DIRECT TESTIMONY OF JAMES A. HUMMEL, II
WHOLESALE RENEWABLE MANAGER
ON BEHALF OF DUKE ENERGY INDIANA, LLC
CAUSE NO. 44932 REP 3 BEFORE THE
INDIANA UTILITY REGULATORY COMMISSION

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is James A. Hummel, II and my business address is 1000 East Main Street, Plainfield, Indiana.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed as Wholesale Renewable Manager by Duke Energy Business Services LLC. Duke Energy Business Services, LLC is a service company affiliate of Duke Energy Indiana, LLC ("Duke Energy Indiana" or "Company"). Duke Energy Indiana, LLC is a wholly-owned, indirect subsidiary of Duke Energy Corporation ("Duke Energy").

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. I received a Bachelor of Science in Accounting from Ball State University. I began my career at Duke Energy in 1989. Since my employment with the Company, I have held various financial and customer service positions supporting the Company and its affiliates. Prior to my current duties that I started in 2020, I held positions in Corporate Accounting, Fuels and Emission Allowance Accounting, External Reporting, Billing and Meter Data Management.

Q. PLEASE BRIEFLY DESCRIBE YOUR DUTIES AS WHOLESALE RENEWABLE MANAGER.

A. As Wholesale Renewable Manager, I am responsible for developing strategy and policies related to renewable energy.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I will provide an update on completion of the feasibility study assessing energy security options at the Crane Solar Facility and installation of a remote operable switch, as discussed in Cause No. 44734. I will also provide the annual update on the Camp Atterbury Microgrid and Nabb Battery Storage Projects, as approved in Cause No. 45002. Lastly, I will provide an update on the Crane Battery project which was approved in the Company's recent retail rate case in Cause No. 45253.

II. UPDATE ON CRANE SOLAR FEASIBILITY STUDY

Q. PLEASE DESCRIBE THE PURPOSE OF THE FEASIBILITY STUDY THAT WAS APPROVED IN CAUSE NO. 44734.

A. As discussed in Ms. Birmingham-Byrd's direct testimony in that proceeding, in lieu of cash payment for the site lease, Duke Energy Indiana agreed to study the feasibility of incorporating future grid-tied energy storage technologies for the purpose of maintaining electric services for critical loads.

Q. HAS THE FEASIBILITY STUDY BEEN COMPLETED?

A. Yes, it was completed on August 30, 2018, and shared with the Indiana Office of the Utility Consumer Counselor on September 5, 2018.

Q. PLEASE SUMMARIZE THE FINDINGS OF THE FEASIBILITY STUDY.

A. The Crane Microgrid Feasibility Study serves as a guide for Duke Energy Indiana and the Department of the Navy to develop a project plan to support additional energy infrastructure at NSA Crane, which will provide both bulk system and local reliability benefits.

The study identified new load shedding infrastructure, generation and storage assets, and control and communications infrastructure required to meet the study team's goals and objectives. Of note, three generation and storage assets would be required to provide electrical service to NSA Crane microgrid in the event of a major grid outage: 1) the existing 17 MW^{ac} Crane Solar Facility owned by Duke Energy, 2) a new battery energy storage system ("BESS"), and 3) new diesel generators. Combined with the existing Crane Solar Facility, these two assets will provide grid benefits when grid-tied and provide backup power to Crane during major outage events.

As approved by the Commission in Cause No. 45253, the Company added the BESS assets (see further discussion below). In a separate yet coordinated scope of work, the Navy may source the remaining diesel generators.

Q. WHAT ARE THE NEXT STEPS REGARDING INCORPORATING FUTURE GRID-TIED ENERGY STORAGE TECHNOLOGIES AT THE CRANE SITE?

A. Duke Energy Indiana has partnered with the U.S. Navy to support mutual renewable energy and energy resiliency goals. The 17 MW solar PV facility deployed at NSA Crane and owned and operated by Duke Energy Indiana was the first step in realizing those goals. In addition to building utility-scale renewable energy projects, this partnership created opportunities for developing and deploying additional distributed

energy technologies – including battery storage – that are beneficial to Duke Energy Indiana's customers. Through coordination with Crane and the U.S. Navy, Duke Energy Indiana installed a 5 MW BESS on-base that will support the bulk power system and enable microgrid capabilities, thus enhancing energy resiliency for Crane. The BESS is a regulated grid-asset owned and operated by Duke Energy Indiana, similar to the 17 MW solar facility on-base. The BESS is located within the existing solar lease footprint, thus reducing project costs.

