VERIFIED DIRECT TESTIMONY OF ROBERT LEE

Q1. Please state your name, professional position, and business address.

A1. My name is Robert Lee. I am Vice President of CRA International d/b/a Charles River Associates, Inc. ("CRA"). My business address is 200 Clarendon Street, Boston, Massachusetts 02116.

Q2. On whose behalf are you submitting this direct testimony?

A2. I am submitting this testimony on behalf of Northern Indiana Public Service Company LLC ("NIPSCO").

Q3. Please briefly describe your educational and business experience.

A3. I received a Master of Science in Industrial Administration from Carnegie Mellon University in Pittsburgh, Pennsylvania and a BA in Mathematics from Boston College in Chestnut Hill, Massachusetts. After graduate school, I held senior staff positions with Putnam, Hayes and Bartlett and the PA Consulting Group. I joined CRA's energy practice in 2001 and became a Vice President with the firm in 2013. During my tenure in consulting, I have focused on power industry restructuring, generating

asset valuation and the economics of environmental policy. In 2008, I joined CRA's Auctions and Competitive Bidding Practice where I have focused primarily on default service procurements and related issues facing market participants in deregulated wholesale and retail electricity markets. In association with that work, CRA executes request of proposal processes ("RFP") designed to help our utility clients meet their capacity needs.

Q4. Please describe CRA and the work you perform in more detail.

A4. CRA is an economics and management consulting firm, founded in 1964, and headquartered in Boston, Massachusetts. CRA has worked on behalf of a wide range of stakeholders in the design, management and execution of structured sales and procurement processes conducted both through formal auctions and RFPs. CRA clients in these engagements have included regulated utilities, government agencies, state and federal regulators as well as cooperatives and private corporations. CRA has directly managed or monitored structured processes that have resulted in over $25 billion worth of transactions in the United States and abroad. CRA has worked with a broad set of utilities on resource planning and capacity strategy decisions. In addition, CRA has extensive experience in managing default service procurement processes for utilities in the Midwest and mid-Atlantic

United States and currently manages the default service procurement processes for FirstEnergy's Ohio Utilities, FirstEnergy's Pennsylvania Utilities, Duke Energy Ohio, Duquesne Light Company and The Dayton Power & Light Company. All such procurements have been reviewed and approved by the respective utility commissions or other regulatory bodies with oversight over the processes. CRA advises energy sector clients on asset valuation for the purposes of acquisition and divestiture and senior members of CRA's team have testified as experts on sales and procurement process design before regulatory agencies and in civil litigation.

Q5. Have you previously testified before this or any other regulatory commission?

A5. I have not testified before the Indiana Utility Regulatory Commission ("Commission") in the past. I have testified before the Public Utility Commission of Ohio on behalf of Duke Energy Ohio and The Dayton Power and Light Company ("DP&L") related to the design and administration of procurement auctions to secure suppliers for their default service needs. In 2017, I testified before the Public Service Commission of West Virginia on behalf of FirstEnergy's Monongahela Power Company ("Mon Power"). That testimony related to an RFP conducted in support of their anticipated

capacity needs. I have submitted testimony before the Federal Energy Regulatory Commission ("FERC") on affiliate transaction issues associated with RFPs conducted for Mon Power and DTE Energy. I submitted testimony to FERC quantifying the reactive power tariff for generating assets owned by DP&L and AES Ohio Generation. In addition, I have testified on competitive bidding in the insurance industry in civil litigation. My curriculum vitae is attached as Attachment 3-A.

Q6. What is the purpose of your direct testimony in this proceeding?

A6. The purpose of my direct testimony is to explain the analysis NIPSCO used to evaluate its various options for wind energy and why the Wind Energy Purchase Agreement between NIPSCO and Jordan Creek Wind Farm LLC ("Jordan Creek"), which is an indirect, wholly-owned subsidiary of NextEra Energy Resources, LLC ("NextEra"), dated January 3, 2019 ("Jordan Creek Wind Energy PPA") is an economic choice for helping meet NIPSCO's retail electric load.

Q7. Are you sponsoring any attachments to your direct testimony?

A7. Yes. In addition to my curriculum vitae attached as Attachment 3-A, I am sponsoring Attachment 3-B, which is a May 14, 2018 news release issued by

NIPSCO announcing its intent to explore potential options to meet the future needs of its residential, commercial and industrial electric customers, Confidential Attachment 3-C, which is the opinion letter provided from CRA to NIPSCO following the RFP, and Confidential Attachment 3-D, which is a detailed table of how each proposal was evaluated and scored. All of these attachments were prepared by me or under my direction and supervision.

Q8. What were the key findings outlined in Confidential Attachment 3-C?

A8. Through the Opinion Letter and its attachments, CRA recommended certain assets as potential projects to advance to a definitive agreement phase. The assets recommended for advancement were selected based on the preferred portfolio in NIPSCO's Integrated Resource Plan ("IRP") submitted October 31, 2018 (the "2018 IRP") and the RFP scoring criteria developed in advance of the RFP process.

Q9. What does Confidential Attachment 3-D show?

A9. Confidential Attachment 3-D provides the detailed scoring results for each project bid into the RFP. Consistent with the RFP process rules, each project

was evaluated based on development risk, reliability, asset-specific risk, and the estimated net present value ("NPV") of facility revenues and costs.

Q10. Please provide an overview of NIPSCO's 2018 IRP and RFP process.

