# 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	) CAUSE NO. 45253
OF NEW SCHEDULES OF RATES AND	)
CHARGES, GENERAL RULES AND	)
<b>REGULATIONS, AND RIDERS; (3)</b>	)
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	)
<b>REVENUE DECOUPLING MECHANISM FOR</b>	)
CERTAIN CUSTOMER CLASSES	)

# VERIFIED DIRECT TESTIMONY OF ANDREW S. RITCH

# On Behalf of Petitioner, DUKE ENERGY INDIANA, LLC

Petitioner's Exhibit 24

July 2, 2019

### DUKE ENERGY INDIANA 2019 BASE RATE CASE DIRECT TESTIMONY OF ANDREW S. RITCH

# 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

1		I. <u>INTRODUCTION</u>
2	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
3	А.	My name is Andrew S. Ritch, and my business address is 139 East 4 <sup>th</sup> Street, Cincinnati,
4		Ohio.
5	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
6	A.	I am employed by Duke Energy Business Services LLC, the service company affiliate of
7		Duke Energy Indiana, Inc. ("Duke Energy Indiana," "Petitioner," or "Company") as a
8		Wholesale Renewable Manager.
9	Q.	PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL EXPERIENCE.
10	Α.	I have a Bachelor's degree from Colby College in Waterville, ME and an MBA from the
11		F.W. Olin Graduate School of Business at Babson College in Wellesley, MA.
12	Q.	PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.
13	А.	I have worked for Duke Energy and its predecessor companies since 2002. My career
14		began in a management training program, leading efforts in Strategic Sourcing and
15		Corporate Budgeting and Financial Forecasting. In 2006, I moved to a Senior Analyst
16		role in Investor Relations. Prior to my current role, I was the Director of Corporate
17		Strategy and Business Planning for the U.S. Franchised Electric and Gas Businesses.
18	Q.	WHAT ARE YOUR PRIMARY RESPONSIBILITIES AS WHOLESALE
19		RENEWABLE MANAGER?

1	A.	I am responsible for providing overall strategy, policy and direction for renewable
2		energy assets within Duke Energy's Midwest regulated businesses, including Duke
3		Energy Indiana.
4	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?
5	A.	The purpose of my testimony is to support Duke Energy Indiana's request for a base rate
6		adjustment. My testimony will describe the Company's solar generation assets, battery
7		storage projects, and microgrid projects. I will also discuss new generation resources
8		capital expenditure changes between 2018-2020.
9		II. CRANE SOLAR FACILITY AND MICROGRID
10	Q.	PLEASE PROVIDE A BRIEF DESCRIPTION OF THE CRANE SOLAR
11		FACILITY.
12	A.	In Cause No. 44734, Duke Energy Indiana was granted a CPCN for the construction of a
13		17.25MW AC solar generation plant located at the NSA Crane base near Bloomington,
14		Indiana. This facility interconnects to Duke Energy Indiana's 69 kV transmission line
15		and is bid into the Midcontinent Independent System Operator ("MISO") in the same
16		way as other Duke Energy Indiana-owned generation. The Crane facility was placed into
17		service in late January 2017 and is performing as anticipated with regard to capacity,
18		providing clean energy to the Company's customers.
19	Q.	IS THE CRANE SOLAR FACILITY GENERATING POWER TO THE GRID?
20	A.	Yes.
21	Q.	WHAT IS THE CURRENT GENERATION OUTPUT OF THE SOLAR
22		GENERATION SYSTEM?

