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Witness: Todd W. Tarter
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Electric Company
Docket No. 22-EPDE-261-ACA
Date Testimony Prepared: January 2022

Before the Kansas Corporation Commission

Direct Testimony

of

Todd W. Tarter

**In Support of the
Annual Energy Cost Adjustment ACA Filing**

January 2022



****Denotes Confidential****

CONFIDENTIAL VERSION

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OF
TODD W TARTER
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE
KANSAS CORPORATION COMMISSION
DOCKET NO. 22-EPDE-261-ACA

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**DIRECT TESTIMONY
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THE EMPIRE DISTRICT ELECTRIC COMPANY
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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS?

A. My name is Todd W. Tarter, and my business address is 602 South Joplin Avenue, Joplin, Missouri, 64801.

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

A. I am employed by Liberty Utilities Service Corp. as the Senior Manager, Strategic Planning for Liberty Utilities' Central Region, which includes The Empire District Electric Company ("Empire" or "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I graduated from Pittsburg State University in 1986, with a Bachelor of Science Degree in Computer Science. After graduation, I received a mathematics education certification. I began my employment with Empire in May 1989. During my tenure with the Company, I have worked in the Corporate Planning, Strategic Planning, Information Technology ("IT"), Planning and Regulatory, Electrical Procurement and Energy Supply Services departments. My primary responsibilities during the early parts of my career included work with the Company's construction budget, load forecasts, sales and revenue budgets, financial forecasts, fuel and purchased power projections, and IT projects among others. In 2004, I was promoted to Manager of Strategic Planning where I primarily worked with

1 fuel and purchased power projections, energy efficiency and integrated resource planning
2 (“IRP”). In October 2016, I assumed the position Manager of Systems and Settlements
3 where I was primarily responsible for market settlements; the computer systems used by
4 the Electrical Procurement department; load forecasting; load research; transmission
5 congestion hedging; and fuel and purchased power projections. I was promoted to Senior
6 Manager, Strategic Planning in December 2019 where I continue to work with load
7 forecasting, transmission congestion hedging, fuel and purchased power projections, and
8 integrated resource planning. I have worked for the Company for over 32 years.

9 **Q. HAVE YOU PREVIOUSLY PRESENTED TESTIMONY BEFORE THE KANSAS**
10 **CORPORATION COMISSION (“COMMISSION”) OR ANY OTHER STATE**
11 **COMMISSION?**

12 A. Yes, I have presented testimony in Kansas under the following dockets: 05-EPDE-980-
13 RTS, 12-EPDE-392-ACA, 13-EPDE-385-ACA, 14-EPDE-270-ACA, 15-EPDE-228-
14 ACA, 16-EPDE-260-ACA, 17-EPDE-101-RTS, 20-EPDE-242-ACA and 21-EPDE-198-
15 ACA. I have also presented testimony before the Arkansas Public Service Commission,
16 the Missouri Public Service Commission (“MoPSC”), and the Oklahoma Corporation
17 Commission.

18 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS CASE?**

19 A. My testimony will support Empire’s request to the Commission for an order approving the
20 Annual Cost Adjustment (“ACA”) factor submitted to the Commission as part of Empire’s
21 approved Energy Cost Adjustment (“ECA”) tariff. In addition, my testimony supports and
22 describes the costs and revenues that flow through the ECA.

1 **Q. PLEASE DESCRIBE HOW THE SOUTHWEST POWER POOL (“SPP”)**
2 **INTEGRATED MARKETPLACE (“IM”) IMPACTS EMPIRE’S OPERATIONS.**

3 A. Since March 1, 2014, Empire submits its generation into the SPP market on a daily basis,
4 and the SPP market determines the most economical and reliable solution for providing
5 energy to customers. When the SPP IM went live, it created one consolidated balancing
6 authority in SPP. Prior to the SPP IM, there were several balancing authorities within SPP.
7 In the past, Empire functioned as a balancing authority and dispatched its generators to
8 serve its native load, while buying and selling energy when it was economical to do so,
9 mostly through bilateral contracts. Since the SPP IM began, Empire purchases energy from
10 the market to serve native load, sells generation into the market, and receives revenue from
11 selling its generation into the market.