Q. WHEN WAS THE BESS PLACED IN SERVICE?

A. The 5 MW BESS was placed in service in December 2020.

Q. ARE THERE ANY OTHER UPDATES REGARDING THE PROJECTS AT CRANE?

A. Yes. Along with the Microgrid Feasibility Study, Duke Energy Indiana committed to installing remote operable switching capability at Crane to further support the base's resiliency goals. Duke Energy Indiana also verified through the Microgrid Feasibility Study that the remote operable switching was consistent with the results and overall scope of work to ultimately enhance resiliency for NSA Crane. Duke Energy Indiana placed the 5 MW BESS into service in December 2020. Work on the remote capable switch and its functioning with the BESS will continue into 2021.

Q. PLEASE EXPLAIN WHAT TYPES OF O&M COSTS THE COMPANY INCURS FOR THE CRANE SOLAR FACILITY.

A. Maintenance activities required for the Crane Solar Facility include remote performance monitoring; resolving any outage or system performance concerns; replacement of panels

as needed due to breakage or performance loss; routine maintenance of the inverters and power transformers; repair of electrical connections, and routine vegetative management, including mowing and vegetation control. On-going compliance preventative-maintenance activities are performed on a weekly basis and repairs are performed when necessary. At a minimum, weekly visual drive thru checks are performed for any damage on the site due to animals, weather, *etc*.

Q. IS THE COMPANY SEEKING RECOVERY OF O&M COSTS FOR THE CRANE SOLAR FACILITY?

A. Yes. As stated in the Commission's Final Order for Cause No. 45253 dated July 30, 2020, and the Company's Step 1 Compliance filing the Crane Solar Facility was moved into base rates. Duke Energy Indiana is reconciling O&M costs from October 2018 through July 2020 within this Rider for the final time. O&M activities are primarily managed out of the Company's Wheatland Generating Station and a technician(s) will service the facility according to an established maintenance plan, as needed. Actual O&M amounts were provided to Ms. Sieferman for use in her rate calculations.

Q. HAS THE CRANE SOLAR FACILITY BEEN PRODUCING POWER TO THE GRID?

A. Yes. A summary of the of the generation output of the Crane Solar Facility from January 1, 2020 through December 31, 2020, is referenced below:

	Generation Produced (kWh in thousands)
January	1,196.000
February	1,492.000
March	2,031.000
April	2,779.000
May	2,925.000
June	3,488.000
July	3,380.000
August	3,142.000
September	2,868.000
October	2,031.000
November	1,934.000
December	84.000
Total	27,350.000

Q. HAS NSA CRANE PURCHASED ENERGY DIRECTLY FROM THE CRANE SOLAR FACILITY DURING THE REPORTING PERIOD? IF SO, WHAT WAS THE AMOUNT OF GENERATION AND DURATION?

A. No events occurred during this reporting period.

Q. WERE ANY PROCEEDS GENERATED FROM THE SALE OF RENEWABLE ENERGY CREDITS ("RECs") ASSOCIATED WITH THE CRANE SOLAR FACILITY?

A. During the October 1, 2018 through September 30, 2020 period, the Company realized proceeds, net of broker fees, from the sale of approximately 48,000 Crane Solar RECs totaling $505,340.

III. UPDATE ON CAMP ATTERBURY MICROGRID AND NABB BATTERY STORAGE

Q. PLEASE DESCRIBE THE COST RECOVERY APPROVED IN THE FINAL ORDER IN CAUSE NO. 45002.

A. The Commission approved both the Camp Atterbury Microgrid and Nabb Battery Storage Projects ("Projects") as clean energy projects eligible for incentives under Indiana Code § 8-1-8.8-11. As such, the Commission approved: (1) timely recovery of the associated construction and operating expenses through Duke Energy Indiana's Renewable Energy Project Revenue Adjustment, Rider 73; (2) deferral of costs associated with the Projects until such costs are reflected in Petitioner's retail rates and charges; (3) utilization of the new depreciation rates of 8.33% based on the expected 12-year life of the cells and monitoring equipment related to the battery storage plant portion of the Projects; and 4.00% based on the expected 25-year life of the other battery-related equipment related to the battery storage plant portion of the Projects until such time as a new depreciation rate supported by a depreciation study is approved by the Commission in a future proceeding; and (4) utilization of the 3.33% depreciation rate for the solar

component of the Camp Atterbury Microgrid project. Ms. Sieferman will discuss the accounting and ratemaking aspects of the Camp Atterbury Microgrid and Nabb Battery projects in her pre-filed testimony.