1	A.	For the 12 months ended December 31, 2018, the Crane Solar Facility generated a total of
2		28,093,000 kWh.
3	Q.	IN YOUR OPINION, IS THE CRANE SOLAR FACILITY USED AND USEFUL
4		IN SUPPLYING SOLAR GENERATION TO DUKE ENERGY INDIANA'S
5		<b>RETAIL CUSTOMERS?</b>
6	A.	Yes. The Crane solar facility is commercially operational and provides clean, carbon free
7		generation to the benefit of Duke Energy Indiana customers. As such, it is my opinion
8		that this generation is used and useful in serving our customers.
9	Q.	PLEASE DESCRIBE THE PURPOSE OF THE FEASIBILITY STUDY THAT
10		WAS APPROVED IN CAUSE NO. 44734.
11	A.	As discussed in Ms. Birmingham-Byrd's direct testimony in that proceeding, in lieu of
12		cash payment for the site lease, Duke Energy Indiana agreed to study the feasibility of
13		incorporating future grid-tied energy storage technologies for the purpose of maintaining
14		electric services for critical loads.
15	Q.	HAS THE FEASIBILITY STUDY BEEN COMPLETED?
16	A.	Yes, it was completed on August 30, 2018, and shared with the Indiana Office of the
17		Utility Consumer Counselor on September 5, 2018.
18	Q.	PLEASE SUMMARIZE THE FINDINGS OF THE FEASIBILITY STUDY.
19	A.	The Crane Microgrid Feasibility Study serves as a guide for Duke Energy Indiana and the
20		Department of the Navy to develop a project plan to support additional energy
21		infrastructure at NSA Crane, which will provide both bulk system and local reliability
22		benefits. Doosan GridTech was hired to facilitate the study and worked closely with the

### DUKE ENERGY INDIANA 2019 BASE RATE CASE DIRECT TESTIMONY OF ANDREW S. RITCH

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.

5 The study identified new load shedding infrastructure, generation and storage 6 assets, and control and communications infrastructure required to meet the study team's 7 goals and objectives. Of note, three generation and storage assets would be required to 8 provide electrical service to NSA Crane microgrid in the event of a major grid outage: 1) 9 the existing 17 MW<sup>ac</sup> Crane Solar Facility owned by Duke Energy, 2) a new battery 10 energy storage system ("BESS"), and 3) new diesel generators. Duke Energy Indiana is 11 well-positioned to install a BESS on-base that could support the bulk power system and 12 enable Microgrid capabilities, as well as enhance energy resiliency for Crane. The future 13 BESS will be a regulated grid-asset owned and operated by Duke Energy Indiana, similar 14 to the existing Crane Solar Facility, as well as the approved Camp Atterbury Microgrid 15 and Nabb Battery facilities, approved in Cause No. 45002 and discussed below. 16 Combined with the existing Crane Solar Facility, these two assets will provide grid 17 benefits when grid-tied and provide backup power to Crane during major outage events. 18 Q. WHAT ARE THE NEXT STEPS REGARDING INCORPORATING FUTURE 19 **GRID-TIED ENERGY STORAGE TECHNOLOGIES AT THE CRANE SITE?** 20 A. Duke Energy Indiana is currently evaluating the feasibility and constraints of a 5 MW 21 BESS to be located adjacent to the existing 17 MW solar array. Unless otherwise 22 determined, the BESS will be subject to an interconnection agreement, the existing lease

1		conditions, and will require applicable corporate and regulatory approval prior to
2		construction. If interconnection is feasible and assuming there would be no delays to the
3		project schedule due to interconnection, siting issues, or the appropriate approvals, the
4		BESS could be commissioned in 2020.
5	Q.	ARE THERE ANY OTHER UPDATES REGARDING THE MICROGRID
6		FEASIBILITY STUDY?
7	A.	Yes. Along with the Microgrid Feasibility Study, Duke Energy Indiana has committed to
8		installing remote operable switching capability at Crane to further support the base's
9		resiliency goals, as approved by the Commission in Cause No. 44734. Duke Energy
10		Indiana also verified through the Microgrid Feasibility Study that the remote operable
11		switching was consistent with the results and overall scope of work to ultimately enhance
12		resiliency for NSA Crane. In compliance with the Company's project management
13		standards, efficient resource scheduling, project planning, as well as the shared interest of
14		Duke Energy Indiana and the Navy in limiting the number of line outages at this location,
15		Duke Energy Indiana is tentatively planning for all switch-related work, including the
16		remote operation of the switch, to be coordinated with the potential future BESS project
17		at the base, as opposed to scheduling resources multiple times to work at this location.
18	Q.	DID DUKE ENERGY INDIANA DECIDE TO MOVE FORWARD WITH ANY
19		PROJECTS IDENTIFIED IN THE CRANE MICROGRID FEASIBILITY
20		STUDY?
21	А.	Yes. Duke Energy Indiana plans to install a 5 MW BESS to be located adjacent to the
22		existing 17 MW solar array.

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# 1 Q. PLEASE DESCRIBE THE CRANE BATTERY PROJECT.