12 **Q. PLEASE GENERALLY DESCRIBE EMPIRE’S ELECTRIC SYSTEM**
13 **OPERATING CHARACTERISTICS.**

14 A. Empire generally has dual (winter/summer) system peaks almost equal to each other. The
15 system peak in 2021 (which occurred during the ACA period) was 1,220 megawatts
16 (“MW”). This was also a new all-time system peak for the Company. It was recorded on
17 February 16, 2021 during Storm Uri when the Company’s service territory, the SPP region
18 and much of the United States experienced an extreme weather event that brought some of
19 the coldest temperatures in decades. For comparison, the all-time summer peak occurred
20 in August 2011 at 1,198 MW. The following table shows that the summer peak during the
21 ACA period was about 85% of the system peak. During the past twelve calendar years
22 (2010 through 2021), Empire has recorded its annual peak during the winter season eight
23 times and during the summer season four times. The following table displays the actual

Empire peak demands by month for the twelve-months ending (“TME”) October 2021 along with the native load in megawatt-hours (“MWh”) for each month.

Month	Peak - MW	Percent of Annual Peak	Native Load - MWh
Nov-20	786	64%	367,364
Dec-20	819	67%	456,766
Jan-21	841	69%	483,950
Feb-21	1,220	100%	518,449
Mar-21	775	64%	378,472
Apr-21	717	59%	347,300
May-21	762	62%	354,486
Jun-21	1,013	83%	458,636
Jul-21	1,040	85%	493,610
Aug-21	1,037	85%	508,111
Sep-21	898	74%	421,786
Oct-21	716	59%	356,569
Total			5,145,499

This summer/winter relationship can affect fuel procurement and power plant operation because Empire must have sufficient fuel procured to cover the resources offered into the SPP IM.

Q. PLEASE DESCRIBE THE MAKEUP OF EMPIRE’S SUPPLY-SIDE RESOURCES.

A With the advent of the SPP IM, Empire purchases energy from the market to serve native load, sells generation into the market, and receives revenue from selling its generation into the market. Empire’s supply-side resources for the ACA true-up period ending October 2021 are illustrated in the table below. The results for this period were impacted by the previously mentioned extreme winter event that occurred in February 2021. This event, which included extreme cold temperatures, greatly impacted the demand for electricity,

generating unit operations, market and fuel prices, and fuel availability. Additionally, this table does not include the operations of about 600 MW of new wind resources that began commercial operation in early to mid-2021. These resources will be described later in this testimony.

Unit/Purchase	Summer 2021 Rated Capacity ¹ (MW)	Actual Generation (MWh)	Energy Cost TME Oct-2021 (\$000) ²	Average Cost (\$/MWh)	Primary Fuel Type
Asbury	0	-5,047	0	0.00	Coal
Iatan 1-2	192	991,299	15,688	15.83	Coal
Plum Point (own)	50	279,622	4,252	15.21	Coal
Riverton 10-12	283	1,382,892	82,227	59.46	Natural Gas
Energy Center 1-4	245	242,166	27,388	113.10	Natural Gas
State Line	393	1,299,279	111,356	85.71	Natural Gas
Ozark Beach	16	54,173	0	0.00	Hydro
Plum Point PPA	50	299,472	7,734	25.83	Coal
Wind PPA ³	50	514,949	26,737	51.92	Wind
Total	1,279	5,058,805	275,381	54.44	

¹ Rated Capacity based on summer ratings submitted to SPP in the 2021 Resource Adequacy submission. Asbury is presented as having zero capacity since it was de-designated from the SPP market as of the end of March 1, 2020 and not available for the 2021 summer season. This chart does not recognize a capacity sale of 78 MW that began in June 2020.

