STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF DUKE ENERGY INDIANA, LLC PURSUANT TO IND. CODE §§ 8-1-2-42.7 AND 8-1-2-61, FOR (1) AUTHORITY TO MODIFY ITS RATES AND CHARGES FOR ELECTRIC UTILITY SERVICE THROUGH A STEP-IN OF NEW RATES AND CHARGES USING A FORECASTED TEST PERIOD; (2) APPROVAL OF NEW SCHEDULES OF RATES AND CHARGES, GENERAL RULES AND REGULATIONS, AND RIDERS; (3) APPROVAL OF A FEDERAL MANDATE CERTIFICATE UNDER IND. CODE § 8-1-8.4-1; (4) APPROVAL OF REVISED ELECTRIC DEPRECIATION RATES APPLICABLE TO ITS ELECTRIC PLANT IN SERVICE; (5) APPROVAL OF NECESSARY AND APPROPRIATE ACCOUNTING DEFERRAL RELIEF; AND (6) APPROVAL OF A REVENUE DECOUPLING MECHANISM FOR CERTAIN CUSTOMER CLASSES	)	**CAUSE NO. 45253**

VERIFIED DIRECT TESTIMONY
OF
ANDREW S. RITCH

On Behalf of Petitioner,
DUKE ENERGY INDIANA, LLC

Petitioner's Exhibit 24

July 2, 2019

DIRECT TESTIMONY OF ANDREW S. RITCH
WHOLESALE RENEWABLE MANAGER
DUKE ENERGY BUSINESS SERVICES LLC
ON BEHALF OF DUKE ENERGY INDIANA, INC.
BEFORE THE INDIANA UTILITY REGULATORY COMMISSION

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Andrew S. Ritch, and my business address is 139 East 4th Street, Cincinnati, Ohio.

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

A. I am employed by Duke Energy Business Services LLC, the service company affiliate of Duke Energy Indiana, Inc. ("Duke Energy Indiana," "Petitioner," or "Company") as a Wholesale Renewable Manager.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL EXPERIENCE.

A. I have a Bachelor's degree from Colby College in Waterville, ME and an MBA from the F.W. Olin Graduate School of Business at Babson College in Wellesley, MA.

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.

A. I have worked for Duke Energy and its predecessor companies since 2002. My career began in a management training program, leading efforts in Strategic Sourcing and Corporate Budgeting and Financial Forecasting. In 2006, I moved to a Senior Analyst role in Investor Relations. Prior to my current role, I was the Director of Corporate Strategy and Business Planning for the U.S. Franchised Electric and Gas Businesses.

Q. WHAT ARE YOUR PRIMARY RESPONSIBILITIES AS WHOLESALE RENEWABLE MANAGER?

A. I am responsible for providing overall strategy, policy and direction for renewable energy assets within Duke Energy's Midwest regulated businesses, including Duke Energy Indiana.

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

A. The purpose of my testimony is to support Duke Energy Indiana's request for a base rate adjustment. My testimony will describe the Company's solar generation assets, battery storage projects, and microgrid projects. I will also discuss new generation resources capital expenditure changes between 2018-2020.

II. CRANE SOLAR FACILITY AND MICROGRID

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF THE CRANE SOLAR FACILITY.

A. In Cause No. 44734, Duke Energy Indiana was granted a CPCN for the construction of a 17.25MW AC solar generation plant located at the NSA Crane base near Bloomington, Indiana. This facility interconnects to Duke Energy Indiana's 69 kV transmission line and is bid into the Midcontinent Independent System Operator ("MISO") in the same way as other Duke Energy Indiana-owned generation. The Crane facility was placed into service in late January 2017 and is performing as anticipated with regard to capacity, providing clean energy to the Company's customers.

Q. IS THE CRANE SOLAR FACILITY GENERATING POWER TO THE GRID?

A. Yes.

Q. WHAT IS THE CURRENT GENERATION OUTPUT OF THE SOLAR GENERATION SYSTEM?

A. For the 12 months ended December 31, 2018, the Crane Solar Facility generated a total of 28,093,000 kWh.

Q. IN YOUR OPINION, IS THE CRANE SOLAR FACILITY USED AND USEFUL IN SUPPLYING SOLAR GENERATION TO DUKE ENERGY INDIANA'S RETAIL CUSTOMERS?

