IURC CAUSE NO. 38707-FAC134 DIRECT TESTIMONY OF JAMES J. McCLAY, III FILED OCTOBER 31, 2022

TESTIMONY OF JAMES J. McCLAY, III MANAGING DIRECTOR OF NATURAL GAS TRADING DUKE ENERGY CORPORATION ON BEHALF OF DUKE ENERGY INDIANA, LLC CAUSE NO. 38707-FAC 134 BEFORE THE <u>INDIANA UTILITY REGULATORY COMMISSION</u>

I. INTRODUCTION

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

- 2 A. My name is James J. McClay, III, and my business address is 526 South Church
- 3 Street, Charlotte, North Carolina 28202.
- 4 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
- 5 A. I am employed as Managing Director of Natural Gas Trading for Duke Energy
- 6 Corporation ("Duke Energy").

7 Q. PLEASE STATE YOUR EDUCATIONAL AND PROFESSIONAL

8 BACKGROUND.

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9 A. I received a Bachelor's Degree in Business Administration, majoring in Finance

- 10 from St. Bonaventure University. I joined Progress Energy in 1998 as the
- 11 Manager of Power Trading and held that position through early 2003 and then
- 12 became the Director of Power Trading and Portfolio Management for Progress
- 13 Energy Ventures through February 2007. From March 2007 through late 2008, I
- 14 was the Director of Power Trading for Arclight Energy Marketing. From March
- 15 2009 through the present, I've been employed in various managerial roles at
- 16 Progress Energy and Duke Energy overseeing Natural Gas Trading and

OFFICIAL EXHIBITS JAMES J. McCLAY, III - 1 -

IURC PETITIONER'S REPORTER

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1		Origination, Pipeline Transportation, Power Trading, Oil procurement, and
2		various jurisdictions' hedging programs. Prior to my tenure with Duke Energy, I
3		was employed for approximately 13 years in Capital Markets as a U.S.
4		Government fixed income securities trader with various banks and
5		brokers/dealers.
6	Q.	WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS MANAGING
7		DIRECTOR OF NATURAL GAS TRADING, AS THEY RELATE TO
8		DUKE ENERGY INDIANA, LLC ("DUKE ENERGY INDIANA" OR
9		"COMPANY")?
10	A.	As Managing Director of Natural Gas Trading, I manage the organization
11		responsible for the natural gas trading, optimization and scheduling functions for
12		the regulated gas-fired generation assets in the Carolinas (Duke Energy Carolinas
13		and Duke Energy Progress), Duke Energy Florida, Duke Energy Indiana and
14		Duke Energy Kentucky (collectively, the "Utilities"), as well as the organization
15		responsible for power trading for Duke Energy Indiana and Duke Energy
16		Kentucky. Additionally, I oversee the execution of the Utilities' financial
17		hedging programs, fuel oil procurement, and emissions trading.
18	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS
19		PROCEEDING?
20	A.	I will provide an update on the Company's gas and power hedging activities that
21		have been described in previous FAC proceedings. I will also provide testimony

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1 on the status of discussions with the parties regarding possible changes to Duke 2 Energy Indiana's hedging plan. 3 **II. REALIZED NATIVE NATURAL GAS HEDGING RESULTS** 4 Q. DO YOU BELIEVE THAT IT IS REASONABLE FOR THE COMPANY 5 **TO ENTER INTO HEDGES AGAINST GAS PRICES?** 6 Yes, I do. A. 7 PLEASE EXPLAIN WHY YOU BELIEVE THAT SUCH ACTIONS ARE Q. 8 **REASONABLE.** 9 A. Duke Energy Indiana continues to rely on natural gas as fuel for the Company's 10 gas generation plants and natural gas prices have historically been volatile. From 11 March 2006 through August 2022, prompt month Henry Hub natural gas prices 12 have settled between \$1.44 and \$13.58 per Mmbtu. As of July 11, 2022, prompt 13 month natural gas contract settled at \$6.47/Mmbtu. This is a sizable pullback 14 from \$9.344/Mmbtu, the highest price of last 14 years, reached on June 7, 2022, 15 but it's much higher than recent low price of \$3.59/Mmbtu settled on 16 December 30, 2021. In addition, in the past ten years, spot daily market 17 supply/demand imbalances had created occasionally significant short-term price 18 spikes in some locations during high demand seasons. Furthermore, because 19 Duke Energy Indiana's natural gas demand is somewhat linked to weather, the 20 Company is further exposed to such fluctuations in natural gas prices. The natural 21 gas market is highly visible and liquid and there are a number of hedging tools