² This is the cost of Empire's resource generation for November 2020 through October 2021 and excludes: the cost of fixed gas transportation, resettlements and adjustments, purchased power agreement ("PPA") demand charges, environmental costs, the cost of consumables, SPP IM costs and revenues and generation plant O&M (except the PPA's)

³ Wind PPA Rated Capacity based on the month of July

Q. PLEASE DESCRIBE THE RATE STRUCTURES EMPIRE OPERATES UNDER IN ARKANSAS, OKLAHOMA AND MISSOURI.

A. All three states use historical test years to establish base electric rates in a manner similar to the process used in Kansas. In addition, Arkansas, Oklahoma, and Missouri use adjustment mechanisms to pass on changes in fuel and energy costs to retail customers.

Q. WHAT IS THE RELATIONSHIP OF THE SALES LEVELS WITHIN EACH OF THE JURISDICTIONS?

A. Missouri is by far the largest jurisdiction with over 88 percent of total sales made by Empire during the twelve months ended October 31, 2021. The following table displays the actual sales levels in each of the jurisdictions.

Jurisdiction	MWh Sales	Ratio
Wholesale	10,755	0.2%
Kansas	232,744	4.8%
Arkansas	172,269	3.6%
Oklahoma	154,256	3.2%
Missouri	4,239,896	88.1%
Total	4,809,921	100%

Based on TME October 2021 calendar sales

II. FUEL AND PURCHASED POWER PROCUREMENT PRACTICE SUMMARY

Q. HOW DOES EMPIRE ACQUIRE THE FUEL AND PURCHASED POWER USED TO SUPPLY ELECTRICITY TO ITS CUSTOMERS?

A. Empire's fuel and purchased power acquisition planning is performed using a three-step process. The steps in this process are:

- Long-term Integrated Resource Plan ("IRP")
- An annual and six-year business plan
- Updates to the annual and six-year business plans as conditions change

Q. PLEASE DESCRIBE THE IRP PROCESS.

1 A. Empire utilizes the IRP process to develop a long-term strategy to reliably serve its
2 customers at the lowest reasonable cost while considering other relevant factors. This
3 planning process uses Empire's entire load in all five of its jurisdictions. This formal IRP
4 process has been in place since the early 1990's when the MoPSC implemented a formal
5 IRP rule. Since that time Oklahoma and Arkansas have implemented IRP rules. Empire
6 filed its most recent triennial IRP in Missouri on June 28, 2019 and submitted it in Arkansas
7 on July 24, 2019. The Oklahoma Corporation Commission was notified of the Company's
8 2019 IRP on June 2, 2020, followed by an IRP technical conference with Oklahoma
9 stakeholders on June 24, 2020 and a public meeting to present the IRP in Oklahoma on
10 August 5, 2020. The Company is in the process of developing its next triennial IRP which
11 it plans to file in Missouri in April 2022. This 2022 IRP will then be submitted in Arkansas
12 and Oklahoma based on the three-year filing cycle. Empire plans its resources on a system-
13 wide basis. The IRP process Empire uses results in a target list of future resources designed
14 to serve Empire's projected customer needs in all jurisdictions. The fundamental objective
15 of the IRP process requires the utility to consider demand-side, traditional supply-side and
16 renewable resources on an equivalent basis and utilize the minimization of long-run utility
17 costs as a primary criterion while also considering other factors such as risk mitigation,
18 reliability, environmental sustainability, legal mandates, energy policy and rate impacts.

19 **Q. PLEASE DESCRIBE ANY RECENT CAPACITY ADDITIONS TO EMPIRE'S**
20 **GENERATING FLEET.**

21 A. In June 2019, the MoPSC granted Empire certificates of convenience and necessity for
22 three wind farms generating up to 600 megawatts of wind energy located in Barton, Dade,
23 Lawrence, and Jasper Counties in Missouri and in Neosho County, Kansas. These wind

1 farms are known as North Fork Ridge (located in southwest Missouri and nominally rated
2 at 149.4 MW), Kings Point (located in southwest Missouri and nominally rated at 149.4
3 MW) and Neosho Ridge (located in Southeast Kansas and nominally rated at 301 MW).
4 These wind resources became commercially operational during the first and second
5 quarters of 2021. These resources were included in the model run that calculated the 2022
6 Kansas ECA rates beginning June 1, 2022. This date corresponds with the expected timing
7 of new rates resulting from the Company's current abbreviated general rate case in
8 Kansas¹. The rate proceeding includes the investments for these new wind resources.