A10. In 2016, NIPSCO conducted an integrated resource planning process that identified a potential capacity shortfall at or around 2023.[1] The 2016 IRP included tentative conclusions as to future resource options. In 2018, NIPSCO updated the 2016 IRP to ensure that resource planning reflected the most current outlook for key market drivers. On May 14, 2018, NIPSCO issued a news release announcing its intent to explore potential options to meet the future needs of its residential, commercial and industrial electric customers. The news release announcing the all-source request for proposal ("All-Source RFP" or "RFP") solicitation process is included as Attachment 3-B. The RFP process was a component of NIPSCO's broader resource planning and analysis having a dual purpose. The first objective of the RFP was to solicit bids to cover NIPSCO's anticipated capacity shortfall starting in 2023. The second objective of the RFP was to secure market-based information on the cost and performance of alternative

[1] https://www.nipsco.com/economic-development/current-news/current-news-display/2017/01/24/nipsco-plans-for-energy-needs-of-tomorrow

resource options to inform and improve NIPSCO's 2018 IRP. NIPSCO Witness Augustine discusses the preferred portfolio derived from NIPSCO's 2018 IRP and how the assumptions associated with the new wind resource options modeled in the 2018 IRP compare with the cost of the Jordan Creek Wind Energy PPA.

Q11. When did you first become involved in NIPSCO's IRP process?

A11. My involvement with NIPSCO began in February 2018 after the 2018 IRP process had been initiated. While others at CRA became involved with NIPSCO to support the 2018 IRP update, during the first quarter of 2018, NIPSCO retained CRA to assist in the design, administration and bid evaluation of an All-Source RFP. The All-Source RFP was intended to inform NIPSCO's resource planning and identify potential capacity assets to meet NIPSCO's needs. The All-Source RFP was conducted as part of an integrated IRP and RFP process. My role with NIPSCO was to help design and administer the All-Source RFP process.

Q12. Describe NIPSCO's objectives for the All-Source RFP.

A12. Through the All-Source RFP, NIPSCO sought to identify the discrete capacity resources best positioned to satisfy the anticipated capacity

shortfall consistent with both the 2018 IRP analysis and the RFP bid selection criteria. NIPSCO considered a wide range of asset types, including physical generating assets, power purchase agreements ("PPAs") and demand response resources. Through the process, NIPSCO received bids supported by renewable facilities, fossil resources, energy storage, and demand response options. Bids for both standalone assets and integrated facilities comprised of different resource types or supported by energy storage were submitted. Bidders offered assets under PPA arrangements and offered assets for sale. In addition, while the 2016 IRP identified an anticipated capacity shortfall starting in 2023, NIPSCO considered bids with transfer dates or PPA start dates in advance of the identified need in 2023. CRA served as an independent third party managing the RFP process ("RFP Manager").

Q13. Please describe the timeline for the All-Source RFP process.

A13. The All-Source RFP was issued on May 14, 2018 and CRA conducted a bidder conference on May 16, 2018. Prospective bidders were required to provide a Notice of Intent, Bi-lateral Confidentiality Agreement and Pre-Qualification Application due on May 29, 2018. Final proposals ("Proposals") were due on June 29, 2018.

Q14. Please provide an overview of the All-Source RFP design and execution.

A14. Prior to issuing the All-Source RFP on May 14, 2018, CRA worked with the NIPSCO team to define the process objectives and requirements. NIPSCO advised CRA that in order to ensure adequate, reliable capacity supplies to meet customer needs, they intended to acquire dispatchable, semi-dispatchable or renewable resources that, at a minimum, would meet established industry-wide reliability and performance criteria for electric generation facilities and that had physical deliverability into Midcontinent Independent System Operator, Inc. ("MISO") Local Resource Zone 6 ("LRZ6"). CRA worked with NIPSCO to prepare the RFP documentation, ensure the product requested was clearly defined, and ensure the evaluation criteria were clearly specified in the RFP documentation.

Q15. How did CRA and NIPSCO inform interested parties about the All-Source RFP?

A15. CRA managed the outreach to potential bidders interested in the process. CRA worked with NIPSCO to identify existing assets and projects in-development located within LRZ6 as well as potential demand response providers. Representatives from potential bidders were contacted via electronic mail notices and phone calls, informing them of the RFP and

relevant due dates. Both NIPSCO and CRA participated in public stakeholder sessions to inform interested parties about the process and the integrated IRP/RFP approach. In addition, NIPSCO published a press release related to this RFP on its website on May 14, 2018 and CRA ran trade press advertising in Megawatt Daily on May 14, 2018.

Throughout the RFP process, CRA maintained a public Information Website that warehoused all key documents related to the RFP. Through that Information Website, interested parties could submit questions and comments related to the process, the documents or the RFP requirements and, when appropriate, those questions and answers were posted to the RFP Information Website to ensure all bidders had equal access to information. All interested parties were allowed to submit Proposals in the All-Source RFP. Ultimately, CRA approved all pre-qualification applications submitted and notified the applicants of their pre-qualification status.

Q16. Did the All-Source RFP generate substantial interest from bidders?

