CORRECTED DIRECT TESTIMONY OF WENBIN (MICHAEL) CHEN
MANAGER, MIDWEST TRADING
DUKE ENERGY BUSINESS SERVICES LLC
ON BEHALF OF
DUKE ENERGY INDIANA, LLC
CAUSE NO. 44348 SRA 6
BEFORE THE INDIANA UTILITY REGULATORY COMMISSION

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Wenbin (Michael) Chen, and my business address is 526 South Church Street, Charlotte, North Carolina 28202.

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

A. I am employed as Manager, Midwest Trading, by Duke Energy Business Services LLC, a service company subsidiary of Duke Energy Corporation and a non-utility affiliate of Duke Energy Indiana, LLC ("Duke Energy Indiana" or "Company").

Q. PLEASE STATE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a Bachelor's degree in Economics from Shanghai Maritime University and a Master's degree in Business Administration from The Ohio State University. I also hold the Chartered Financial Analyst ("CFA") designation conferred by the CFA Institute and I'm a Financial Risk Manager certified by the Global Association of Risk Professionals.

I was employed by China Merchants Group in Hong Kong and later its affiliate Transocean Grabbulk Pool Ltd in Singapore from 1993 to 2000. During

these seven years, I held various positions in marketing, operations, and bulk carrier chartering.

In 2002, I joined Cinergy Services, Inc. (a predecessor of Duke Energy Business Services LLC) as a Portfolio Analyst and have held positions with increasing responsibility in the Power Trading and Dispatch group since then. I assumed my current position on January 1, 2014.

Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS MANAGER, MIDWEST TRADING?

A. I am responsible for power and natural gas hedging programs for Duke Energy Indiana and Duke Energy Kentucky, Inc. I also manage capacity positions, Financial Transmission Rights ("FTR") positions, load forecast, demand bids submission, and financial scheduling for Duke Energy Indiana in the Midcontinent Independent System Operator, Inc. ("MISO") market and for Duke Energy Kentucky in the PJM Interconnection ("PJM") market.

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

A. I will address capacity purchases and sales made by the Company for the reporting period from June 1, 2018 through May 31, 2020. I will also provide a brief overview of the Company's gas and power hedging activities that have been described in previous Fuel Adjustment Clause ("FAC") proceedings. In particular, I will describe non-native hedging activities, profits and losses and

their impact on the sharing of profits for non-native sales under Standard Contract Rider 70.

II. RELIABILITY PURCHASES AND CAPACITY SALES

Q. ARE YOU RESPONSIBLE FOR MAKING CAPACITY RELIABILITY PURCHASES AND CAPACITY SALES?

A. Yes, my responsibilities include making capacity reliability purchases and sales of surplus capacity. Capacity reliability purchases are necessary when the Company needs them to satisfy MISO's Resource Adequacy capacity requirement. On the other hand, capacity sales may be executed when the Company has surplus capacity after meeting MISO requirements.

Q. ARE YOU KNOWLEDGEABLE ABOUT THE CAPACITY PURCHASES AND SALES MADE BY THE COMPANY THAT HAVE BEEN INCLUDED IN THIS FILING?

A. Yes. All of the Company's capacity purchases and sales were made by the Duke Energy Power Trading and Dispatch group I work for.

Q. CAN YOU PLEASE PROVIDE AN UPDATE ON THE LOGANSPORT CONTRACT?

A. Yes. Duke Energy Indiana contracted with Logansport Municipal Utilities ("Logansport") on June 15, 2009, for the rights to the generating capacity and energy from Logansport Unit #6 (a combustion turbine unit with approximately 8 MW of installed capacity) for the period July 1, 2009 through December 31, 2018. Although the capacity is available year-round, the payment for the capacity

is prorated from June through September each year of the contract.[1] Because this unit became unavailable in July 2011, capacity payments have been suspended and the capacity has been removed from the Company's MISO Resource Adequacy compliance plans. Since the unit didn't become available and the contract ended on December 31, 2018, there were no capacity payments to Logansport for this Rider 70 period and there will not be future payments under this contract.

Q. DID THE COMPANY MAKE ANY BILATERAL CAPACITY PURCHASES FOR THE 2018/2019 PLANNING YEAR?

A. No, since the Company expected to have a net long capacity position, it didn't make any bilateral capacity purchases for the 2018/2019 Planning Year.

