio.

16. In Tables 3a and 3b attached hereto, I examine the impact of recent market performance on the NDTs according to the assumptions discussed above. As illustrated, if I assume an initial benchmark date of October 31, 2019, it is possible that the three NDTs collectively have realized an erosion in fund balances of approximately -9.73 percent (or approximately \$213.5 million, assuming a total portfolio NDT fund balance of \$2.193 billion) through March 20, 2020. If I examine year-to-

¹⁵ The October 31, 2019 through March 20, 2020 time period reflects the fund balance date disclosed in the Application, and a baseline index level as of the market close on October 31, 2019. See the Application, attach. D. The year-to-date time period (through March 20, 2020) reflects a baseline index level as of the market close on December 31, 2019. Both baseline index levels are compared against corresponding index levels as of the market close on March 20, 2020.

date, through March 20, 2020, it is possible that the three NDTs collectively have realized an erosion in fund balances of approximately -11.35 percent (or approximately \$248.9 million, assuming a total portfolio NDT fund balance of \$2.193 billion). Although hypothetical, these estimates are based on reasonable assumptions, including: (1) the allocation parameters set forth in the investment guidelines for IP3 NDT; (2) the performance of three established indexes, one of which (the S&P500 Index) is explicitly referenced as a performance measure in the investment guidelines for IP3 NDT; and (3) the starting NDT fund balances represented in the Application for IP1, IP2, and IP3.¹⁶ The precise impact depends on the actual composition of the NDT portfolios, and the types of investments therein.

17. The regulations state that “actual earnings on existing funds may be used to calculate future fund needs.” 10 C.F.R. § 50.75(e)(1)(i). Further, the Commission retains the right to ensure a licensee’s adequate accumulation of decommissioning funds, including as necessary, review of the rate of accumulation of funds, pursuant to 10 C.F.R. § 50.75(e)(2).

18. As I stated in my February 7, 2020 declaration, benchmarking the *actual* earnings growth of each NDT, as compared to the theoretical application of a two percent real rate of return, is necessary to ensure that the assumptions underpinning the Application’s representation of funds sufficiency in each NDT is both practicable and realistic.¹⁷

¹⁶ See the Application, Enclosure 1, Attachment D. Starting NDT fund balances reflect “2021 Beginning of Year NDT balance” for IP1, IP2, and IP3 adjusted to reverse deductions for estimated ENOI and HDI pre-closure costs.

¹⁷ See Trabucchi decl. ¶50.

19. I believe such review, in the context of the Application and associated materials, including the PSDAR, DCE, and any regulatory exemption requests, is necessary given the likely negative impact recent market volatility has had on the respective NDT fund balances, and the lack of transparency which exists with respect to the independent financial qualifications of Holtec International and its subsidiaries, including but not limited to Nuclear Asset Management Company, LLC; Holtec IP2; Holtec IP3; and HDI. To the extent the NDTs have experienced erosions in fund balances similar to, or worse than, the scenarios illustrated in Tables 3a and 3b, there now may be insufficient funds to cover all the decommissioning costs anticipated at IP1, IP2, and IP3. If so, the NDTs may no longer satisfy the prepayment requirements established by rule.


20. In my view, as I stated in my February 7, 2020 declaration, evincing financial qualification is *in addition to* demonstrating reasonable financial assurance that funds will be available for the decommissioning process. One is not a sufficient substitute for the other.¹⁸ Demonstration of financial qualification independent of the NDT fund balances is particularly important in times of extreme market volatility when the corpus of the NDTs may be at risk of erosion, as now is the case, and Holtec IP2, Holtec IP3, and/or HDI may find themselves in the position of having to procure supplemental financial assurance to offset or otherwise address shortfalls in the NDTs.

¹⁸ See Trabucchi decl. ¶17.

21. Notably, as relevant in this context, the Commission has emphasized the importance of “assuring that the ultimately licensed entity has the capability to meet financial qualification and decommissioning aspects of NRC regulations.”¹⁹ Indeed, financial qualification issues “go to the very heart” of the license transfer inquiry.²⁰ In my view, examining the impact of market volatility on the NDT fund balances is paramount, particularly if the Commission defaults to a precept that the sole means by which the would-be license transferee is required to evince adequate financial qualification is through existing NDT funds balances.