A16. Yes. NIPSCO received more bids in response to its All-Source RFP than any capacity RFP I have participated in to date. CRA received 90 proposals

supported by 59 projects across 5 states. Many of the PPA proposals included fixed or variable pricing arrangements or had options on the start date and contract term. Several proposals included multiple options for facility configuration and resource sizes. There was also a single Demand Response bid offered into the RFP. Figure 1 illustrates the proposals received in response to the RFP:

Figure 1[2]

Count of Proposals

Technology	CCGT	CT	Other Fossil	Wind	Wind + Solar + Storage	Solar	Solar + Storage	Storage	Demand Response	Total
Asset Sale	4			1		1				6
PPA	8		3	6		26	7	8	1	59
Option	3	1		7	1	8	4	1		25
Total	15	1	3	14	1	35	11	9	1	90
Locations	IN, IL	IN	IN, KY	IA, IN, IL, MN	IN	IL, IN, IA	IN	IN	IN	

In total, nearly 15 gigawatts ("GW") of unforced capacity ("UCAP") was offered into the RFP providing a wide range of capacity choices across technologies and deal structures. Figure 2 shows the UCAP for proposals bid into the RFP across technology options and deal structure.

[2] The "Option" designation in Figure 1 indicates that the bidder offered a single asset as either an asset sale or a PPA at NIPSCO discretion.

Figure 2[3]

Proposal MW (UCAP)

Technology	CCGT	CT	Other Fossil	Wind	Wind + Solar + Storage	Solar	Solar + Storage	Storage	Demand Response	Total
Asset Sale	2,020			30		25				2,075
PPA	2,574		1,494	119		1,796	810	1,055	70	7,917
Option	2,563	678		180	110	662	513	100		4,806
Total	7,157	678	1,494	329	110	2,483	1,322	1,155	70	14,798
Locations	IN, IL	IN	IN, KY	IA, IN, IL, MN	IN	IL, IN, IA	IN	IN	IN	

CRA evaluated the economics and other scoring considerations related to each Proposal independent of NIPSCO or any NIPSCO affiliates. CRA reserved the right, in its sole and exclusive discretion, to reject any and all Proposals on the grounds that such Proposal did not conform to the terms and conditions of the RFP or on the grounds that the bidder did not comply with the provisions of the RFP.

Q17. Please describe how RFP bids were used to inform IRP modeling.

A17. The proposals received in response to the RFP were used to develop "tranches" or bundles of assets comprised of individual facilities with similar cost, performance and overall economics. The bid tranches were

[3] The "Option" designation in Figure 2 indicates that the bidder offered a single asset as either an asset sale or a PPA at NIPSCO discretion. UCAP MW are estimated using MISO class averages by technology

used by the NIPSCO IRP team to develop a preferred capacity plan that included a range of asset types. That preferred plan was announced at a public stakeholder session conducted on October 19, 2018. That preferred plan set the capacity needs by asset type. The RFP selected individual proposals for advancement to a potential definitive agreement phase consistent with the IRP preferred plan and based on the RFP's scoring criteria.

Q18. Please describe the Proposal review and evaluation.

A18. After the Proposals were received, CRA, as the RFP Manager:

1. Reviewed all Proposals and screened the responses to ensure they conformed with all response requirements;
2. Developed representative "tranches" of resources providing market-based cost and performance characteristics by resource type for use in IRP modeling;
3. As necessary, conducted follow up conference calls and/or targeted email outreach to certain bidders' representatives to clarify asset-specific issues with the information provided;
4. Evaluated all conforming Proposals according to the pre-specified criteria as outlined in Appendix G of the RFP document;
5. Managed bidder communication and outreach; and
6. Confirmed the winning Proposals and the short list of assets to consider for advancement to the definitive agreement phase.

CRA reviewed all proposals that met pre-determined qualifying criteria set forth in the RFP documentation and evaluated each based on certain pre-

specified evaluation criteria. For physical generating assets and storage assets offered under either a PPA or an asset sales structure, the evaluation considered (1) estimated NPV of expected market revenues and costs from the present through 2043 (20 years beyond the 2023 anticipated need date), (2) asset reliability and deliverability, (3) development risk, and (4) asset-specific risk factors. Demand Response proposals were evaluated across four categories (1) cost, (2) demonstrated performance, (3) response time, and (4) proposal-specific risk factors.

Q19. Did CRA evaluate the bids independent of NIPSCO?

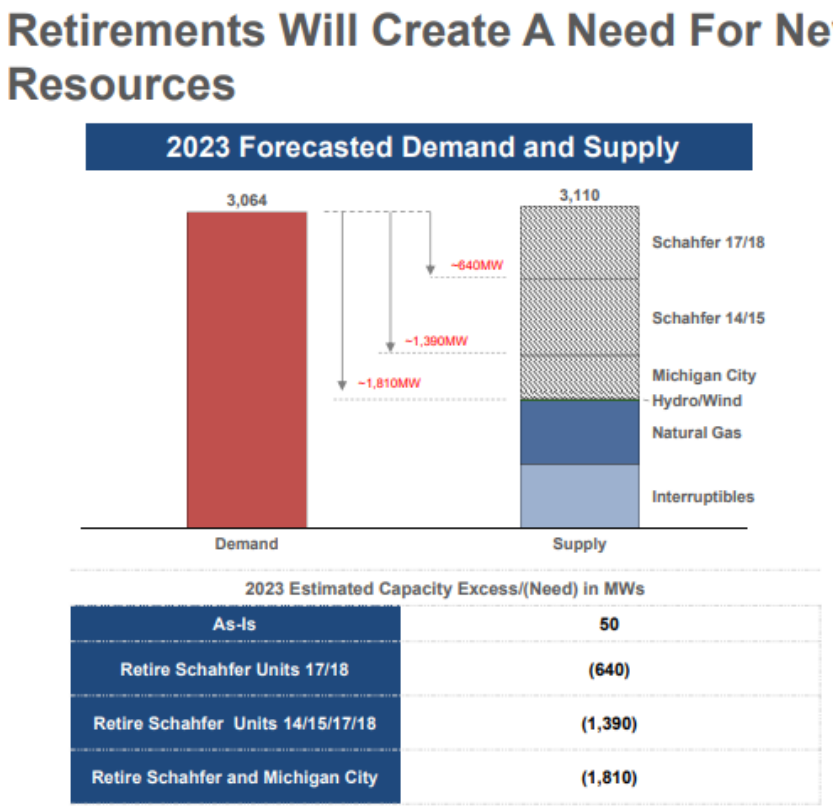
A19. Yes. NIPSCO was not directly involved in the evaluation of proposals nor was NIPSCO aware of bidder identities as part of the process, as explained in the RFP's Frequently Asked Questions ("FAQ"). NIPSCO was provided general information about the level of interest in the RFP, the MW of capacity offered by asset type and deal structure. CRA also provided NIPSCO indications of the general level and range of prices received for various asset categories in order to facilitate communication with stakeholders and others interested in the NIPSCO process. During the evaluation, NIPSCO was only made generally aware of CRA's progress and