A. Yes. The Crane solar facility is commercially operational and provides clean, carbon free generation to the benefit of Duke Energy Indiana customers. As such, it is my opinion that this generation is used and useful in serving our customers.

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. Doosan GridTech was hired to facilitate the study and worked closely with the

Navy and Duke Energy Indiana to: 1) identify Navy and Duke Energy Indiana objectives, 2) assess the feasibility of potential microgrid solutions, 3) provide a conceptual design, and 4) recommend an implementation plan for installing and operating the necessary equipment.

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. Duke Energy Indiana is well-positioned to install a BESS on-base that could support the bulk power system and enable Microgrid capabilities, as well as enhance energy resiliency for Crane. The future BESS will be a regulated grid-asset owned and operated by Duke Energy Indiana, similar to the existing Crane Solar Facility, as well as the approved Camp Atterbury Microgrid and Nabb Battery facilities, approved in Cause No. 45002 and discussed below. 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.

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

A. Duke Energy Indiana is currently evaluating the feasibility and constraints of a 5 MW BESS to be located adjacent to the existing 17 MW solar array. Unless otherwise determined, the BESS will be subject to an interconnection agreement, the existing lease

conditions, and will require applicable corporate and regulatory approval prior to construction. If interconnection is feasible and assuming there would be no delays to the project schedule due to interconnection, siting issues, or the appropriate approvals, the BESS could be commissioned in 2020.

Q. ARE THERE ANY OTHER UPDATES REGARDING THE MICROGRID FEASIBILITY STUDY?

A. Yes. Along with the Microgrid Feasibility Study, Duke Energy Indiana has committed to installing remote operable switching capability at Crane to further support the base's resiliency goals, as approved by the Commission in Cause No. 44734. 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. In compliance with the Company's project management standards, efficient resource scheduling, project planning, as well as the shared interest of Duke Energy Indiana and the Navy in limiting the number of line outages at this location, Duke Energy Indiana is tentatively planning for all switch-related work, including the remote operation of the switch, to be coordinated with the potential future BESS project at the base, as opposed to scheduling resources multiple times to work at this location.

Q. DID DUKE ENERGY INDIANA DECIDE TO MOVE FORWARD WITH ANY PROJECTS IDENTIFIED IN THE CRANE MICROGRID FEASIBILITY STUDY?

A. Yes. Duke Energy Indiana plans to install a 5 MW BESS to be located adjacent to the existing 17 MW solar array.

Q. PLEASE DESCRIBE THE CRANE BATTERY PROJECT.

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 plans to install 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 will be a regulated grid-asset owned and operated by Duke Energy Indiana, similar to the 17 MW solar facility on-base. The BESS will be located within the existing solar lease footprint, thus reducing project costs.

Q. WHAT ARE THE BENEFITS OF THE CRANE BATTERY PROJECT?

A. This project will enhance reliability of service for customers and provide ancillary services, such as Regulating Reserves, to MISO. In return for the lease with the Navy for the land necessary to construct the project, the Navy can access the existing solar facility and new battery (Microgrid) during a catastrophic, regional grid event. During an event in which energy produced by the solar array and the battery services cannot be transmitted to the commercial grid, the Microgrid can provide backup power to critical customer loads on the base. Crane will continue to pay for service through its standard tariff rate whether the assets are grid-tied or in island-mode.

Revenues realized by Duke Energy Indiana for providing such services to MISO will benefit Duke Energy Indiana customers. Like other Company-owned generation and battery storage, revenues received from MISO for the Crane Battery, net of any related MISO costs or energy purchases, would flow back to customers through an appropriate rate mechanism.

Any Investment Tax Credit ("ITC") value that Duke Energy Indiana receives from its investment in the project will benefit customers by reducing revenue requirements over the depreciable life of the property. Duke Energy Indiana believes this project and other battery storage investments are also consistent with recent stakeholder feedback. The utility is uniquely positioned to control and adjust the function of microgrids to optimize their value for the benefit of customers and the grid.

Q. WHEN DO YOU EXPECT CONSTRUCTION TO BEGIN?

A. Duke Energy Indiana expects construction of the Crane Battery to begin in June 2020.

Q. WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?

A. The Company expects the Crane Battery to be placed-in-service in December 2020. See Table 1 for the currently projected construction timeline.