22. Finally, having reviewed Holtec’s February 12, 2020 exemption request, allowing an exemption to use NDT funds to finance activities related to spent fuel management site restoration activities is not in the public interest given the breadth of current market volatility. As I stated in my February 7, 2020 declaration, the result of doing so may be an inappropriate risk transfer to the public in the event Holtec International and its subsidiaries are unable to meet their financial obligations, especially during times of market volatility.²¹

23. I, Chiara Trabucchi, have read the above supplemental declaration, consisting of 13 pages, and certify under penalty of perjury that the foregoing is true and correct to the best of my knowledge. Executed this 23 March 2020.



CHIARA TRABUCCHI

¹⁹ *North Atlantic Energy Serv. Corp.* (Seabrook Station, Unit), 49 N.R.C. 201, 219 (1999).

²⁰ *Id.*

²¹ *See* Trabucchi decl. ¶43.

Table 1: Performance of Three Established Market Indexes, as of 20 Mar 2020

	Security Type	Benchmark Index	Index Level		% Change 31 Oct 2019 through 20 Mar 2020	Index Level 31-Dec-19	% Change Year-to-Date, through 20 Mar 2020
			20 Mar 2020	31-Oct-19			
	[A]	[B]	[C]	[D]	[E]=[C]/[D]-1	[F]	[G]=[C]/[F]-1
[1]	Fixed Income Securities	S&P U.S. Aggregate Bond Index	208.61	208.33	0.13%	208.03	0.28%
[2]	Municipal Bonds, Rated "A"	S&P Municipal Bond A Rating Band Index	125.00	134.07	-6.77%	134.72	-7.21%
[3]	Equity Securities	S&P 500 Index	2,304.92	3,037.56	-24.12%	3,230.78	-28.66%

Table 2: Possible Portfolio Impact of Market Volatility on the IP3 NDT

	Security Type	Benchmark Index	Portfolio Allocation Percentage	31 Oct 2019 through 20 Mar 2020		Year-to-Date, through March 20, 2020	
				% Change	Portfolio Impact	% Change	Portfolio Impact
	[A]	[B]	[C]	[D]=[E][Table 1]	[E]=[C] x [D]	[F]=[G][Table 1]	[G]=[C] x [F]
[1]	Fixed Income Securities	S&P U.S. Aggregate Bond Index	45%	0.13%	0.06%	0.28%	0.13%
[2]	Municipal Bonds, Rated "A"	S&P Municipal Bond A Rating Band Index	20%	-6.77%	-1.35%	-7.21%	-1.44%
[3]	Equity Securities	S&P 500 Index	35%	-24.12%	-8.44%	-28.66%	-10.03%
[4]=[1]+[2]+[3]	Composite Portfolio Impact		100%	NM	-9.73%	NM	-11.35%

Table 3a: Examination of Market Performance on IP1 & IP2 NDT and IP3 NDT Fund Balances
Assuming Benchmark Date of 31 October 2019, as of 20 Mar 2020

		IP1 NDT	IP2 NDT	IP3 NDT	Total NDT
		[A]	[B]	[C]	[D] = [A] + [B] + [C]
[1]	Starting NDT Balance	\$ 592,832,000	\$ 669,228,000	\$ 931,250,000	\$ 2,193,310,000
[2]=[1] x [E][Table 2]	Calculated Portfolio Impact at -9.73%	\$ (57,708,159)	\$ (65,144,790)	\$ (90,650,848)	\$ (213,503,797)
[3]=[1]+[2]	Ending NDT Balance	\$ 535,123,841	\$ 604,083,210	\$ 840,599,152	\$ 1,979,806,203

Table 3b: Examination of Market Performance on IP1 & IP2 NDT and IP3 NDT Balances
Assuming Benchmark Year-to-Date, as of 20 Mar 2020

		IP1 NDT	IP2 NDT	IP3 NDT	Total NDT
		[A]	[B]	[C]	[D] = [A] + [B] + [C]
[1]	Starting NDT Balance	\$ 592,832,000	\$ 669,228,000	\$ 931,250,000	\$ 2,193,310,000
[2]=[1] x [G][Table 2]	Calculated Portfolio Impact at -11.35%	\$ (67,272,481)	\$ (75,941,630)	\$ (105,674,961)	\$ (248,889,071)
[3]=[1]+[2]	Ending NDT Balance	\$ 525,559,519	\$ 593,286,370	\$ 825,575,039	\$ 1,944,420,929

Notes/Sources:

NM = Not Meaningful

[A] Table 1, Table 2: Exhibit A to the IP1 & IP2 Master Trust Agreement, dated August 30, 2001; Exhibit A to the First Amendment to the IP3 Master Trust Agreement, dated November 21, 2000.