9 **Q. DID EMPIRE HAVE ANY RECENT CAPACITY RETIREMENTS?**

10 A. The most recent unit to retire was the Asbury coal-fired generation plant ("Asbury"). After
11 nearly fifty years of service, Asbury was de-designated in the SPP market as of the end of
12 March 1, 2020. At that time, it was nominally rated at 200 MW of capacity. This resource
13 was not included in the model run that calculated the 2022 Kansas ECA rates.

14 **Q. HAS THE COMPANY MADE ANY RECENT CAPACITY SALES?**

15 A. Yes. The Company lost wholesale load as of June 2020. For many years, Empire served
16 multiple municipal electric customers as on-system wholesale customers. Recently, this
17 included the cities of Monett, Mount Vernon, and Lockwood in Missouri and the city of
18 Chetopa in Kansas. As of June 1, 2020, the two largest customers, Monett and Mount
19 Vernon, along with Chetopa are no longer on-system wholesale customers. Following the
20 loss of this on-system wholesale load, Empire entered into a five-year power purchase
21 agreement with the Missouri Joint Municipal Utility Commission ("MJMEUC") on behalf
22 of the Southwest Missouri Power Electric Pool ("SWMPEP") for a capacity and energy

¹ 21-EPDE-444-RTS Abbreviated

1 sale beginning June 1, 2020 and ending May 31, 2025 for the two Missouri municipals.
2 The capacity sale is based on a “slice of Empire system” approach, with a total capacity
3 sale of 78 MW during the agreement period. The MJMEUC agreement also enables
4 MJMEUC to receive payment from SPP for energy sold into the market from Empire
5 resources that are allocated to MJMEUC by this agreement. MJMEUC will pay Empire for
6 the capacity and for their allocated portion of the fuel costs, startup costs, an additional
7 amount per unit of energy and some transmission costs as described by the agreement. The
8 net energy benefits from this sale have been included in the model run used to calculate the
9 2022 Kansas ECA rates.

10 **Q. HOW DOES THE SECOND STEP OF THE PLANNING PROCESS WORK?**

11 A. In addition to the long-range planning, Empire conducts annual financial and operational
12 planning, which is used to develop a six-year business forecast. This planning process
13 includes a detailed load forecast, detailed generation unit modeling, detailed O&M and
14 capital budget planning, and a revenue forecast. The detailed generation unit modeling
15 developed in this phase of the planning process is used as the primary source of information
16 for the development of the fuel and purchased power procurement plan.

17 **Q. ARE THE ANNUAL AND SIX-YEAR BUSINESS PLANS ADJUSTED TO**
18 **REFLECT CHANGES IN THE BUSINESS ENVIRONMENT?**

19 A. Yes. The annual and six-year business plans are periodically refined to consider changes
20 since the plans were initially developed. Empire considers changes in such things as
21 weather, number of customers, fuel prices, purchased power prices, plant outages, and fuel
22 availability. As these refinements are made to the near-term forecasts, Empire adjusts its
23 fuel procurement plans as necessary.

1 **Q. HOW ARE THE NEAR TERM, ONE AND SIX-YEAR FUEL REQUIREMENTS**
2 **DETERMINED?**

3 A. Empire utilizes a chronological dispatch model known as EnCompass to develop an hourly
4 dispatch of its units in the SPP market. Empire uses this model under a license agreement
5 it has with the model's owner, Anchor Power Solutions. The EnCompass model considers
6 coal prices, natural gas prices, market prices, generating plant efficiencies, generating plant
7 outages and many of the other characteristics of Empire's generation resources and
8 develops a dispatch versus a market price curve to determine sales into the market.
9 Empire's native load cost is based on projected market prices and a weather normal forecast
10 of Empire's native load. The model output includes the projected MWh generation from
11 each generation unit, projected fuel usage, hours of operation, number of unit starts, unit
12 margin and native load costs. Monthly reports are generated from this output and are used
13 to develop plans for the acquisition of the fuel required to operate the generating units.