Table 1

Crane Microgrid Construction Schedule	
Activity Name	**Milestone Date**
Engineering, Procure, Construction RFP	December 2019
Construction Mobilization	June 2020
Final Completion	December 2020

Q. WHAT IS THE CURRENT COST ESTIMATE FOR THE CRANE MICROGRID?

A. Currently, the overall estimate is approximately $10 million.

Q. PLEASE DESCRIBE THE MAIN COMPONENTS OF THE COST ESTIMATE.

A. The Crane Battery has four main components: (1) equipment: batteries, inverters and balance of plant components; (2) engineering and construction; (3) interconnection; and (4) site control and communications infrastructure.

Q. PLEASE EXPLAIN THE PROCESS DUKE ENERGY INDIANA WILL UNDERTAKE TO SELECT ITS CONTRACTORS FOR THIS PROJECT.

A. As project development efforts continue to progress, a formal RFP will be issued to providers who are best suited to successfully execute this project. In addition, Duke Energy Indiana will comply with the provisions of Indiana Code § 8-1-8.5 that requires the Company to use a contractor in the engineering, procurement or construction of the project that 1) is subject to Indiana unemployment taxes and 2) is selected by the public utility through bids solicited in a competitive procurement process.

Q. DO YOU BELIEVE THE COST ESTIMATE IS REASONABLE? PLEASE EXPLAIN.

A. Yes, I do. The Company's Class 5 estimate for this project is based upon realistic assumptions given the stage of project development, current market conditions, and the Company's experience constructing similar projects.

III. 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, Standard Contract Rider No. 73 ("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.

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

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. The expertise and pricing provided by Doosan GridTech will ensure the Microgrid Project is completed in a timely and professional manner at an acceptable and competitive cost.

Q. HAS CONSTRUCTION BEGUN?

A. Yes. Duke Energy Indiana began construction of the Camp Atterbury Microgrid in March 2019.

Q. WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?

A. Duke Energy Indiana expects the Camp Atterbury Microgrid to be placed-in-service in October 2019.

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. The expertise and pricing provided by Doosan GridTech will ensure the project is completed in a timely and professional manner at an acceptable cost.

Q. HAS CONSTRUCTION BEGUN?

A. Yes. Duke Energy Indiana began construction of the Nabb Battery in June 2019.

Q. WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?

A. Duke Energy Indiana expects the Nabb Battery to be placed-in-service in November 2019.

IV. TIPPECANOE SOLAR POWER PLANT

Q. PLEASE DESCRIBE THE TIPPECANOE SOLAR POWER PLANT THAT DUKE ENERGY INDIANA HAS PLANNED WITH THE PURDUE RESEARCH FOUNDATION.

A. Duke Energy Indiana plans to construct a 1.6 MW-AC solar plant at Purdue Research Foundation's ("PRF") Discovery Park District ("Discovery Park") in West Lafayette. The distributed energy project will provide all Duke Energy Indiana customers clean, renewable energy while supporting the economic development and sustainability goals of the Discovery Park. This solar project will set the stage for sustainable land use developments at Discovery Park while diversifying Duke Energy Indiana's fuel mix with emission-free, 100% renewable energy generation resource.

Duke Energy Indiana will lease approximately ten acres of land from PRF. Duke Energy Indiana has contracted with Carmel, Indiana-based Telamon as the Engineering, Procurement, and Construction ("EPC") firm to build the solar plant. Once constructed, Duke Energy Indiana will own and operate the new solar plant. The plant will interconnect to a 12.47 kV distribution line.

Q. IS THE TIPPECANOE SOLAR POWER PLANT A "CLEAN ENERGY RESOURCE" UNDER INDIANA CODE § 8-1-37-4?

A. Yes.

Q. WHEN DO YOU EXPECT CONSTRUCTION TO BEGIN?

A. Duke Energy Indiana expects construction of the Tippecanoe Solar Power Plant to begin in July 2019.

Q. WILL DUKE ENERGY INDIANA PROVIDE NOTICE TO THE COMMISSION PURSUANT TO INDIANA CODE § 8-1-8.5-7 PRIOR TO CONSTRUCTION?

A. Yes. Petitioner's Exhibit 24-A (ASR) serves as Duke Energy Indiana's notice prior to construction.

Q. WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?

A. The Company expects the Tippecanoe Solar Power Plant to be placed-in-service by December 31, 2019. See Table 2 below for a more detailed projected construction schedule.