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the Company to take advantage of these tools.
E COMPANY COMPLETED ANY GAS HEDGING
ACTIONS SINCE THE LAST UPDATE TO THE COMMISSION
FAC133 PROCEEDING?
Company used hedging products available on InterContinental
e ("ICE") and purchased hedges based on forecasted forward expected
s burns for the period from September 2022 through June 2023. As
in FAC108 testimony, in addition to Henry Hub future contracts that
any uses to hedge gas exposure, Duke Energy Indiana uses two types of
future contracts to convert Henry Hub hedging trades to a hedging
hat settles at Chicago Citygate daily gas index. These financial products
age the price separation between Henry Hub and Chicago Citygate gas
may occur, due to locational differences and source of gas production.
of natural gas the Company pays for its gas generation units now moves
sely with Chicago Citygate daily gas index and sometimes disconnects
ry Hub price.
WERE THE RESULTS OF THE GAS HEDGING APPLICABLE
RECONCILIATION PERIOD FOR THIS FAC PROCEEDING?
as purchases made to hedge June through August 2022 native gas burn
gain of \$14,345,491. These gas hedges were purchased prior to the
2022 peak demand season to reduce volatility and lock in certainty of

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price, following the Duke Energy Indiana hedge plan. During this FAC
reconciliation period, market price for gas realized higher than the hedged prices
primarily due to strong price increases triggered by the Russian invasion of
Ukraine.

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Realized Native Natural Gas Hedging Results

	1	June 2022	July 2022	August 2022	
		\$4,470,574	\$3,683,153	\$6,191,764	
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7		As with our past p	ractice, the Company	will evaluate gas burn r	needs
8		regularly and may purcha	se gas hedges as neede	d and when it is pruder	nt to do so.
9	Q.	CONSISTENT WITH T	THE CONTRACT BE	TWEEN DUKE ENE	CRGY
10		INDIANA AND PURDU	JE UNIVERSITY RE	LATED TO THE PU	RDUE
11		COMBINED HEAT AN	D POWER ("CHP")	FACILITY, ARE DU	KE
12		ENERGY INDIANA AN	ND PURDUE CONSI	DERING PLANS TO	HEDGE
13		NATURAL GAS EXPO	SURE FROM THE S	STEAM SALES TO P	URDUE?
14	А.	Yes. As approved by the	Commission in Cause	No. 45276, the Steam	Purchase
15		and Sale Agreement ("Ag	reement") specifically	contemplates the Com	pany and
16		Purdue cooperatively agree	eeing to extend the fixe	ed price of the steam sa	le. If
17		extended, Duke Energy Ir	ndiana would hedge the	e term natural gas price	S
18		associated with the produ	ction of steam from the	e CHP. Under the Agre	eement,
19		Duke Energy Indiana agre	eed to sell steam produ	ced by the Purdue CHI	P based on
20		the market price of natura	l gas. As part of the A	greement, the parties a	llso agreed

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1		that "Seller" (Duke Energy Indiana) would develop a hedging strategy for the fuel
2		used by the CHP for the production of steam:
3 4 5 6 7 8		Seller shall develop and implement a natural gas hedging strategy for the fuel for the Facility's production of Unfired Steam and associated electricity, subject to approval by the Indiana Utility Regulatory Commission, to the extent such approval is required. Seller and Buyer shall meet periodically, but not less than annually, to discuss such hedging strategy, and Seller agrees to consider Buyer's input when developing and implementing its hedging strategy.
9		Agreement at p. 29.
10		Purdue contacted Duke Energy Indiana in July and asked to begin conversations
11		on the potential to hedge the natural gas used to produce steam under the
12		Agreement. The Company has identified the volume of expected natural gas
13		usage for producing steam and plans to purchase natural gas hedges for that
14		amount once the length of fixed sale price period has been agreed to by both
15		parties. Duke Energy Indiana will report back on any final decisions by the
16		parties in a future FAC.
17		III. REALIZED NATIVE POWER HEDGING RESULTS
18	Q.	DOES THE COMPANY CONDUCT OTHER HEDGING ACTIVITIES?
19	A.	Yes, Duke Energy Indiana also hedges the costs of purchased power. Power
20		prices have been volatile since the beginning of the Midcontinent Independent
21		System Operator, Inc. ("MISO") energy markets in April of 2005. Through the
22		end of August 2022, the average peak daily Indiana Hub Day Ahead LMP was
23		\$44.58/MWH. For the same period, average daily Indiana Hub Real Time LMP
24		was \$43.28/MWH. However, there was a wide range of prices. Day Ahead daily
25		price settled between \$17.83 and \$398.63 while Real Time price went from as