2 A. Duke Energy Indiana has partnered with the U.S. Navy to support mutual renewable 3 energy and energy resiliency goals. The 17 MW solar PV facility deployed at NSA 4 Crane and owned and operated by Duke Energy Indiana was the first step in realizing 5 those goals. In addition to building utility-scale renewable energy projects, this 6 partnership created opportunities for developing and deploying additional distributed 7 energy technologies – including battery storage – that are beneficial to Duke Energy 8 Indiana's customers. Through coordination with Crane and the U.S. Navy, Duke Energy 9 Indiana plans to install a 5 MW BESS on-base that will support the bulk power system 10 and enable microgrid capabilities, thus enhancing energy resiliency for Crane. The BESS 11 will be a regulated grid-asset owned and operated by Duke Energy Indiana, similar to the 12 17 MW solar facility on-base. The BESS will be located within the existing solar lease 13 footprint, thus reducing project costs.

# 14

**Q**.

# WHAT ARE THE BENEFITS OF THE CRANE BATTERY PROJECT?

15 A. This project will enhance reliability of service for customers and provide ancillary 16 services, such as Regulating Reserves, to MISO. In return for the lease with the Navy for 17 the land necessary to construct the project, the Navy can access the existing solar facility 18 and new battery (Microgrid) during a catastrophic, regional grid event. During an event 19 in which energy produced by the solar array and the battery services cannot be 20 transmitted to the commercial grid, the Microgrid can provide backup power to critical 21 customer loads on the base. Crane will continue to pay for service through its standard 22 tariff rate whether the assets are grid-tied or in island-mode.

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1		Revenues realized by Duke Energy Indiana for providing such services to MISO
2		will benefit Duke Energy Indiana customers. Like other Company-owned generation and
3		battery storage, revenues received from MISO for the Crane Battery, net of any related
4		MISO costs or energy purchases, would flow back to customers through an appropriate
5		rate mechanism.
6		Any Investment Tax Credit ("ITC") value that Duke Energy Indiana receives
7		from its investment in the project will benefit customers by reducing revenue
8		requirements over the depreciable life of the property. Duke Energy Indiana believes this
9		project and other battery storage investments are also consistent with recent stakeholder
10		feedback. The utility is uniquely positioned to control and adjust the function of
11		microgrids to optimize their value for the benefit of customers and the grid.
12	Q.	WHEN DO YOU EXPECT CONSTRUCTION TO BEGIN?
13	A.	Duke Energy Indiana expects construction of the Crane Battery to begin in June 2020.
14	Q.	WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?
15	A.	The Company expects the Crane Battery to be placed-in-service in December 2020. See
16		Table 1 for the currently projected construction timeline.
17		<u>Table 1</u>

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

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1	Q.	WHAT IS THE CURRENT COST ESTIMATE FOR THE CRANE MICROGRID?
2	A.	Currently, the overall estimate is approximately \$10 million.
3	Q.	PLEASE DESCRIBE THE MAIN COMPONENTS OF THE COST ESTIMATE.
4	A.	The Crane Battery has four main components: (1) equipment: batteries, inverters and
5		balance of plant components; (2) engineering and construction; (3) interconnection; and
6		(4) site control and communications infrastructure.
7	Q.	PLEASE EXPLAIN THE PROCESS DUKE ENERGY INDIANA WILL
8		UNDERTAKE TO SELECT ITS CONTRACTORS FOR THIS PROJECT.
9	А.	As project development efforts continue to progress, a formal RFP will be issued to
10		providers who are best suited to successfully execute this project. In addition, Duke
11		Energy Indiana will comply with the provisions of Indiana Code § 8-1-8.5 that requires
12		the Company to use a contractor in the engineering, procurement or construction of the
13		project that 1) is subject to Indiana unemployment taxes and 2) is selected by the public
14		utility through bids solicited in a competitive procurement process.
15	Q.	DO YOU BELIEVE THE COST ESTIMATE IS REASONABLE? PLEASE
16		EXPLAIN.
17	A.	Yes, I do. The Company's Class 5 estimate for this project is based upon realistic
18		assumptions given the stage of project development, current market conditions, and the
19		Company's experience constructing similar projects.
20		III. <u>CAMP ATTERBURY MICROGRID AND NABB BATTERY STORAGE</u>
21	Q.	PLEASE DESCRIBE THE COST RECOVERY APPROVED IN THE FINAL

