

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
BRETT J. PHIPPS

On Behalf of Petitioner,
DUKE ENERGY INDIANA, LLC

Petitioner's Exhibit 22

July 2, 2019

DUKE ENERGY INDIANA 2019 RATE CASE
DIRECT TESTIMONY OF BRETT J. PHIPPS

**TESTIMONY OF BRETT J. PHIPPS
MANAGING DIRECTOR, FUEL PROCUREMENT
DUKE ENERGY PROGRESS, LLC
ON BEHALF OF DUKE ENERGY INDIANA, LLC
BEFORE THE
INDIANA UTILITY REGULATORY COMMISSION**

I. INTRODUCTION

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Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Brett J. Phipps, and my business address is 526 South Church Street,
Charlotte, NC 28202.

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

A. I am employed as Managing Director, Fuel Procurement, Duke Energy Progress, LLC, a
utility affiliate of Duke Energy Indiana, LLC (“Duke Energy Indiana” or “Company”).
In that capacity, I also provide services for Duke Energy’s other affiliate utility
companies, including Duke Energy Indiana, LLC.

**Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND
BUSINESS EXPERIENCE.**

A. I am a 1992 graduate of Marshall University with a Bachelor of Science in Chemistry. I
have worked in the energy industry for approximately 26 years. My career began in the
mining industry in 1993 where I held various roles associated with surface mining
operations. I was employed with Progress Energy since 1999 where I held roles in
terminal operations and sales and marketing for the unregulated business. I transitioned
to the regulated business in 2005 where I worked in various fuels procurement functions
and leadership roles. I joined Duke Energy in July 2012 and am currently Managing

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1 Director, Fuel Procurement. I am on the Board of Directors of the American Coal
2 Council, and a member of: The Coal Institute, the Lexington Coal Exchange and
3 Southern Gas Association.

4 **Q. PLEASE BRIEFLY DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AS**
5 **MANAGING DIRECTOR, FUEL PROCUREMENT.**

6 A. As Managing Director, Fuel Procurement, I participate in all aspects of the overall
7 strategic direction and commercial management of the purchase, delivery and storage of
8 fossil fuels that the Duke Energy regulated utilities use for the generation of electricity.
9 As part of this activity, I monitor and provide guidance in the various areas of fuel
10 markets, including feedback regarding supply and demand, price, quality, availability,
11 economics and deliverability. These fuel reviews cover both existing and potential future
12 supply sources. I also supervise the Company's fuel procurement activity and associated
13 transportation including the negotiation and administration of long-term and spot-
14 purchase contracts. In addition to fuels, I also supervise procurement of reagents
15 (products used by environmental control systems), natural gas and the overall fuel
16 inventories for the regulated fossil generation fleet.

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

18 A. I will discuss Duke Energy's fuel procurement strategy as it relates to Duke Energy
19 Indiana's generating units.

1 **II. FUEL PROCUREMENT**

2 **Q. PLEASE EXPLAIN DUKE ENERGY INDIANA'S FUEL PROCUREMENT**
3 **STRATEGY.**

4 A. Duke Energy Indiana has units that burn coal, natural gas and fuel oil.

5 Coal is generally purchased under long-term contracts of one year or more to
6 assure a dependable supply of large quantities of coal with consistent quality
7 characteristics to a generating station at a competitive price. When the Company
8 determines its requirements to purchase coal, projected coal burns, coal inventory levels,
9 the amount of coal under contract and the quality characteristics needed for a particular
10 generating station are taken into account. Coal supply requirements are competitively bid
11 and proposals are secured from producers and evaluated thoroughly, taking into account
12 coal quality, quantity, volume flexibility, transportation alternatives and price, among
13 other factors. The producer (or producers) whose coal offers the best value, particularly
14 with regard to overall utilization costs and volume flexibility, is selected for further
15 negotiations to produce a long-term contract or contracts. It is important to note that
16 many of our long-term contracts either contain provisions for periodic price reopener
17 negotiations, some type of price escalations and de-escalations, or a mechanism to adjust
18 prices based upon a published market price index. In addition, our coal transportation
19 contracts in Indiana contain fuel price surcharge provisions that are based upon published
20 fuel price indices.