Q. DID THE COMPANY MAKE ANY BILATERAL CAPACITY PURCHASES FOR THE 2019/2020 PLANNING YEAR?

A. No, as the Company became net long in capacity, no bilateral capacity purchases were made for the 2019/2020 Planning Year.

Q. DID THE COMPANY PARTICIPATE IN MISO CAPACITY AUCTIONS?

A. Yes. The Company actively participated in MISO's Resource Adequacy capacity auctions. Before June 2013, MISO held monthly Voluntary Capacity Auctions for market participants to balance their next-month capacity position. The Company mostly sold surplus capacity after meeting native peak load demand in

[1] The Commission declined to pre-approve this long-term capacity purchase from Logansport in Cause No. 43715.

these monthly auctions. Starting from the Planning Year 2013/2014, MISO replaced its monthly auctions with a new annual Planning Resource Auction ("PRA") construct. The Company elected to fully participate in the PRA, where Duke Energy Indiana purchased capacity from MISO for native load and sold generation capacity to MISO, at the Auction Clearing Prices ("ACP"). For Planning Year 2018/2019, MISO ACP at Zone 6, where the Company's load resides, was set at $10/MW-Day for both generation capacity and load initially.

In a stakeholder meeting after the PRA, MISO's Resource Adequacy Subcommittee announced that load should receive a Zonal Deliverability Benefit of $0.04/MW-day, which reduced capacity cost of load to $9.96/MW-day. Given that the Company was 88.2 MW long in the first seven (7) months and 171.5 MW long in the last five (5) months going into the PRA, the auction resulted in 83.60 MW of net capacity sales for June through December 2018 and 166.9 MW net sales for January through May 2019. Total net capacity revenue was $524,377 from MISO to the Company.

For Planning Year 2019/2020, MISO ACP at Zone 6, was set at $2.99/MW-Day for both generation capacity and load. It should be noted that starting from this Planning Year, Duke Energy Indiana's Madison Station (total 8 units with 546.8 MW UCAP) was assigned to MISO's PJM external zone due to its location in Ohio. ACP for this zone also cleared at $2.99/MW-day; therefore, for this year, there is no impact to expected revenues from this station. However, though MISO awarded Historical Unit Considerations ("HUCs") to Madison

Station as a hedging instrument, it's possible the station could clear at a different ACP in future auctions and potentially receive lower payments from MISO even with HUCs.

As the Company had 313.4 MW capacity sales in the Planning Year 2019/2020 auction, including capacity from the Madison units, the PRA resulted in net payment of $342,966 from MISO to the Company.

Combining net capacity payments of the two years, total proceeds from the annual MISO capacity auctions for Planning Year 2018/2019 and 2019/2020 were $867,343.

Beginning in January 2019, the Company began purchasing capacity under a Purchased Power Agreement ("PPA") with Staunton Solar, LLC. Total demand charge payment was $48,920 for Planning Year 2018/2019 and $138,822 for Planning Year 2019/2020, resulting in a total payment of $187,742 for the two years.

Subtracting the Staunton Solar PPA demand charge payments from the MISO PRA auction revenue, net capacity proceeds netted to $679,601 for this Rider 70 proceeding, which is to be shared by customers and shareholders through the profit-sharing mechanism.

Q. HOW DO YOU MAKE THE DECISION TO MAKE CAPACITY PURCHASES OR SALES?

A. Mr. Scott Park maintains the Company's capacity positions for MISO Resource Adequacy, which I use to make purchase and sale decisions. For purchases, he

tells me how much we need to buy and we work together on the timing of transactions. I make forward sales decisions based on how much we have in surplus capacity.

III. NON-NATIVE POWER HEDGING

Q. PLEASE DESCRIBE THE COMPANY'S POWER HEDGING PROGRAM.

A. The Company's power hedging program encompasses both native and non-native load. As I have previously testified in the Company's fuel adjustment proceedings, for over ten (10) years now, the Company has hedged the costs of purchased power related to native load in order to reduce volatility in purchased power costs caused by volatility of power prices in the MISO energy markets. To help hedge against this volatility, the Company has entered into forward power purchase contracts that are financially settled on a specific future date at the MISO Indiana Hub Day Ahead or Real Time LMP ("Locational Marginal Pricing"). The applicable LMP on the settlement date for these contracts may be higher or lower than the price the Company paid for the forward contract and the Company will either pay or be refunded the difference. The price the Company pays for these contracts is the then current market price. A key factor is that we never make a forward power purchase unless the cost of such purchase is less than the forecasted cost of running the incremental generating unit needed to meet the forecasted load, thereby essentially fixing a price for purchased power at a cost lower than the expected cost of operating our own generation.