22 ORDER IN CAUSE NO. 45002.

1	A.	The Commission approved both the Camp Atterbury Microgrid and Nabb Battery
2		Storage Projects ("Projects") as clean energy projects eligible for incentives under
3		Indiana Code § 8-1-8.8-11. As such, the Commission approved: (1) timely recovery of
4		the associated construction and operating expenses through Duke Energy Indiana's
5		Renewable Energy Project Revenue Adjustment, Standard Contract Rider No. 73 ("Rider
6		73"); (2) deferral of costs associated with the Projects until such costs are reflected in
7		Petitioner's retail rates and charges; (3) utilization of the new depreciation rates of 8.33%
8		based on the expected 12-year life of the cells and monitoring equipment related to the
9		battery storage plant portion of the Projects; and 4.00% based on the expected 25-year
10		life of the other battery-related equipment related to the battery storage plant portion of
11		the Projects until such time as a new depreciation rate supported by a depreciation study
12		is approved by the Commission in a future proceeding; and (4) utilization of the 3.33%
13		depreciation rate for the solar component of the Camp Atterbury Microgrid project.
14		The Commission found that any future REC proceeds and Investment Tax Credits
15		shall be used to reduce the total Rider 73 revenue requirements.
16	Q.	PLEASE PROVIDE AN UPDATE ON THE CAMP ATTERBURY PROJECT.
17	A.	In March 2018, Duke Energy Indiana issued a request for proposals ("RFP") to bidders
18		with the potential capability to fulfill technical and commercial requirements, as well as
19		the Company's financial and safety requirements. The Company then assessed bidders
20		based on relevant experience, functional competence, references, and expertise. During
21		the evaluation, Duke Energy Indiana facilitated multiple proposal review sessions with
22		stakeholders and reference checks. After careful consideration, the Company awarded

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21	Q.	HAS CONSTRUCTION BEGUN?
20		project is completed in a timely and professional manner at an acceptable cost.
19		GridTech. The expertise and pricing provided by Doosan GridTech will ensure the
18		the Engineering, Procurement, and Construction and O&M contracts to Doosan
17		stakeholders and reference checks. After careful consideration, Duke Energy awarded
16		evaluation, Duke Energy Indiana facilitated multiple proposal review sessions with
15		relevant experience, functional competence, references, and expertise. During the
14		financial and safety requirements. Duke Energy Indiana assessed bidders based on
13		capability to fulfill technical and commercial requirements, as well as the Company's
12	A.	In March 2018, Duke Energy Indiana issued a RFP to bidders with the potential
11	Q.	PLEASE PROVIDE AN UPDATE ON THE NABB BATTERY PROJECT.
10		October 2019.
9	A.	Duke Energy Indiana expects the Camp Atterbury Microgrid to be placed-in-service in
8	Q.	WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?
7		March 2019.
6	A.	Yes. Duke Energy Indiana began construction of the Camp Atterbury Microgrid in
5	Q.	HAS CONSTRUCTION BEGUN?
4		competitive cost.
3		Microgrid Project is completed in a timely and professional manner at an acceptable and
2		GridTech. The expertise and pricing provided by Doosan GridTech will ensure the
1		the Engineering, Procurement, and Construction and O&M contracts to Doosan

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

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1	Q.	WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?
2	A.	Duke Energy Indiana expects the Nabb Battery to be placed-in-service in November
3		2019.
4		IV. TIPPECANOE SOLAR POWER PLANT
5	Q.	PLEASE DESCRIBE THE TIPPECANOE SOLAR POWER PLANT THAT
6		DUKE ENERGY INDIANA HAS PLANNED WITH THE PURDUE RESEARCH
7		FOUNDATION.
8	A.	Duke Energy Indiana plans to construct a 1.6 MW-AC solar plant at Purdue Research
9		Foundation's ("PRF") Discovery Park District ("Discovery Park") in West Lafayette.
10		The distributed energy project will provide all Duke Energy Indiana customers clean,
11		renewable energy while supporting the economic development and sustainability goals of
12		the Discovery Park. This solar project will set the stage for sustainable land use
13		developments at Discovery Park while diversifying Duke Energy Indiana's fuel mix with
14		emission-free, 100% renewable energy generation resource.
15		Duke Energy Indiana will lease approximately ten acres of land from PRF. Duke
16		Energy Indiana has contracted with Carmel, Indiana-based Telamon as the Engineering,
17		Procurement, and Construction ("EPC") firm to build the solar plant. Once constructed,
18		Duke Energy Indiana will own and operate the new solar plant. The plant will
19		interconnect to a 12.47 kV distribution line.
20	Q.	IS THE TIPPECANOE SOLAR POWER PLANT A "CLEAN ENERGY
21		RESOURCE" UNDER INDIANA CODE § 8-1-37-4?
22	A.	Yes.