21 Duke Energy Indiana also purchases spot coal. Duke Energy's Regulated Fuel
22 Department stays continually informed as to the current market for spot and contract coal

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1 and specific opportunities for the purchase of such coal. At the time the Company
2 identifies a need to purchase spot coal, Regulated Fuels will seek proposals from
3 potential suppliers via a phone solicitation, and the resulting commitments are based on
4 the proposals that provide the best overall economic value to Duke Energy Indiana, with
5 key aspects of the Company's evaluation being based on a combination of the lowest
6 delivered cost, coal quality compatibility, and best overall utilization characteristics for a
7 given unit or units. As long-term contract obligations expire, the Company has been
8 utilizing increased amounts of spot coal purchases to enable its portfolio to be more
9 responsive to current actual burns and projected future burns that have become more
10 volatile.

11 For its natural gas units, Duke Energy Indiana has contracts for the purchase of
12 gas supply, pipeline transportation, balancing and parking of natural gas needed for its
13 generating stations.

14 For its oil-fired units Duke Energy Indiana has one fuel oil supplier contract to
15 provide fuel oil for its generating stations.

16 **A. Coal**

17 **Q. HOW MUCH COAL DOES DUKE ENERGY INDIANA PURCHASE**
18 **ANNUALLY?**

19 A. Duke Energy Indiana purchases approximately 11 million tons of coal annually.

20 **Q. HOW MANY OF THE COMPANY'S GENERATING STATIONS RECEIVE**
21 **COAL UNDER LONG-TERM CONTRACTS?**

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1 A. Gibson, Cayuga and Edwardsport IGCC Stations continue to be supplied by long-term
2 agreements. Gallagher Station will continue to be supplied by spot purchases depending
3 on how much the Gallagher Station units operate.

4 **Q. PLEASE DESCRIBE THE STEPS THE COMPANY TAKES TO ENSURE THE**
5 **COMPANY IS BUYING COAL AT THE LOWEST PRICE REASONABLY**
6 **POSSIBLE?**

7 A. We use various methods and strategies to ensure reasonable costs, including the use of
8 staggered terms on long-term contracts, maintaining a diversified mix of suppliers and
9 using indices, at times, in the determination of adjustment of prices. The Company also
10 works with fuel and transportation suppliers to increase operating and volume flexibility
11 in an effort to reduce costs. In addition, we are vigilant about monitoring and enforcing
12 the provisions of our coal contracts with respect to quantities and qualities of coal due the
13 Company. Further, the coal quality provisions contained in the Company's coal supply
14 agreements typically include penalties for non-conforming coal deliveries.

15 **Q. PLEASE DESCRIBE THE LATEST TRENDS IN COAL MARKET**
16 **CONDITIONS.**

17 A. Published prices for U.S. coal markets have increased slightly recently in response to
18 demand from recent weather and increased natural gas prices. The following are 2019
19 market price indications for the different coal producing regions as of Mid-May 2019:
20 High-sulfur Illinois basin coal prices are in the high \$30s to mid \$40s per ton, these
21 prices are forecasted to remain through 2020; Central Appalachia coal prices are in the
22 low \$50s to low \$60s per ton, these prices are forecasted to remain through 2020;

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1 Northern Appalachia coal prices are in the low to high \$40s, these prices are also
2 forecasted to remain through 2020 per ton; and Powder River Basin coal prices
3 approximately \$12.10 per ton.

4 Coal markets continue to be challenged and there has been market volatility due
5 to a number of factors, including: (a) deteriorated financial health of coal suppliers; (b)
6 renewed uncertainty from the new administration regarding proposed and imposed U.S.
7 Environmental Protection Agency (“EPA”) regulations for power plants; (c) abundant
8 natural gas supply and storage resulting in lower natural gas prices combined with
9 installation of new combined cycle (“CC”) generation by utilities, especially in the
10 Southeast, which has also lower overall coal demand; (d) changing demand in global
11 markets for both steam and metallurgical coal; (e) increasingly stringent safety
12 regulations for mining operations, which result in higher costs and lower productivity; (f)
13 volatile power prices; (g) mergers and acquisitions in the different coal basins; and (h)
14 mining production changes in an attempt to bring supply of coal into balance with current
15 demand. Despite the challenges in the coal industry, the Company has not experienced
16 non-performance by suppliers on any of its coal contracts.