[B][1], Table 1, Table 2: Exhibit A to the First Amendment to the IP3 Master Trust Agreement, dated November 21, 2000, states: "Fixed income securities must be managed to track the Lehman Brothers Aggregate Bond Index." The Lehman Brothers Aggregate Bond Index was renamed the Barclays Capital Aggregate Bond Index in 2008, following Barclays PLC's purchase of Lehman's North America operations. Following Barclays PLC's sale of its index and risk analytics business to Bloomberg, it became known as the Bloomberg Barclays Aggregate Bond Index. Presently, Bloomberg lists a series of aggregate bond indices at <https://www.bloomberg.com/markets/rates-bonds/bloomberg-barclays-indices>, rather than a sole Aggregate Bond Index; however, there are a number of exchange-traded funds (ETFs) that seek to track the Aggregate Bond Index, such as the iShares Core U.S. Aggregate Bond ETF (ticker: "AGG"; <https://www.bloomberg.com/quote/AGG:US>). As a conservative assumption, I examine the performance of fixed income securities by means of the S&P U.S. Aggregate Bond Index, which is designed to measure the performance of publicly issued U.S. dollar denominated investment grade debt. This index has outperformed the iShares Core U.S. Aggregate Bond ETF across the time horizons examined. Substituting the iShares Core U.S. Aggregate Bond ETF for the S&P U.S. Aggregate Bond Index would place additional downward pressure on the NDT fund balances.

[C][1], [D][1], [F][1], Table 1: S&P U.S. Aggregate Bond Index, <https://us.spindices.com/indices/fixed-income/sp-us-aggregate-bond-index>. This index is designed to measure the performance of publicly issued U.S. dollar denominated investment-grade debt. Year-to-Date percent change is through March 20, 2020, and reflects a baseline index level as of the market close on December 31, 2019.

[C][2], [D][2], [F][2], Table 1: S&P Municipal Bond A Rating Band Index, <https://us.spindices.com/indices/fixed-income/sp-municipal-bond-a-rating-band-index>. This index seeks to measure the performance of the U.S. municipal bond market, focusing specifically on bonds that have a Standard & Poor's rating of between 'A+' and 'A-', a Moody's rating of between 'A1' and 'A3' and a Fitch rating of between 'A+' and 'A-'. Year-to-Date percent change is through March 20, 2020, and reflects a baseline index level as of the market close on December 31, 2019.

[C][3], [D][3], [F][3], Table 1: S&P 500 Ticker SPX, <https://us.spindices.com/indices/equity/sp-500>. This index is a gauge of large-cap equities in the U.S. market, and includes 500 "leading" companies comprising 80 percent of total market capitalization. Year-to-Date percent change is through March 20, 2020, and reflects a baseline index level as of the market close on December 31, 2019.

[C] Table 2: Exhibit A to the First Amendment to the IP3 Master Trust Agreement, dated November 21, 2000.

[A][1], Tables 3a / 3b: License Transfer Application dated November 21, 2019, Enclosure 1, Attachment D, p. 266, Column: "Beginning of Year Trust Balance 11" Row: "2021," adjusted per Footnote 1 to reflect a fund balance date of October 31, 2019, and the add-back of \$59.3M reversing the deductions for estimated ENOI and HDI pre-closure costs.

[B][1], Table 3a / 3b: License Transfer Application dated November 21, 2019, Enclosure 1, Attachment D, p. 268, Column: "Beginning of Year Trust Balance" Row: "2021," adjusted per Footnote 1 to reflect a fund balance date of October 31, 2019, and the add-back of \$15.15M reversing the deductions for estimated ENOI and HDI pre-closure costs.

[C][1], Table 3a / 3b: License Transfer Application dated November 21, 2019, Enclosure 1, Attachment D, p. 270, Column: "Beginning of Year Trust Balance" Row: "2021," adjusted per Footnote 1 to reflect a fund balance date of October 31, 2019, and the add-back of \$15.15M reversing the deductions for estimated ENOI and HDI pre-closure costs.