# DUKE ENERGY INDIANA 2019 BASE RATE CASE DIRECT TESTIMONY OF ANDREW S. RITCH

1	Q.	WHEN DO YOU EXPECT CONSTRUCTION TO BEGIN?
2	A.	Duke Energy Indiana expects construction of the Tippecanoe Solar Power Plant to begin
3		in July 2019.
4	Q.	WILL DUKE ENERGY INDIANA PROVIDE NOTICE TO THE COMMISSION
5		PURSUANT TO INDIANA CODE § 8-1-8.5-7 PRIOR TO CONSTRUCTION?
6	A.	Yes. Petitioner's Exhibit 24-A (ASR) serves as Duke Energy Indiana's notice prior to
7		construction.
8	Q.	WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?
9	А.	The Company expects the Tippecanoe Solar Power Plant to be placed-in-service by
10		December 31, 2019. See Table 2 below for a more detailed projected construction
11		schedule.
12		Table 2

# <u> Table 2</u>

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? 13

1	A.	The distributed energy resource will provide all Duke Energy Indiana's customers with
2		carbon free, renewable energy and is an incremental step toward diversifying Duke
3		Energy Indiana's generation portfolio to include more clean energy resources.
4		Additionally, the solar power plant's location will support the Discovery Park's mission
5		to advance Purdue University in the quest for sustainable engagement. The project
6		supports Discovery Park's master plan to capitalize on high-performance technologies to
7		create a dynamic community that showcases innovative and sustainable building and land
8		use concepts through its designed elements.
9	Q.	WHAT IS THE CURRENT COST ESTIMATE FOR THE TIPPECANOE SOLAR
10		POWER PLANT?
11	A.	Currently, the overall estimate is approximately \$3.5 million. This amount does not
12		include an estimate of allowance of funds used during construction ("AFUDC").
13	Q.	PLEASE DESCRIBE THE MAIN COMPONENTS OF THE COST ESTIMATE.
14	A.	Please see Petitioner's Confidential Exhibit 24-B (ASR) for a breakdown of the major
15		components of the cost estimate.
16	Q.	PLEASE EXPLAIN THE PROCESS DUKE ENERGY INDIANA UNDERTOOK
17		TO SELECT ITS CONTRACTOR FOR THIS PROJECT.
18	A.	Duke Energy Indiana's supply chain organization conducted a competitive Request for
19		Proposals to identify the Engineering, Procurement, Construction ("EPC") contractor for
20		this project. The EPC will design, procure all equipment and construct the facility. After
21		evaluating the bids, Duke Energy Indiana selected Carmel, Indiana based Telamon
22		Enterprise Ventures, based on its overall solar experience, Indiana solar experience,

1		regional labor familiarity, and competitive pricing. The EPC contract is a fixed price and
2		firm schedule contract with a target commercial date of December 2019. Duke Energy
3		Indiana's distribution organization will manage the electrical interconnection work
4		required to connect the facility to the distribution grid.
5	Q.	DO YOU BELIEVE THE COST ESTIMATE IS REASONABLE? PLEASE
6		EXPLAIN.
7	A.	Yes, the cost estimate is reasonable. It is a fixed price, firm schedule contract where the
8		EPC is responsible for all aspects of the facility include engineering design, equipment
9		procurement, and constructing the facility. The project also has an interconnection
10		agreement with Duke Energy Indiana distribution to connect the solar facility to the
11		electrical grid.
12	Q.	IS THE TIPPECANOE SOLAR POWER PLANT A PROJECT THAT MEETS
13		THE REQUIREMENTS OF INDIANA CODE § 8-1-8.5-7?
14	A.	Yes.
15		V. <u>B-LINE HEIGHTS SOLAR POWER PLANT</u>
16	Q.	PLEASE DESCRIBE THE B-LINE HEIGHTS SOLAR POWER PLANT
17		PROJECT.
18	A.	Duke Energy Indiana plans to construct a 112 kW-AC solar canopy at the B-Line Heights
19		Apartments, an affordable housing complex in Bloomington. The distributed energy
20		project will provide all Duke Energy Indiana customers with clean, renewable energy.