The Commission found that any future REC proceeds and Investment Tax Credits shall be used to reduce the total Rider 73 revenue requirements.

Q. DID THE FINAL ORDER IN CAUSE NO. 45002 REQUIRE ANY REPORTING ON THE CAMP ATTERBURY MICROGRID AND NABB BATTERY STORAGE PROJECTS?

A. Yes. The Company is required to report annually on the competitive procurement and construction of the Camp Atterbury Microgrid and Nabb Battery Projects.

Q. PLEASE PROVIDE AN UPDATE ON THE CAMP ATTERBURY PROJECT.

A. In March 2018, Duke Energy Indiana issued a request for proposals ("RFP") to bidders with the potential capability to fulfill technical and commercial requirements, as well as the Company's financial and safety requirements. The Company then assessed bidders based on relevant experience, functional competence, references, and expertise. During the evaluation, Duke Energy Indiana facilitated multiple proposal review sessions with stakeholders and reference checks. After careful consideration, the Company awarded the Engineering, Procurement, and Construction and O&M contracts to Doosan GridTech.

Q. WERE THERE ANY COSTS INCURRED AS OF THE SEPTEMBER 30, 2020 CUTOFF FOR THIS PROCEEDING?

A. The project costs booked as of September 30, 2020 are approximately $14,013,652, excluding AFUDC.

Q. WHEN DID CONSTRUCTION BEGIN?

A. Construction of the Camp Atterbury Microgrid began in March 2019.

Q. WHEN WAS THE PROJECT PLACED-IN-SERVICE?

A. The Camp Atterbury Microgrid was placed-in-service in November 2019. Per the Commission's Final Order in Cause No. 45253 dated July 30, 2020, and the Company's Step 1 Compliance filing the Camp Atterbury project was moved into base rates. One final segment of the Camp Atterbury Microgrid project was not completed in 2020, related to the islanding function. Costs associated with this final segment will continue to be included in Rider 73 until the Company's next retail base rate case.

Q. PLEASE PROVIDE AN UPDATE ON THE NABB BATTERY PROJECT.

A. In March 2018, Duke Energy Indiana issued a RFP to bidders with the potential capability to fulfill technical and commercial requirements, as well as the Company's financial and safety requirements. Duke Energy Indiana assessed bidders based on relevant experience, functional competence, references, and expertise. During the evaluation, Duke Energy Indiana facilitated multiple proposal review sessions with stakeholders and reference checks. After careful consideration, Duke Energy awarded the Engineering, Procurement, and Construction and O&M contracts to Doosan GridTech.

Q. WERE THERE ANY COSTS INCURRED AS OF THE SEPTEMBER 30, 2020 CUTOFF FOR THIS PROCEEDING?

A. The project costs booked as of September 30, 2020 are approximately $7,632,761, excluding AFUDC.

Q. WHEN DID CONSTRUCTION BEGIN?

A. Construction of the Nabb Battery began in June 2019.

Q. WHEN WAS THE PROJECT PLACED- IN-SERVICE?

A. The Nabb Battery was placed-in-service in December 2020. Per the Commission's Final Order for Cause No. 45253 dated July 30, 2020, and the Company's upcoming Step 2 Compliance filing the Nabb Battery project will be moved into base rates. One final segment of the Nabb Battery project was not completed in 2020, related to improving reliability at the Nabb Substation. Costs associated with this final segment will continue to be included in Rider 73 until the Company's next retail base rate case.

IV. CONCLUSION

Q. ARE YOU SPONSORING ANY EXHIBITS IN THIS PROCEEDING?

A. No.

Q. DID YOU PROVIDE THE PROJECT COSTS INCURRED THROUGH SEPTEMBER 30, 2020 TO MS. SIEFERMAN FOR HER USE IN THIS PROCEEDING?

A. Yes, I did.

Q. DOES THIS CONCLUDE YOUR PREFILED TESTIMONY AT THIS TIME?

A. Yes.

VERIFICATION

I hereby verify under the penalties of perjury that the foregoing representations are true to the best of my knowledge, information and belief.

Signed: _____ Dated: 1/29/2021

James A. Hummel, II