was only involved with bidder-specific issues if those issues required policy or technical guidance from NIPSCO subject matter experts.

Q20. Please discuss the IRP process conclusions and NIPSCO's preferred plan.

A20. The 2018 IRP considered a range of options around the potential retirement of existing NIPSCO fossil generation facilities and developed an optimal portfolio of assets based on detailed scenario and risk analysis and informed by comprehensive market modeling. The magnitude of the 2023 resource need was directly dependent on the conclusions derived from the 2018 IRP. NIPSCO Witness Augustine describes key assumptions and conclusions related to the 2018 IRP. Figure 3 illustrates the NIPSCO supply stack versus the resource requirements for 2023 under a range of potential retirement scenarios for NIPSCO's R.M. Schahfer Generating Station ("Schahfer") and Michigan City Generating Station ("Michigan City") based on that IRP analysis.

Figure 3:



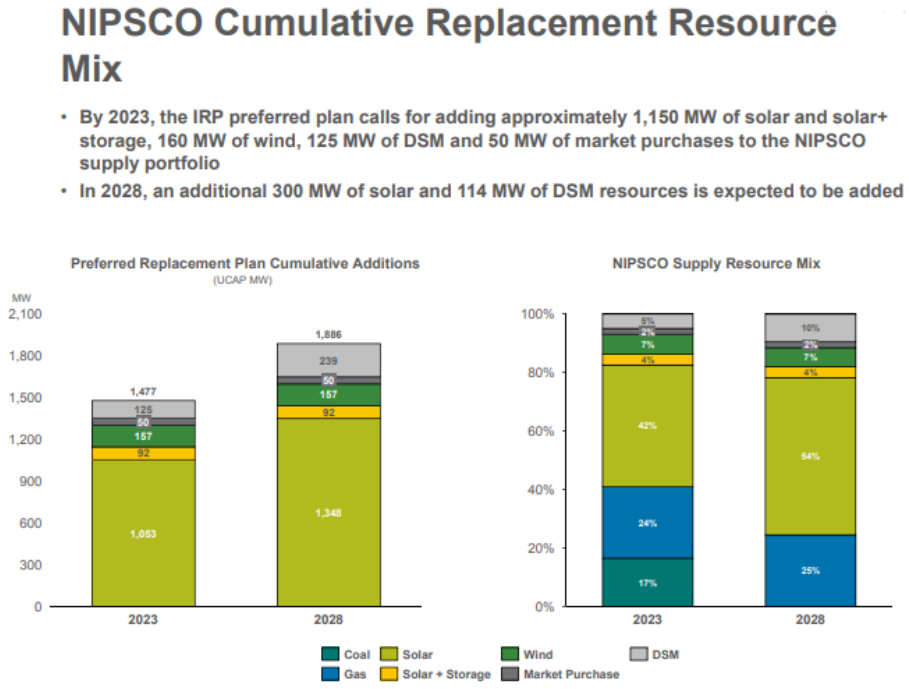
NIPSCO's 2018 IRP results indicate that the optimal path forward includes the medium term retirement of Schahfer Units 14, 15, 17 and 18 by 2023 and the retirement of Michigan City Unit 12 by year end 2028.[4]

Given the retirement analysis conclusions included in the 2018 IRP, NIPSCO's resource requirements are greater than the ~600 MW (UCAP) initially identified in the 2016 IRP. As a direct result of the expanded

[4] https://www.nipsco.com/about-us/integrated-resource-plan

resource requirements, the level of capacity and the count of projects designated for advancement to the definitive agreement stage of the RFP was broader than initially anticipated. Figure 4 identifies the composition of the optimal portfolio and the requirements and was used to finalize the quantity and composition of the portfolio of assets shortlisted through the RFP process.

Figure 4:



Q21. What was CRA's recommendation to NIPSCO?

A21. CRA recommended that NIPSCO advance a set of assets consistent with the IRP preferred plan to the definitive agreement phase of the process. Process

bidders were asked to hold firm bids though December 31, 2018. CRA's recommendations on advancement to the definitive agreement phase were subject to any potential resource constraints NIPSCO may have with respect to initiating commercial negotiations with counterparties in advance of that date. In my opinion, the RFP was performed in a transparent, fair and nondiscriminatory manner and the process used to solicit and evaluate proposals was executed consistent with the process as defined and envisioned by NIPSCO and CRA at the outset. Further, no bidder was given an undue advantage or preference in the All-Source RFP.

Q22. What was the first step in the two-party negotiations with the developers?