Table 2

Tippecanoe Solar Power Plant Construction Schedule	
Activity Name	**Milestone Date**
Notice to Proceed	Agreement Effective Date
Permit Drawing package to Duke Energy for Review	May 17, 2019
Duke Energy Review Comments Deadline	May 21, 2019
Permits filed	May 28, 2019
Permits Approved	June 28, 2019
Mobilization	July 8, 2019
Placed in Service	September 20, 2019
Substantial Completion	October 18, 2019
Project Completion	December 2019

Q. WHAT ARE THE BENEFITS OF THIS PROJECT?

A. The distributed energy resource will provide all Duke Energy Indiana's customers with carbon free, renewable energy and is an incremental step toward diversifying Duke Energy Indiana's generation portfolio to include more clean energy resources. Additionally, the solar power plant's location will support the Discovery Park's mission to advance Purdue University in the quest for sustainable engagement. The project supports Discovery Park's master plan to capitalize on high-performance technologies to create a dynamic community that showcases innovative and sustainable building and land use concepts through its designed elements.

Q. WHAT IS THE CURRENT COST ESTIMATE FOR THE TIPPECANOE SOLAR POWER PLANT?

A. Currently, the overall estimate is approximately $3.5 million. This amount does not include an estimate of allowance of funds used during construction ("AFUDC").

Q. PLEASE DESCRIBE THE MAIN COMPONENTS OF THE COST ESTIMATE.

A. Please see Petitioner's Confidential Exhibit 24-B (ASR) for a breakdown of the major components of the cost estimate.

Q. PLEASE EXPLAIN THE PROCESS DUKE ENERGY INDIANA UNDERTOOK TO SELECT ITS CONTRACTOR FOR THIS PROJECT.

A. Duke Energy Indiana's supply chain organization conducted a competitive Request for Proposals to identify the Engineering, Procurement, Construction ("EPC") contractor for this project. The EPC will design, procure all equipment and construct the facility. After evaluating the bids, Duke Energy Indiana selected Carmel, Indiana based Telamon Enterprise Ventures, based on its overall solar experience, Indiana solar experience,

regional labor familiarity, and competitive pricing. The EPC contract is a fixed price and firm schedule contract with a target commercial date of December 2019. Duke Energy Indiana's distribution organization will manage the electrical interconnection work required to connect the facility to the distribution grid.

Q. DO YOU BELIEVE THE COST ESTIMATE IS REASONABLE? PLEASE EXPLAIN.

A. Yes, the cost estimate is reasonable. It is a fixed price, firm schedule contract where the EPC is responsible for all aspects of the facility include engineering design, equipment procurement, and constructing the facility. The project also has an interconnection agreement with Duke Energy Indiana distribution to connect the solar facility to the electrical grid.

Q. IS THE TIPPECANOE SOLAR POWER PLANT A PROJECT THAT MEETS THE REQUIREMENTS OF INDIANA CODE § 8-1-8.5-7?

A. Yes.

V. B-LINE HEIGHTS SOLAR POWER PLANT

Q. PLEASE DESCRIBE THE B-LINE HEIGHTS SOLAR POWER PLANT PROJECT.

A. Duke Energy Indiana plans to construct a 112 kW-AC solar canopy at the B-Line Heights Apartments, an affordable housing complex in Bloomington. The distributed energy project will provide all Duke Energy Indiana customers with clean, renewable energy.

Duke Energy Indiana has contracted with Carmel, Indiana-based Telamon as the PC firm to construct the parking canopy as part of the 34-unit housing development. The plant will interconnect to a 12.47 kV distribution line.

Q. IS THE B-LINE HEIGHTS SOLAR POWER PLANT A "CLEAN ENERGY RESOURCE" UNDER INDIANA CODE § 8-1-37-4?

A. Yes.

Q. HAS CONSTRUCTION BEGUN?

A. Yes. Duke Energy Indiana began construction of the B-Line Heights Solar Power Plant in June 2019.

Q. DID DUKE ENERGY INDIANA PROVIDE NOTICE TO THE COMMISSION PURSUANT TO INDIANA CODE § 8-1-8.5-7 PRIOR TO CONSTRUCTION?

A. Yes. Petitioner's Exhibit 24-C (ASR) was provide to the Commission on May 21, 2019.

Q. WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?

A. The Company expects the B-Line Heights Solar Power Plant to be placed-in-service by October 2019. See Table 3 below for a more detailed projected construction schedule.