Q. WHAT ABOUT HEDGING FOR NON-NATIVE LOAD?

A. The Company also hedges for non-native load, although here the objective is to lock in a margin for the forecasted surplus economic generation not allocated to serve native load. Mr. Scott Burnside explains in his testimony the Company's business practices with respect to allocations of expenses and revenues between native and non-native load. Duke Energy Indiana makes non-native sales from economic generation in excess of native load requirements, when available, primarily into the MISO energy markets. The Company hedges its forecasted non-native position similar to the way it hedges its native position, except that the non-native hedges are primarily sales that settle financially in MISO energy markets rather than financial purchases.

Q. HOW IS THE NON-NATIVE POSITION DETERMINED?

A. Since June 2014, the Company has used a vendor provided economic model called GenTrader to perform the economic dispatch simulations. GenTrader measures the current forward price that is observed in the market against the cost of operating Duke Energy Indiana's generation fleet and simulates economic dispatch decisions for the portfolio. Only the Company units that have lower operating costs than the current forward market price are dispatched by GenTrader. Electric power output from these units is considered economic generation. The non-native day-ahead position consists of surplus economic generation after meeting the forecasted load of Company native customers.

Non-native hedging transactions are entered into to lock in a fixed margin with a view to hedge against potentially lower power prices in the real-time

markets. The objective of managing the non-native position is to ensure adequate portfolio return from surplus economic generation by taking advantage of a transparent forward power market. Profits and losses from non-native transactions are shared with customers through the Standard Contract Rider 70 profit-sharing mechanism. Company risk management policies determine the amount of non-native economic generation that can be sold forward.

Q. DO YOU BELIEVE THE COMPANY'S POWER HEDGING PRACTICES ARE REASONABLE?

A. Yes, I do. The Company never speculates on future prices, but rather uses a sophisticated model to determine when it is economic to purchase and sell on a forward basis. The Company's practice is economic at the time the decision is made and reduces volatility because it is transacting in a less volatile forward market, as opposed to more volatile spot markets (*i.e.*, the MISO day ahead and real-time markets).

Q. WHAT WERE THE RESULTS OF THE NON-NATIVE HEDGING PROGRAM FOR JUNE 1, 2018 THROUGH MAY 31, 2020?

A. The final realized value of the non-native hedges for this period was $2,213,748, including MISO virtual trades, and non-native natural gas hedges associated with non-native power hedges.

Q. ARE THERE ANY PLANNED CHANGES TO THE COMPANY'S NATIVE POWER HEDGING?

A. The Company does not currently plan any additional changes to its native power hedging plan, and before major changes would be made, the Company would discuss the issues with the OUCC, and request any needed Commission approval.

Q. ARE THERE ANY PLANNED CHANGES TO THE COMPANY'S NON-NATIVE POWER HEDGING?

A. The Commission's Order in the Company's most recent rate case (Cause No. 45253, dated June 29, 2020) changed the way traditional non-native profit is shared between customers and the Company, however no changes are being contemplated for the non-native hedging program at this point in time.

Q. DO THE ENERGY MARKETS CONTINUE TO EXHIBIT VOLATILITY?

A. Yes, they do, and I believe this will continue into the foreseeable future. For instance, the MISO Energy Markets have experienced a wide range of prices at the Company LMP pricing nodes. Through May 2020, the Company has observed hourly CIN Hub, and Indiana Hub since January 1, 2012, Real Time LMP of over $100/MWH in almost every month since the beginning of the MISO Day 2 Markets (April 2005), with the highest LMP at $1,966.29/MWH and the lowest at negative $242.96/MWH. In the same time period, NYMEX prompt month crude oil contract traded as high as $145.29/barrel and as low as negative $37.63/barrel. As for natural gas, NYMEX Henry Hub prompt month contract traded in a wide range between $1.55 and $15.38 per MMBtu. Both the lowest crude oil price and lowest natural gas price were reached recently in April 2020 and prices have since rebounded considerably.

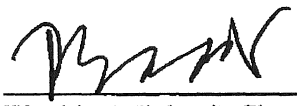
IV. CONCLUSION

Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY IN THIS CAUSE AT THIS TIME?

A. Yes, it does.

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: 
Wenbin (Michael) Chen

Dated: 09/30/2020