A22. After identifying for NIPSCO the assets recommended for advancement to the definitive agreement phase of the process, CRA communicated with each bidder notifying them of the process status and next steps. At that point, NIPSCO prioritized certain short-listed projects and initiated commercial negotiations with the highest priority counterparties.

Q23. Please discuss your recommendation for NIPSCO with regard to the acquisition of wind power?

A23. IRP modeling indicated a preference for wind resources as part of the preferred portfolio. In addition, NIPSCO was advised that the sites amenable for wind development within Indiana may be limited. All project proposals supported by Indiana wind projects showed positive NPV contributions. As a result, consistent with the IRP's preferred portfolio, all Indiana wind proposals submitted into the RFP process were recommended as assets to consider for advancement to the definitive agreement phase for further due diligence and analysis.

Q24. Were all Indiana wind projects considered equal priority?

A24. No. Part of the value offered by wind resources relates to production tax credits ("PTC") that are a function of a facility's in service date. Wind resources that can meet a 2020 in service date qualify for the maximum tax credits. Moving forward with those projects to ensure they meet the 2020 online deadline for maximum PTC qualification was considered the highest priority. Even within the set of 2020 wind projects, certain assets were prioritized by NIPSCO due to the deal economics and capacity constraints NIPSCO faces for finalizing commercial negotiations. Other projects including solar projects and wind projects targeting a 2021 online date were

considered lower priority because the economics of those projects were less time sensitive.

Q25. Which projects bid into the All-Source RFP had a target online date of 2020?

A25. There were seven (7) projects bid into the All-Source RFP with a target online date of 2020 – NextEra's Jasper Pulaski and Jordan Creek projects, EDPR's Rosewater project, APEX Roaming Bison, EON's Clinton, RES White Post and Calpine's Big Blue River project. Of these seven (7) projects, NIPSCO has focused to date on both NextEra projects as well as the EDPR and APEX bids.

Q26. What are Renewable Energy Credits ("RECs")?

A26. RECs are the property rights to the environmental benefits resulting from generating electricity using renewable energy sources (e.g., wind, solar, biomass, and geothermal).

Q27. How did NIPSCO evaluate the pricing with and without RECs?

A27. CRA evaluated RECs qualitatively. Certain proposals included the provision that RECs would accrue to the project developer rather than

NIPSCO. These proposals lost points in the evaluation versus projects where RECs were transferred to NIPSCO.

Q28. Why did CRA value the RECs qualitatively rather than quantitatively?

A28. The value of renewable energy was incorporated into the IRP process through evaluation of portfolio costs, risks, and carbon dioxide emissions. Given the large uncertainty associated with future regulation and the future costs of renewable resources, no explicit REC value was attributed to renewable projects in the IRP. The IRP's preferred portfolio was predominantly comprised of renewable resources even without considering the economic value RECs might provide. The RFP process then selected individual projects consistent with the IRP preferred portfolio. As a result, the RFP process evaluated wind assets versus other wind assets, solar projects versus other solar projects. Assuming a similar facility capacity factor for like assets, assets within the same asset class would generate a similar number of RECs per MW-year and therefore similar REC values. However, in cases where RECs accrue to the developer rather than to NIPSCO, there is a different but highly uncertain value offered by one project versus another. Because CRA wanted that difference in value reflected in the bid evaluation, but there was not a specific REC valuation

consistent with IRP modeling, projects that did not include RECs lost points through the Proposal Specific Risk scoring category. However, in all but one instance, Indiana wind projects did include RECs as part of the bid.

Q29. How did NIPSCO evaluate the contract term to be included in the wind PPAs?

A29. As part of the evaluation of the economics of each bid received, CRA calculated the NPV per MW-month of each bid received. The NPV valued each facility's expected energy and capacity output versus projections of the prevailing market value for energy and capacity in Indiana derived from IRP base case modeling. For PPA bids, these value streams were offset by the bid specific PPA price offered into the RFP. For build transfer agreement ("BTA") options, the market value of the output was offset by the asset purchase price and ongoing facility expenses. In cases where the projected value of the facility's output exceeded the price for that output included in the PPA or the BTA costs, the proposal would yield a positive NPV. In cases where the projected value of the facility's output was less than the price for that output included in the PPA or BTA costs, the proposal NPV would be negative. The sum of the discounted annual values offered by a PPA would be the total NPV for the proposal. This total NPV

was divided by the UCAP MW for the project multiplied by the number of months in the PPA term or the asset's expected life to yield a NPV per MW-month. Implicitly, the NPV per MW-month captures the total value offered across bids normalized by the bid's term length.

Q30. How did NIPSCO evaluate the fixed versus escalating pricing of the wind Proposals?

A30. The mechanics of the NPV calculation were identical between fixed and escalating PPA proposals. In many cases, developers offered a single project under both fixed and escalating pricing structures at NIPSCO's option. In these cases, the NPV was calculated both under fixed and variable pricing structures and the option that yielded the highest NPV per MW-month was included in the scoring of the bid.

Q31. Would the fixed versus variable PPA structure affect the facility dispatch?

A31. Each renewable facility's underlying dispatch into the MISO market was assumed to be the same under either a fixed or variable PPA structure. Since wind, solar and other similar projects have zero or near-zero variable

costs, the facilities will dispatch into the market at their maximum level regardless of the PPA pricing.

Q32. Did CRA consider the locational marginal price-related ("LMP") impacts of the wind Proposals?