1		Duke Energy Indiana has contracted with Carmel, Indiana-based Telamon as the
2		PC firm to construct the parking canopy as part of the 34-unit housing development. The
3		plant will interconnect to a 12.47 kV distribution line.
4	Q.	IS THE B-LINE HEIGHTS SOLAR POWER PLANT A "CLEAN ENERGY
5		<b>RESOURCE'' UNDER INDIANA CODE § 8-1-37-4?</b>
6	A.	Yes.
7	Q.	HAS CONSTRUCTION BEGUN?
8	A.	Yes. Duke Energy Indiana began construction of the B-Line Heights Solar Power Plant
9		in June 2019.
10	Q.	DID DUKE ENERGY INDIANA PROVIDE NOTICE TO THE COMMISSION
11		PURSUANT TO INDIANA CODE § 8-1-8.5-7 PRIOR TO CONSTRUCTION?
12	A.	Yes. Petitioner's Exhibit 24-C (ASR) was provide to the Commission on May 21, 2019.
13	Q.	WHEN DO YOU ANTICIPATE THE PROJECT TO BE IN SERVICE?
14	A.	The Company expects the B-Line Heights Solar Power Plant to be placed-in-service by
15		October 2019. See Table 3 below for a more detailed projected construction schedule.

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<b>B-Line Heights Solar Power Plant Construction Schedule</b>			
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		

# Table 3

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

3 A. The project's location in Bloomington, Indiana helps demonstrate Duke Energy Indiana's

4 commitment to identifying innovative ways to support renewable energy generation in

5 more densely populated urban areas and supports the City of Bloomington's renewable

6 and affordable housing goals.<sup>1</sup>

# 7 Q. WHAT IS THE CURRENT COST ESTIMATE FOR THE B-LINE HEIGHTS

8

1

# **SOLAR POWER PLANT?**

- 9 A. Currently, the overall estimate is over \$470,000. This amount does not include an
- 10 estimate of allowance of funds used during construction ("AFUDC").
- 11 Q. PLEASE DESCRIBE THE MAIN COMPONENTS OF THE COST ESTIMATE.

<sup>&</sup>lt;sup>1</sup> <u>https://bloomington.in.gov/sites/default/files/2017-05/executive\_summary\_ctp\_redevelopment\_strategy.pdf</u>

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

**3 Q. PLEASE EXPLAIN THE PROCESS DUKE ENERGY INDIANA UNDERTOOK** 

4

# TO SELECT ITS CONTRACTOR FOR THIS PROJECT.

5 Duke Energy Indiana's supply chain organization conducted a competitive Request for A. 6 Proposals to identify the EPC contractor for this project. The EPC design, procure all 7 equipment and construct the facility. After evaluating the bids, Duke Energy Indiana 8 selected Carmel, Indiana based Telamon Enterprise Ventures, based on its overall solar 9 experience, Indiana solar experience, regional labor familiarity, and competitive pricing. 10 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 11 12 the electrical interconnection work required to connect the facility to the distribution grid. 13 Q. DO YOU BELIEVE THE COST ESTIMATE IS REASONABLE? PLEASE 14 **EXPLAIN.** 15 A. Yes, the cost estimate is reasonable as it is a fixed price, firm schedule contract where the

16 EPC is responsible for all aspects of the facility include engineering design, equipment

- 17 procurement, and constructing the facility. The project also has an interconnection
- 18agreement with Duke Energy Indiana distribution to connect the solar facility to the

19 electrical grid.