17 **Q. HOW MANY DAYS BURN DOES THE COMPANY MANAGE TO?**

18 A. Duke Energy Indiana manages to a target of approximately 45 days of coal at full load
19 burn. However, actual inventory levels fluctuate due to changes from, but not limited to,
20 the following factors: (1) weather driven demand; (2) plant availability; and (3)
21 commodity price fluctuations.

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1 **Q. WHAT IS THE CURRENT INVENTORY LEVEL DAYS OF BURN AT EACH**
 2 **OF THE MAJOR COAL GENERATING PLANTS AS OF THE END OF MAY**
 3 **2019.**

4 A. The inventory levels are shown in the table below:

5 **Table 1**

Station	Days Full Load Burn (As of 5/31/2019)
Cayuga	58
Edwardsport IGCC	40
Gallagher	34
Gibson	52
Total	51

6 **Q. WHAT IS THE FORECASTED DAYS OF COAL BURN AT EACH OF THE**
 7 **MAJOR COAL GENERATING PLANTS AS OF THE END OF THE 2020**
 8 **FORECAST TEST PERIOD?**

9 A. Forecasted days of coal burn are shown in the table below:

10 **Table 2**

Station	Days Full Load Burn (As of 12/31/2020)
Cayuga	47
Edwardsport IGCC	46
Gallagher	31
Gibson	47
Total	46

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1 **Q. WHAT WAS THE TOTAL COAL INVENTORY LEVEL IN 2018 AND WHAT IS**
2 **IT EXPECTED TO BE IN 2020?**

3 A. The coal inventory level for Duke Energy Indiana at the end of 2018 was 2,387,404 tons.
4 The coal inventory level for Duke Energy Indiana at the end of 2020 is expected to be
5 approximately 2,517,963 tons.

6 **Q. IS THE COAL INVENTORY LEVEL IN 2020 REASONABLE?**

7 A. Yes, it is. This coal inventory level is consistent with our fuel inventory strategy. An
8 approximate average of 45 to 46 days of coal burn for the forecasted 2020 period is
9 reasonable and consistent with recent experience. The Company's fuel inventory strategy
10 is designed to balance the costs associated with maintaining coal inventory with the need
11 to provide a reliable inventory level that when needed especially during periods of high
12 demand, extreme weather, fuel transportation or mine production problems, Duke Energy
13 Indiana will have adequate fuel supplies to operate its generating units.

14 **Q. WHAT STEPS IS THE COMPANY UNDERTAKING TO ACTIVELY MANAGE**
15 **ITS COAL INVENTORY LEVELS?**

16 A. The Company continues to evaluate a host of options to effectively manage inventory
17 levels. As mentioned previously, the Company actively manages its portfolio and has
18 been utilizing increased amounts of spot coal to enable its purchases to be more
19 responsive to current actual burns and projected future burns that have become more
20 volatile. However, in cases where actual burns unexpectedly drop below projections and
21 the Company's inventory levels are above target, as inventory levels dictate, the
22 Company explores options to store or defer contract coal or resell surplus coal into the

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1 market. Due to continued weak coal market conditions, resale opportunities will continue
2 to be extremely difficult in the near term. The Company will continue to closely monitor
3 its anticipated coal requirements and inventories and take every action available to
4 effectively control coal inventories in the least cost-impact manner for customers
5 including the use of a coal price decrement on an as needed basis.

6 **Q. BASED ON YOUR EXPERTISE, DO YOU HAVE AN OPINION AS TO**
7 **WHETHER THE COMPANY IS BUYING COAL AT THE LOWEST PRICES**
8 **REASONABLY POSSIBLE?**

9 A. Yes. In my opinion, the Company is currently purchasing coal at prices as low as
10 reasonably possible.

11 **B. Natural Gas**

12 **Q. HOW MUCH NATURAL GAS DOES DUKE ENERGY INDIANA PURCHASE**
13 **ANNUALLY?**

14 A. Duke Energy Indiana purchases approximately 20 - 40 bcf annually.

15 **Q. PLEASE DESCRIBE HOW THE COMPANY PURCHASES NATURAL GAS**
16 **FOR ITS NATURAL GAS-FIRED GENERATING UNITS.**

17 A. For gas-fired generators, Duke Energy Indiana purchases natural gas pursuant to supply
18 agreements that allow for competitive daily and spot market gas supply purchases from
19 third parties.