A32. The prices included in the RFP NPV evaluation of bids were based on a single Indiana Hub price derived from IRP base case modeling. As a result, for this phase of the analysis, there was no distinction on the LMP for assets within LRZ6. However, I am aware that NIPSCO has conducted a nodal analysis of bids as part of the due diligence process during the definitive agreement phase to understand any potential congestion risk.

Q33. Is the proposed Jordan Creek Wind Energy PPA an economic option for meeting NIPSCO's retail electric load?

A33. Yes. The 2018 IRP identified that based on the current market economics and outlook, wind power represents an excellent resource option for NIPSCO and its customers over the expected useful life of a new wind facility. As illustrated in Confidential Attachment 3-D, of all the wind proposals that were submitted into the RFP, the Jordan Creek Project yielded the highest overall score based on the evaluation criteria used for

scoring the RFP bids with 817 total points. The Jordan Creek Project is the most mature project of all RFP bids for in development wind resources having already achieved four of the five identified development milestones used as part of the RFP scoring. Of the potential counterparties for in development wind resources, NextEra had performed the most extensive transmission analysis associated with their project and completed an N-1-1 contingency analysis of the Jordan Creek Project.[5] In addition, there were limited asset specific concerns for Jordan Creek; the facility only lost points for potential shared interconnection costs under some scenarios.

Q34. Does this conclude your prefiled direct testimony?

A34. Yes.

[5] An N-1-1 contingency analysis studies the impact of a sequence of events consisting of the initial loss of a single generator or transmission component followed by a system adjustments, followed by another loss of a single generator or transmission component.

VERIFICATION

I, Robert Lee, Vice President of Charles River Associates, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

Robert Lee

Dated: February 1, 2019

CRA Charles River Associates

ROBERT J. LEE

Vice President

M.S. Industrial Administration,
Carnegie Mellon University,

B.A. Mathematics,
Boston College

Mr. Lee is a Vice President in CRA's Auctions & Competitive Bidding Practice. During his consulting career, Mr. Lee has assisted numerous clients to develop structured sales and procurement channels in an array of industries and markets. He has managed structured transactions, acquisitions and divestitures in both traditional and competitive bidding environments. In addition, Mr. Lee has helped clients on a range of valuations and market analyses related to changes in market dynamics and market structure. Prior to joining CRA, Mr. Lee held senior staff positions at the PA Consulting Group and at Putnam, Hayes and Bartlett, Inc.

AUCTIONS AND COMPETITIVE BIDDING

Electricity

Duke Energy Ohio, Inc.

- Designed a competitive bidding process (CBP) to procure wholesale generation for retail Standard Service Offer (SSO) load for Duke Energy Ohio, Inc. covering the period from January 1, 2012 through May 31, 2018. The CBP used a clock auction format. The auction process was subject to approval by the Public Utilities Commission of Ohio (PUCO).

- Designed and managed a request for proposal process (RFP) to identify a supplier for the Percentage of income Payment Plan (PIPP) customer load of Duke Energy Ohio.

The Dayton Power and Light Company

- Designed a competitive bidding process (CBP) to procure wholesale generation for retail Standard Service Offer (SSO) load for Dayton Power and Light. The procurements covered the period from January 1, 2014 through May 31, 2017. The CBP used a clock auction format. The auction process and outcome were subject to approval by the Public Utilities Commission of Ohio (PUCO).

Duquesne Light Company

- Designed a competitive bidding process (CBP) to procure wholesale generation for retail provider of last resort (POLR VII) load for the Duquesne Light Company.

DTE Electric Company

- Managed an RFP process for DTE Electric Company (DTE). The RFP was designed to acquire a power plant to help DTE close an identified capacity shortfall. DTE acquired the East China combustion turbine from an affiliate under a process approved by FERC under affiliate transaction guidelines.

FirstEnergy Corporation

- Assisted in the design and ongoing execution of a competitive bidding processes to procure wholesale generation and capacity for retail Standard Service Offer (SSO) load of customers of FirstEnergy's Ohio Utilities — Cleveland Electric Illuminating Company, The Toledo Edison Company, and Ohio Edison Company. The auction process and outcome are subject to approval by the Public Utilities Commission of Ohio (PUCO).

- For FirstEnergy Service Company, assisted in designing and conducting a competitive bidding process using a hybrid clock auction and sealed-bid format to procure wholesale generation and capacity for retail Standard Service Offer (SSO) load to be delivered June 2009 through May 2011 to customers of FirstEnergy Ohio Utilities — Cleveland Electric Illuminating Company, The Toledo Edison Company, and Ohio Edison Company. Played a key role on the Auction Manager team including managing the mock auction and the live event. The successful auction procured more than $6 billion in supplies. The auction process and outcome were subject to approval by the Public Utilities Commission of Ohio (PUCO).

- Designed and managed a request for proposal process (RFP) to identify a supplier for the Percentage of income Payment Plan (PIPP) customer load of FirstEnergy's Ohio Utilities.

- Managed an RFP process for FirstEnergy's Monongahela Power (Mon Power) affiliate in West Virginia. The RFP was designed to acquire a power plant to help Mon Power close an identified capacity and energy shortfall.

- Managed an RFP process for Mon Power to divest a share of the Bath County pumped storage facility.

RWE

- Auction Manager for RWE's ongoing power supply auction serving major commercial and industrial customers in Europe. Currently working with RWE and the broader CRA auction team on the auction design framework, including all bidding rules, auction parameters, and bidder support documentation and tools. In addition, Mr. Lee helped to develop and test the customized auction software working with software engineering through the design and testing process. The auction process and outcome are subject to approval by the German cartel office (BKartA).