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1		low as \$15.57/MWH to as high as \$298.68/MWH. There were 121 days where
2		Day Ahead daily price exceeded \$100/MWH and 126 days in the same period that
3		daily Real Time peak power prices reached above \$100/MWH. To help hedge
4		against this market volatility, if the position warrants, the Company enters into
5		forward power purchase contracts that are financially settled on a specific future
6		date at MISO Indiana Hub Day-Ahead or Real Time LMPs. ¹ The applicable
7		LMPs on the settlement date for these contracts may be higher or lower than the
8		price the Company paid for the forward contract and the Company will either pay
9		or be refunded the difference.
10	Q.	WHAT PRICE DOES THE COMPANY PAY FOR THESE POWER
11		CONTRACTS?
11 12	A.	CONTRACTS? The Company paid the then current market price for the June 2022 on-peak
	A.	
12	A.	The Company paid the then current market price for the June 2022 on-peak
12 13	A.	The Company paid the then current market price for the June 2022 on-peak monthly forward contracts in the amount of \$48.63/MWH, \$33.28/MWH for June
12 13 14	A.	The Company paid the then current market price for the June 2022 on-peak monthly forward contracts in the amount of \$48.63/MWH, \$33.28/MWH for June 2022 off-peak monthly contracts, \$135/MWH for July 2022 on-peak monthly
12 13 14 15	A.	The Company paid the then current market price for the June 2022 on-peak monthly forward contracts in the amount of \$48.63/MWH, \$33.28/MWH for June 2022 off-peak monthly contracts, \$135/MWH for July 2022 on-peak monthly contracts, and \$135/MWH for August 2022 on-peak monthly contracts. In
12 13 14 15 16	A.	The Company paid the then current market price for the June 2022 on-peak monthly forward contracts in the amount of \$48.63/MWH, \$33.28/MWH for June 2022 off-peak monthly contracts, \$135/MWH for July 2022 on-peak monthly contracts, and \$135/MWH for August 2022 on-peak monthly contracts. In addition, the Company put on short-term hedges and paid the then market prices
12 13 14 15 16 17	А. Q .	The Company paid the then current market price for the June 2022 on-peak monthly forward contracts in the amount of \$48.63/MWH, \$33.28/MWH for June 2022 off-peak monthly contracts, \$135/MWH for July 2022 on-peak monthly contracts, and \$135/MWH for August 2022 on-peak monthly contracts. In addition, the Company put on short-term hedges and paid the then market prices between \$52/MWH and \$112/MWH to hedge portfolio imbalances in daily and

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¹ Since the onset of MISO energy markets, almost all bi-lateral contracts have been "financial" rather than "physical" contracts.

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1	A.	Duke Energy Indiana uses a forward power forecast generated by analytics to
2		determine a monthly forward power position. When entering into a hedge
3		transaction, Duke Energy Indiana measures the purchase price for the forward
4		power purchase contract against the expected cost of operating the incremental
5		Company generation units needed to meet the forecasted load. For example, if
6		our forecasted native load would require the Company to operate a gas turbine
7		peaking plant at a cost of \$100/MWH and we could purchase a forward power
8		purchase contract at a cost of \$80/MWH, Duke Energy Indiana would make that
9		purchase, essentially fixing a price for purchased power at a cost lower than the
10		expected cost of operating our own generation. The Company never makes a
11		forward power purchase unless the cost of such purchase is less than the cost of
12		running the incremental generating unit needed to meet the forecasted load.
13		If, on the settlement date, the LMP is higher than the forward contract
14		price, the Company would be credited the difference from the counterparty. On
15		the other hand, if the LMP is lower than the forward contract price, the Company
16		would have to pay the difference to the counterparty. The actual purchase of
17		power or dispatch of units to serve native load would still be done on an economic
18		basis.

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19 Q. WHEN DID THE COMPANY BEGIN THIS HEDGING PROGRAM?