20 Duke Energy Indiana has contracts for the purchase of gas supply, pipeline
21 transportation, balancing and parking of natural gas needed for its generating stations. A
22 summary of the agreements is as follows: (1) on Panhandle Eastern Pipeline Company

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1 (“PEPL”), a firm transportation agreement, an interruptible transportation agreement, an
 2 enhanced interruptible transportation agreement and a parking service agreement. The
 3 firm natural gas transportation agreement on PEPL has a primary receipt point at the
 4 Texas Eastern / Lebanon point with delivery path to the pipeline interconnection with the
 5 Indiana Gas Company system (part of Vectren Energy Delivery of Indiana (“Vectren”) a
 6 subsidiary of CenterPoint Energy) near Montezuma, Indiana and on a firm contract to
 7 the Cayuga CT and directly off the interconnection to Noblesville Station; (2) on Texas
 8 Eastern Pipeline Co. (“TETCO”), an interruptible transportation contract, a Lebanon
 9 lateral interruptible transportation agreement and operational balancing agreement with
 10 natural gas transportation and balancing for the Madison Station; (3) on Midwestern
 11 Pipeline a firm transportation agreement, a park and loan agreement, and an operational
 12 balancing agreement for gas delivery and parking services for the Wheatland Generation
 13 Station, Vermillion Station, and Edwardsport IGCC; (4) a gas transportation service
 14 agreement with Vectren Energy Delivery of Indiana – South for Edwardsport IGCC; and
 15 (5) an interruptible transportation agreement and a pooling transportation service on ANR
 16 Pipeline Company for the Henry County Station. The Company primarily utilizes
 17 Sequent Energy Management, L.P. to schedule and procure natural gas consumed at
 18 Madison Generation Station, and Tenaska Marketing Ventures for natural gas consumed
 19 at Wheatland, Cayuga CT, Noblesville, Vermillion, Henry County, and Edwardsport,
 20 IGCC.

21 **Q. PLEASE DESCRIBE HOW THE PRICE OF NATURAL GAS HAS CHANGED IN**
 22 **RECENT MONTHS.**

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1 A. Spot natural gas prices are dynamic, volatile and can change significantly day to day
2 based on market fundamental drivers. For the period of January 1, 2019 through May 31,
3 2019, the daily prompt month Henry Hub Futures price for natural gas ranged between a
4 low of \$2.49 per MMBtu on April 25, 2019 to a high of \$3.59 per MMBtu on January 15,
5 2019. The average daily settlement price during this time period was \$2.78 per MMBtu.
6 The futures price is not indicative of the actual delivered gas price to Duke Energy
7 Indiana's generation stations; however, it is an indication of prompt month natural gas
8 pricing in the Gulf Coast region.

9 **Q. DO YOU HAVE AN OPINION AS TO WHETHER THE COMPANY**
10 **PURCHASED NATURAL GAS AT THE LOWEST PRICES REASONABLY**
11 **POSSIBLE?**

12 A. Yes. It is my opinion that the Company purchased natural gas at the lowest cost
13 reasonably possible.

14 **C. Oil**

15 **Q. HOW MUCH OIL DOES DUKE ENERGY INDIANA PURCHASE ANNUALLY?**

16 A. During a (3) year average period from 2016-2018, Duke Energy Indiana purchased
17 approximately 3.6 million gallons of fuel oil annually.

18 **Q. REFERRING NOW TO THE COMPANY'S PURCHASE OF OIL, WILL YOU**
19 **DESCRIBE THOSE PURCHASES?**

20 A. Oil for peaking and cycling units is purchased from one supplier at the current index
21 prices as of the date of delivery under prearranged logistics. Our primary oil
22 requirements are for #2 ultra-low sulfur fuel oil, which varies little in delivered quality.