Trans Elect

- Part of CRA's Auction Manager team on an open season auction process for Trans Elect. The open season auction process used CRA's Auction Management System to successfully sell transmission capacity rights through an open and transparent bidding process. The auction process and outcome were subject to approval by the U.S. Federal Energy Regulatory Commission (FERC).

GE EFS

- Auction Manager for the Linden VFT open season auction process. With CRA's assistance, GE successfully auctioned incremental transmission capacity from PJM into New York's Zone J. Mr. Lee worked closely with GE and the broader CRA team to design and test the customized AMS auction software and to educate bidders on the auction design parameters as well as the VFT technology. The auction process and outcome were subject to approval by the U.S. Federal Energy Regulatory Commission (FERC).

Agriculture

Ocean Spray Cranberries

- Project Manager and Auction Manager for the development of an Internet-based trading platform for Ocean Spray Cranberries. The system, launched in the summer of 2009, represented a major innovation in an industry that lacked price transparency and adequate market signals for investment. Through the online system, Ocean Spray successfully is offering cranberry concentrate to major beverage producers worldwide.

Fonterra - GlobalDairyTrade

- Project Manager and Auction Manager for the development and administration of *global*DairyTrade, the Internet-based auction sales channel for a major international dairy cooperative. The auction-based system represents a major departure from the industry status quo and served as a mechanism for cost reduction, efficiency improvement, and increased market transparency for the supplier and its customers. Key responsibilities include contributions on the auction design, software development, customer training processes, and client communications.

ASSET VALUATION AND MARKET STRATEGY

Confidential Client

- Advised the successful bidder in the acquisition of a gas-fired combined cycle power plant located in a remote region of Pakistan. As part of El Paso's divestiture of its Asian power generating assets, Mr. Lee worked closely with a the buyer to value the portfolio of power sales, fuel supply and O&M contracts supporting the facility. Critical considerations included fuel supply risk, FX risk and the proper assessment of the threat of terrorism associated with the facility.

Confidential Client

- Worked closely with the management of a processed coal producer to identify the product's value versus alternative coal options. Established the breakeven value for the fuel under a range of alternative environmental, coal price and transportation cost scenarios. Helped establish the relevant geographic range under which the fuel could potentially compete and identified attractive utilities for targeted marketing activities. Identified alternative distribution strategies that would help mitigate transportation cost concerns.

Hoosier Energy

- Reviewed the NO_X SIP Call compliance plan for Hoosier Energy, a Midwestern G&T Cooperative. Worked closely with management to develop a new framework for evaluating environmental compliance options at Hoosier's principal coal-fired power stations. Identified key risk factors impacting the value of the cooperative's planned environmental expenditures, including the risk of domestic CO2 restrictions. Identified potential cost saving and risk mitigation strategies in association with pending changes in environmental policies. Proposed alternative allowance banking strategies that would reduce financial exposure associated with SIP investments.

PSEG

- Worked with management to evaluate the impact of a range of environmental scenarios on PSEG asset values. Mr. Lee modeled an array of 3P and 4P proposals and evaluated the likely response of market participants. The modeling exercise examined the impact of incremental environmental restrictions on regional and national new capacity builds, PCE retrofits and fuel selection. In addition, the CRA team quantified the impact of proposed or pending regulations on regional power market prices and on the prices for tradable emissions credits.

Triton Coal

- Advised the management of Triton Coal on antitrust issues associated with their divestiture of the Buckskin and North Rochelle coal mines located in the Wyoming portion of the Powder River Basin. Identified substitute products including coal from alternative producing basins and power generation from alternative fuels. Identified the market for Powder River Basin coal based on transportation access and costs as well as coal quality considerations. Evaluated bidders based on the potential impact of the acquisition on market concentrations. Balanced the bid price for resources versus the likelihood that a potential sale would withstand DOJ scrutiny.

Foster Wheeler

- Performed a strategic assessment of the international coal boiler market for Foster Wheeler. Identified key markets for growth in coal-fired power generation over the near, mid and long-term. Considered key issues such as resource availability, environmental policy uncertainties and power demand growth. Worked closely with Foster Wheeler Oy to identify attractive markets for their CFB coal-boiler marketing activities.

British Petroleum

- Examined the potential strategic impacts of btu convergence on coal and oil markets. The analysis evaluated the economics of coal-to-liquids, coal-to-gas and underground coal gasification. Identified regional discontinuities on project economics and participated in workshops designed to assess opportunities in the coal space and their impact on markets for oil, coal and power.

The Dayton Power and Light Company – AES Ohio Generation

- Quantified the reactive power revenue requirements for the combined fossil fleet of Dayton Power and Light and AES Ohio Generation.

TESTIMONY AND ADMINISTRATIVE PROCEEDINGS

PUCO Case No. 17-1263-EL-SSO. Testimony on behalf of the Duke Energy Ohio (Duke) related to Duke's application for authority to establish a Standard Service Offer pursuant to Section 4928.143, Revised Code, in the form of an Electric Security Plan.

Public Service Commission of West Virginia Case No. 17-0269-E-PC. Testimony on behalf of the Monongahela Power Company (Mon Power) in support of Mon Power's petition for approval of a generation resource transaction and related relief.

Monongahela Power Company, Allegheny Energy Supply Company, LLC (AE Supply). *FERC Docket EC17-88-000.* Submitted testimony in support of the proposed transfer of a generating asset from AE Supply to Mon Power.

PUCO Case No. 16-0395-EL-SSO. Testimony on behalf of the Dayton Power & Light Company (DP&L) related to DP&L's application for authority to establish a Standard Service Offer pursuant to Section 4928.143, Revised Code, in the form of an Electric Security Plan.