Table 3

B-Line Heights Solar Power Plant Construction Schedule	
Activity Name	**Milestone Date**
Notice to Proceed	Agreement Effective Date
Permit Drawing package to Duke Energy for Review	April 25, 2019
Duke Energy Review Comments Deadline	April 28, 2019
Permit filed with City of Bloomington	May 2, 2019
Permits Approved	May 30, 2019
Phase 1 First Mobilization (Foundations)	June 18, 2019
Underground and Canopy Foundation Work Complete	June 20, 2019
Phase 2 Second Mobilization	August 19, 2019
Placed in Service	September 23, 2019
Substantial Completion	October 2, 2019
Project Completion	October 2019

Q. WHAT ARE THE BENEFITS OF THE BLOOMINGTON SOLAR PROJECT?

A. The project's location in Bloomington, Indiana helps demonstrate Duke Energy Indiana's commitment to identifying innovative ways to support renewable energy generation in more densely populated urban areas and supports the City of Bloomington's renewable and affordable housing goals.[1]

Q. WHAT IS THE CURRENT COST ESTIMATE FOR THE B-LINE HEIGHTS SOLAR POWER PLANT?

A. Currently, the overall estimate is over $470,000. This amount does not include an estimate of allowance of funds used during construction ("AFUDC").

Q. PLEASE DESCRIBE THE MAIN COMPONENTS OF THE COST ESTIMATE.

[1] https://bloomington.in.gov/sites/default/files/2017-05/executive_summary_ctp_redevelopment_strategy.pdf

A. Please see Petitioner's Confidential Exhibit 24-D (ASR) for a breakdown of the major components of the cost estimate.

Q. PLEASE EXPLAIN THE PROCESS DUKE ENERGY INDIANA UNDERTOOK TO SELECT ITS CONTRACTOR FOR THIS PROJECT.

A. Duke Energy Indiana's supply chain organization conducted a competitive Request for Proposals to identify the EPC contractor for this project. The EPC design, procure all equipment and construct the facility. After evaluating the bids, Duke Energy Indiana selected Carmel, Indiana based Telamon Enterprise Ventures, based on its overall solar experience, Indiana solar experience, regional labor familiarity, and competitive pricing. The EPC contract is a fixed price and firm schedule contract with a target commercial date of September 2019. Duke Energy Indiana's distribution organization will manage the electrical interconnection work required to connect the facility to the distribution grid.

Q. DO YOU BELIEVE THE COST ESTIMATE IS REASONABLE? PLEASE EXPLAIN.

A. Yes, the cost estimate is reasonable as it is a fixed price, firm schedule contract where the EPC is responsible for all aspects of the facility include engineering design, equipment procurement, and constructing the facility. The project also has an interconnection agreement with Duke Energy Indiana distribution to connect the solar facility to the electrical grid.

Q. IS THE B-LINE HEIGHTS SOLAR POWER PLANT A PROJECT THAT MEETS THE REQUIREMENTS OF INDIANA CODE § 8-1-8.5-7?

A. Yes.

VI. PRODUCTION CAPITAL EXPENDITURES

Q. ARE YOU SPONSORING THE POWER PRODUCTION CAPITAL EXPENDITURES IN THIS FORECAST?

A. Yes. I am sponsoring only the portion of the Power Production Capital Expenditures related to New Generation Resources. Duke Energy Indiana witnesses Mr. Cecil Gurganus, Mr. Timothy Thiemann, and Mr. James Michael Mosley will also be sponsoring portions of the Power Production Capital Expenditures forecasts, as it relates directly to their testimony.

Q. WHAT LEVEL OF NEW GENERATION RESOURCES POWER PRODUCTION CAPITAL EXPENDITURES ARE REFLECTED IN DUKE ENERGY INDIANA'S 2020 FORECAST?