# 20 Q. IS THE B-LINE HEIGHTS SOLAR POWER PLANT A PROJECT THAT MEETS

21 THE REQUIREMENTS OF INDIANA CODE § 8-1-8.5-7?

22 A. Yes.

1		VI. PRODUCTION CAPITAL EXPENDITURES			
2	Q.	ARE YOU SPONSORING THE POWER PRODUCTION CAPITAL			
3		EXPENDITURES IN THIS FORECAST?			
4	А.	Yes. I am sponsoring only the portion of the Power Production Capital Expenditures			
5		related to New Generation Resources. Duke Energy Indiana witnesses Mr. Cecil			
6		Gurganus, Mr. Timothy Thiemann, and Mr. James Michael Mosley will also be			
7		sponsoring portions of the Power Production Capital Expenditures forecasts, as it relates			
8		directly to their testimony.			
9	Q.	WHAT LEVEL OF NEW GENERATION RESOURCES POWER PRODUCTION			
10		CAPITAL EXPENDITURES ARE REFLECTED IN DUKE ENERGY INDIANA'S			
11		2020 FORECAST?			
12	А.	Duke Energy Indiana's 2020 New Generation Resources Power Production Capital			
13		Expenditures Forecast is \$42 million.			
14	Q.	HOW DOES THE 2020 NEW GENERATION RESOURCES POWER			
15		PRODUCTION CAPITAL EXPENDITURES FORECAST COMPARE TO THE			
16		NEW GENERATION RESOURCES POWER PRODUCTION CAPITAL			
17		EXPENDITURES BUDGET FOR 2019 AND THE ACTUAL 2018 NEW			
18		GENERATION RESOURCES POWER PRODUCTION CAPITAL			
19		EXPENDITURES?			
20	A.	A comparison of the Forecasted 2020 New Generation Resources Power Production			
21		Capital expenditures to the 2019 Budget and 2018 Actual New Generation Resources			
22		Power Production Capital Expenditures is shown in the table below.			

### DUKE ENERGY INDIANA 2019 BASE RATE CASE DIRECT TESTIMONY OF ANDREW S. RITCH

Table 4

1

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

2 **Q**. PLEASE DESCRIBE THE MAJOR CHANGES BETWEEN THE 2018 ACTUAL, 3 2019 BUDGET, AND 2020 FORECASTED NEW GENERATION RESOURCES 4 POWER PRODUCTION CAPITAL EXPENDITURES INCLUDING ANY 5 MAJOR ASSUMPTIONS UTILIZED TO ARRIVE AT THE 2020 FORECAST. 6 Capital expenditures vary year to year depending on the timing of spend for new A. 7 generation resources. The major changes between 2018 actuals and the 2019 budget are 8 related to the Camp Atterbury solar microgrid project, the Nabb battery project, the 9 Tippecanoe solar project, the Crane battery project, and a planned Combined Heat and 10 Power ("CHP") facility that the Company anticipates filing with the commission in the 11 second half of 2019. The major changes between the 2019 budget and the 2020 forecast 12 primarily reflects additional spend on the planned CHP project, which is not expected to 13 be in-service until 2021, and therefore is not included in rate base in this proceeding. **DID YOU PROVIDE THE 2020 NEW GENERATION RESOURCES POWER** 14 **O**. 15 **PRODUCTION CAPITAL EXPENDITURES REFLECTED ABOVE, TO** WITNESS MR. CHRIS JACOBI FOR INCLUSION IN THE DEI FORECASTED 16 17 **TEST PERIOD PROPOSED IN THIS CASE?** 18 A. Yes.

> ANDREW S. RITCH - 19 -

1		VII. <u>CONCLUSION</u>
2	Q.	WERE PETITIONER'S EXHIBITS 24-A (ASR) AND 24-C (ASR), ALONG WITH
3		PETITIONER'S CONFIDENTIAL EXHIBITS 24-B (ASR) AND 24-D (ASR),
4		PREPARED BY YOU OR UNDER YOUR SUPERVISION.
5	A.	Yes, they were.
6	Q.	DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?
7	A.	Yes.

# PETITIONER'S EXHIBIT 24-A (ASR) Duke Energy Indiana 2019 Base Rate Case

# **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

### PETITIONER'S EXHIBIT 24-C (ASR) Duke Energy Indiana 2019 Base Rate Case

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

ANDREW J. WELLS Senior Counsel T: (317) 838-1318 F: (317) 838-1842 Andrew.wells@duke-energy.com

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: Andrew Ritch

Dated: 7/2/2019