Dayton Power and Light Company, *et al*., *FERC Docket No. ER16-2569* Testimony in support of Dayton Power and Light Company's reactive power tariff.

AES Ohio Generation, LLC, *Docket No. FERC ER16-2570;* Testimony in support of AES Ohio Generation reactive power tariff.

DTE Electric Company, *et al*., *Docket No. FERC EC15-138*; in support of DTE's affiliate acquisition of the East China combustion turbine located in East China Township Michigan

PUCO Case No. 14-841-EL-SSO. Testimony on behalf of the Duke Energy Ohio, Inc. (Duke) related to Duke's application for authority to establish a Standard Service Offer pursuant to Section 4928.143, Revised Code, in the form of an Electric Security Plan.

Sixth Judicial Circuit in and for Pinellas County Florida; Case Number 2012-006187-SC. Testified on the structure and efficacy of a competitive bidding process designed to establish market values for settling automobile insurance claims

PUCO Case No. 12-426-EL-SSO. Testimony on behalf of the Dayton Power & Light Company (DP&L) related to DP&L's application for authority to establish a Standard Service Offer pursuant to Section 4928.143, Revised Code, in the form of an Electric Security Plan.

PUCO Case No. 11-3549-EL-SSO. Testimony on behalf of the Duke Energy Ohio, Inc. (Duke) related to Duke's application for authority to establish a Standard Service Offer pursuant to Section 4928.143, Revised Code, in the form of an Electric Security Plan.

PUCO Case No. 10-2586-EL-SSO. Testimony on behalf of the Duke Energy Ohio, Inc. (Duke) related to Duke's application for approval of a Market Rate Offer to conduct a competitive bidding process for Standard Service Offer electric generation supply.

Developed and presented PSEG and Exelon's joint claim for relief to the Oil Spill Liability Trust Fund, US Department of Homeland Security. Prepared the claim for damages associated with the temporary shut down of the Salem nuclear facility as a result of the November, 2004 Athos I oil spill.

PRESENTATIONS AND PUBLICATIONS

Brandeis University, Graduate School of International Business, lecturer on coal and environmental markets and energy market dynamics

National Public Radio (NPR), Marketplace, recurrent on air guest discussing coal, environmental markets and environmental policy

"Creating Markets and Structured Sales Channels", presented at the U.S. Apple Association Outlook 2010, Chicago, IL, August 19, 2010

"Not Your Father's Auction", Industry Week, April 2010

"A Better Way to Transact", Beverage Industry: Market Insights, May 2010

"NO_X Trading: Strategies for Electric Cooperatives"; with Anne Smith; Cooperative Research Network, National Rural Electric Cooperative Association; April 2003

EDUCATION

CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA
Graduate School of Industrial Administration
MSIA (MBA)

BOSTON COLLEGE Chestnut Hill, MA
College of Arts and Sciences
BA Mathematics

FOR IMMEDIATE RELEASE
May 14, 2018

FOR ADDITIONAL INFORMATION
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Director of External Communications
219-647-6556

NIPSCO TO EXPLORE RANGE OF OPTIONS TO MEET FUTURE ELECTRIC NEEDS

Request for proposals opened to consider all sources

MERRILLVILLE, Ind. – Northern Indiana Public Service Company (NIPSCO) has announced the opening of a request for proposals (RFP) to consider a combination of potential resources to meet the future electric needs of its customers.

"As the energy market and customer needs continue to evolve, it is important that we consider all options when determining a long-term plan that balances the needs of our customers and communities" said Violet Sistovaris, NIPSCO president. "This effort is consistent with our goal to focus on providing affordable, clean energy while maintaining flexibility for future technology and market changes."

The need for the future electric capacity follows the projection made by the company in its last Integrated Resource Plan (IRP) to retire 50 percent of its coal-fired electric generation by 2023, with its Bailly Generating Station on track to retire by the end of May 2018.

NIPSCO is considering all sources in the RFP process in conjunction with the company's 2018 IRP. The IRP process involves several months of analysis, public meetings and input from customers, consumer representatives, environmental organizations and other stakeholders.

The goal of the IRP is to identify a long-term plan for continuing to provide customers with cost-effective, reliable, flexible and sustainable supplies of electricity while addressing the inherent uncertainties and risks that exist in the electric industry.

Dispatchable and semi-dispatchable generation, renewables, demand response resources and contractual arrangements will be considered, as well as emerging technologies such as storage.

NIPSCO's current energy mix includes generation from natural gas and coal, hydroelectric generation, purchased wind power, customer-owned renewable generation, demand response, energy efficiency and other purchased power.

The RFP will close June 29, 2018 and more information can be found at http://www.nipsco-rfp.com.

About NIPSCO: *Northern Indiana Public Service Company (NIPSCO), with headquarters in Merrillville, Indiana, has proudly served the energy needs of northern Indiana for more than 100 years. As Indiana's largest natural gas distribution company and the second-largest electric distribution company, NIPSCO serves approximately 820,000 natural gas and 460,000 electric customers across 32 counties. NIPSCO is part of NiSource's (NYSE: NI) seven regulated utility companies. NiSource is one of the largest fully regulated utility companies in the United States, serving approximately 4 million natural gas and electric customers through its local Columbia Gas and NIPSCO brands. More information about NIPSCO and NiSource is available at NIPSCO.com and NiSource.com.*

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Confidential Attachment 3-C (Redacted)

Confidential Attachment 3-D (Redacted)