A. Duke Energy Indiana's 2020 New Generation Resources Power Production Capital Expenditures Forecast is $42 million.

Q. HOW DOES THE 2020 NEW GENERATION RESOURCES POWER PRODUCTION CAPITAL EXPENDITURES FORECAST COMPARE TO THE NEW GENERATION RESOURCES POWER PRODUCTION CAPITAL EXPENDITURES BUDGET FOR 2019 AND THE ACTUAL 2018 NEW GENERATION RESOURCES POWER PRODUCTION CAPITAL EXPENDITURES?

A. A comparison of the Forecasted 2020 New Generation Resources Power Production Capital expenditures to the 2019 Budget and 2018 Actual New Generation Resources Power Production Capital Expenditures is shown in the table below.

Table 4

$ in Millions	2018 Actual	2019 Budget	2020 Forecast
Power Production Capital Expenditures - New Generation Resources	$2	$33	$42
Increase / (Decrease)		$31	$11

Q. PLEASE DESCRIBE THE MAJOR CHANGES BETWEEN THE 2018 ACTUAL, 2019 BUDGET, AND 2020 FORECASTED NEW GENERATION RESOURCES POWER PRODUCTION CAPITAL EXPENDITURES INCLUDING ANY MAJOR ASSUMPTIONS UTILIZED TO ARRIVE AT THE 2020 FORECAST.

A. Capital expenditures vary year to year depending on the timing of spend for new generation resources. The major changes between 2018 actuals and the 2019 budget are related to the Camp Atterbury solar microgrid project, the Nabb battery project, the Tippecanoe solar project, the Crane battery project, and a planned Combined Heat and Power ("CHP") facility that the Company anticipates filing with the commission in the second half of 2019. The major changes between the 2019 budget and the 2020 forecast primarily reflects additional spend on the planned CHP project, which is not expected to be in-service until 2021, and therefore is not included in rate base in this proceeding.

Q. DID YOU PROVIDE THE 2020 NEW GENERATION RESOURCES POWER PRODUCTION CAPITAL EXPENDITURES REFLECTED ABOVE, TO WITNESS MR. CHRIS JACOBI FOR INCLUSION IN THE DEI FORECASTED TEST PERIOD PROPOSED IN THIS CASE?

A. Yes.

VII. CONCLUSION

Q. WERE PETITIONER'S EXHIBITS 24-A (ASR) AND 24-C (ASR), ALONG WITH PETITIONER'S CONFIDENTIAL EXHIBITS 24-B (ASR) AND 24-D (ASR), PREPARED BY YOU OR UNDER YOUR SUPERVISION.

A. Yes, they were.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.

NOTICE OF RENEWABLE ENERGY PROJECT PURSUANT TO INDIANA CODE § 8-1-8.5-7

Project	Tippecanoe Solar Power Plant
Location	40.421142, -86.940157 in West Lafayette, IN
Owner	Duke Energy Indiana, LLC
Projected Construction Start	On or after July 2, 2019
Projected In-Service	Q4 2019
Details	The Project is sized at 1,600 kWac and has an expected useful life of thirty (30) years. The plant will interconnect to a 12.47 kV distribution line.

PETITIONER'S EXHIBIT 24-B (ASR) IS CONFIDENTIAL

Duke Energy Indiana, LLC
1000 East Main Street
Plainfield, IN 46168

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Via USPS (and electronic) delivery

May 21, 2019

Mary M. Becerra
Secretary of the Commission
Indiana Utility Regulatory Commission
101 West Washington Street
Suite 1500 East
Indianapolis, IN 46204

Re: *B-Line Heights Solar Canopy*

Dear Ms. Becerra:

Pursuant to Indiana Code § 8-1-8.5-7, Duke Energy Indiana, LLC provides notice of its intent to begin construction of a solar project ("Project") on or after June 18, 2019. The Project is located at 611 North Rogers St, Bloomington, IN 47404. The Project will be owned and operated by Duke Energy. The Project's estimated size is 114 kWdc/112 kWac and has an expected useful life of thirty (30) years. The Company anticipates the Project to be completed in the third quarter of 2019.

Sincerely,

Andrew J. Wells
Senior Counsel
Duke Energy Indiana, LLC

cc: Jane Steinhauer, Director, Energy Division

PETITIONER'S EXHIBIT 24-D (ASR) IS CONFIDENTIAL

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: 7/2/2019

Andrew Ritch