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1 **Q. BASED UPON YOUR EXPERIENCE, DO YOU HAVE AN OPINION AS TO**
2 **WHETHER THE COMPANY PURCHASED OIL AT THE LOWEST PRICES**
3 **REASONABLY POSSIBLE?**

4 A. Yes. It is my opinion that the Company purchased oil at the lowest cost reasonably
5 possible.

6 **III. DUKE ENERGY INDIANA ANNUAL 2020 BUDGET**
7 **FUEL AND PURCHASE POWER EXPENSE**

8 **Q. DID THE FUELS AND SYSTEM OPTIMIZATION GROUP PROVIDE WITNESS**
9 **JACOBI WITH THE ELECTRIC FUEL AND PURCHASE POWER COST**
10 **FORECAST USED IN ESTABLISHING THE FUEL AND PURCHASE POWER**
11 **EXPENSE IN THE DUKE ENERGY INDIANA 2020 BUDGET?**

12 A. Yes, The Fuels and System Optimization group provided Witness Jacobi the electric fuel
13 and purchased power cost forecast used in establishing the fuel and purchase power
14 expense in the Duke Energy Indiana 2020 budget. As Managing Director, Fuel
15 Procurement I am responsible for the fuel related inputs to the production cost model
16 used to simulate the generation output and the associated costs used to create the forecast.

17 **Q. WHAT ARE THE MAJOR FUEL AND PURCHASED POWER ASSUMPTIONS**
18 **REFLECTED IN THE COMPANY'S 2020 BUDGET?**

19 A. To forecast the output of the Company's generating units, the Company uses an
20 externally developed production costing model calibrated to the Duke Energy Indiana
21 system for forecasting. All of Duke Energy Indiana's generating units are represented in
22 the model with their key characteristics, such as capacity, fuel type, heat rate, and

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1 emission rates. Other inputs include fuel costs for each unit, forced outage rates, the
 2 market value for emission allowances, the market price for power, and the Company's
 3 load forecast for native load customers. The model simulates the economic dispatch of
 4 the Company's generating fleet and projects purchases on an hourly basis to meet the
 5 forecasted load for current and future periods. For the time periods forecasted, the model
 6 calculates the amount and type of fuel that would be used, the number of emission
 7 allowances consumed, and the amount of power generated and purchased to most
 8 economically serve our customers.

9 The Company's fuel forecasting methodology for natural gas pricing incorporates
 10 third-party market natural gas prices and volatility at the time of forecast into the fuel
 11 forecast. The market volatilities used are obtained and derived from observed 3rd party
 12 option pricing from the Intercontinental Exchange. Third-party basis adders are included
 13 to deliver the gas to the generating stations along with any transportation and loss
 14 charges. The coal fuel costs are derived based on each station's weighted average cost of
 15 coal which are calculated by incorporating existing inventory costs, projected contractual
 16 costs including transportation and third-party market coal prices.

17 **Q. IN YOUR OPINION, ARE DUKE ENERGY INDIANA'S RETAIL**
 18 **JURISDICTIONAL FUEL COSTS ASSUMPTIONS FOR 2020 REASONABLE?**

19 A. Yes. Duke Energy Indiana makes every reasonable effort to acquire fuel so as to provide
 20 electricity to its retail customers at the lowest fuel cost reasonably possible. As the
 21 Company explains in its quarterly fuel adjustment clause proceedings, Duke Energy
 22 Indiana purchases coal pursuant to long-term contracts entered into after competitive

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1 bidding and on the spot markets. For gas-fired generators, Duke Energy Indiana
2 purchases natural gas pursuant to supply agreements that allow for competitive daily and
3 spot market gas supply purchases from third parties.

4 **IV. CONCLUSION**

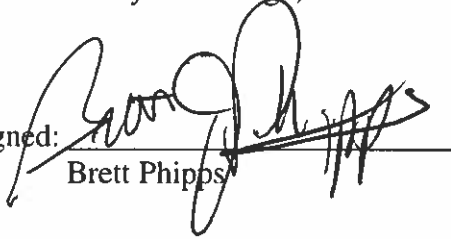
5 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY AT THIS TIME?**

6 **A. Yes.**

VERIFICATION

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

Signed:


Brett Phipps

Dated:

7/2/2019