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1	A.	Duke Energy Indiana started making such purchases for January 2006, and made
2		forward power purchases for each month of 2006, and have generally continued
3		that practice to the present. ²
4	Q.	WHAT WERE THE RESULTS FOR JUNE THROUGH AUGUST 2022?
5	A.	The final realized value of the native power hedges for this period was
6		\$12,470,670 positive, resulting from forward monthly transactions, intra-month
7		transactions, as well as any MISO virtual trades. The positive result was driven
8		by high realized power prices because of geopolitical concerns in Europe, as well
9		as continued disruptions in coal supply.
10		Realized Native Power Hedging Results

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June 2022	July 2022	August 2022
\$12,436,137	(24,466)	\$58,999

As noted in the pre-filed testimony of Ms. Suzanne E. Sieferman, the net realized
results for the reconciliation period from the power hedging activity exclusive of
MISO virtual trades, and including prior period adjustments, was a gain of
\$12,456,9001.
Including net realized results from native natural gas hedging mentioned

above, total hedging gains for this FAC filing are \$26,802,391.

² As noted later in my testimony, Duke Energy Indiana's power hedging practices subsequent to the effectiveness of a settlement with the Indiana Office of Utility Consumer Counselor and the Commission's Order on June 25, 2008, in Cause No. 38707-FAC68-S1 are consistent with such settlement and Commission Order.

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1 Q. **IS THE COMPANY CONTINUING ITS POWER HEDGING** 2 **PRACTICES?** 3 A. Yes. Duke Energy Indiana made native purchases for September 2022 and June 4 2023 to hedge against expected purchased power. In addition, the Company made 5 intra-month purchases for September and October. The Company's methodology 6 for making purchases has remained consistent. If the forward purchase price of 7 power is less than the cost of running the incremental generating units required to 8 meet the forecasted load, then Duke Energy Indiana may purchase a forward 9 power hedge. Of course, forward power prices, gas prices, emission allowance 10 prices, weather conditions, expected load, and availability of generating units, 11 among other factors, are constantly changing. As conditions change, the 12 Company would evaluate these conditions and adapt. Using sophisticated 13 computer analysis, Duke Energy Indiana constantly assess the Company's 14 forward power positions on a monthly, daily and even intra-day basis. The goal is 15 to maintain forward power hedges only in an amount necessary to economically 16 cover our forecasted load. 17 Q. HOW DID THE COMMISSION'S JUNE 25, 2008 ORDER IN CAUSE 18 NO. 38707 FAC68-S1 AFFECT THE COMPANY'S CURRENT HEDGING 19 **METHODOLOGY?** 20 The Company's hedging methodology is consistent with the Settlement A. 21 Agreement with the OUCC and the Commission order. Accordingly, beginning 22 on August 1, 2008, Duke Energy Indiana has not utilized its flat hedging

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1		methodology. Rather, Duke Energy Indiana will hedge up to approximately flat
2		minus 150 MW on a forward, monthly and intra-month basis, and up to
3		approximately flat on a Day Ahead/Real-Time basis. This methodology will
4		leave the Company with at least approximately 150 MW of expected load
5		unhedged on a forward forecasted basis.
6	Q.	IN THE COMMISSION'S SEPTEMBER 28, 2022 ORDER IN CAUSE
7		NO. 38707 FAC 133, THE PARTIES WERE INSTRUCTED TO MEET BY
8		NOVEMBER 28, 2022 TO DISCUSS POSSIBLE CHANGES TO
9		APPLICANT'S HEDGING PLAN. WHAT IS THE STATUS OF THOSE
10		DISCUSSIONS?
11	A.	The Company has reviewed its current hedging practices to determine if any
12		incremental improvements can be made. Duke Energy Indiana has scheduled an
13		initial conversation on October 31, 2022 with the OUCC and our industrial
14		customers to review and discuss potential changes to the hedging program.
15	Q.	DO YOU BELIEVE THE COMPANY'S GAS AND POWER HEDGING
16		PRACTICES ARE REASONABLE?
17	А.	Yes, I do. The Company never speculates on future prices, but rather uses a
18		sophisticated model to determine when it is economic to purchase and sell on a
19		forward basis. The practice is economic at the time the decision is made and
20		reduces volatility because Duke Energy Indiana is transacting in a less volatile
21		forward market, as opposed to more volatile spot markets (<i>i.e.</i> , the MISO day
22		ahead and real-time markets).

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1		Just as an electric reserve margin reduces risk that capacity may not be
2		available when it is needed, Duke Energy Indiana believes its power hedging
3		practice benefits customers by reducing customers' risk of paying potentially
4		higher spot market prices. Further, as stated above, our practices going forward
5		will be consistent with the Commission Order in Cause No. 38707 FAC68-S1.
6	Q.	DOES THIS CONCLUDE YOUR PREFILED DIRECT TESTIMONY?
7	A.	Yes, it does.

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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: ______

Date: _____ 0ctober 31, 2022