14
15 **III. EXISTING SUPPLY-SIDE RESOURCES**

16 **Q. PLEASE DESCRIBE EMPIRE'S SUPPLY-SIDE RESOURCES IN GREATER**
17 **DETAIL.**

18 **BASE LOAD FACILITIES**

19 A. The Company is currently a joint owner at two coal-fired generation facilities. This
20 includes Iatan (12% ownership of Units 1 and 2) and Plum Point (7.52% ownership).
21 Iatan Unit 1 is approximately a 700 MW coal-fired unit operated by Evergy Metro, Inc.
22 ("Evergy"), formerly Kansas City Power & Light ("KCPL"). Empire owns 12% or 84
23 MW of this unit. It is a base load resource and Empire is not directly responsible for

1 fuel procurement on this generation unit. Iatan Unit 2, which went into service in late
2 2010, is approximately a 900 MW unit. Empire owns 12% or around 108 MW of this
3 unit. Like Unit 1, Iatan Unit 2 is a base load resource and Empire is not directly
4 responsible for fuel procurement at this unit. Plum Point is approximately a 665 MW
5 base load coal-fired unit located in Northeastern Arkansas. Empire owns 7.52% or
6 approximately 50 MW of Plum Point. In addition, Empire has entered into a long-term
7 purchased power agreement (“PPA”) contract for approximately 50 MW from this unit.
8 This unit went into commercial operation in August 2010. Empire is not directly
9 responsible for the coal procurement at Plum Point.

10
11 **INTERMEDIATE AND PEAKING RESOURCES**

12 Empire owns natural gas-fired resources at three locations: the Riverton, Energy Center
13 and State Line generation facilities. The Riverton facility consists of a combined cycle unit
14 and two small simple cycle natural gas-fired units. Riverton Unit 12 is the newest unit at
15 this location. It is a natural gas-fired combined cycle unit that is currently rated at 254 MW
16 for the summer season. The original simple cycle combustion turbine was installed in 2007
17 and the unit was converted to a combined cycle in 2016. As mentioned, the Riverton site
18 also has two relatively small simple cycle natural gas units (Riverton Units 10 and 11) that
19 are rated a combined 29 MW. Empire has four natural gas-fired turbines at the Energy
20 Center generation facility. Two of these units (Energy Center Units 1 and 2) have
21 combined summer capacity rating of approximately 162 MW. They went into service in
22 1978 and 1981. They tend to operate during the summer on-peak hours, but due to their
23 ability to burn fuel oil as a back-up fuel, they can also operate during extreme winter

1 conditions for economic or natural gas transportation curtailment reasons. Energy Center
2 Units 1 and 2 were modeled to be offered into the SPP market on a blend of natural gas
3 and fuel oil for this ECA filing. Empire also has two FT8 Twin Pac aero-derivative units
4 known as Energy Center Units 3 and 4 at the Energy Center facility, with a combined
5 summer rating of about 83 MW. These units have quick start capability and are typically
6 on-line at full load in less than 10 minutes. These units are used primarily for two purposes,
7 peaking and load balancing. The State Line facility consists of State Line Unit 1 and the
8 jointly-owned State Line combined cycle. State Line Unit 1 is a 93 MW 1995 vintage
9 combustion turbine. Empire operates a combined cycle unit at its State Line facility
10 (Empire's 60% share is about 300 MW). This unit is jointly owned with Westar Generation
11 Inc. ("Westar"), which holds a 40% ownership share. It is a 2X1 (two by one) unit
12 consisting of two gas turbines and one steam turbine. The unit has the ability to operate in
13 1X1 (one by one) mode or 2X1 mode.

14 **OTHER RESOURCES**

15 Empire also owns and operates the Ozark Beach hydro facility located near Forsyth,
16 Missouri. It has a capacity of about 16 MW. The output of this unit is limited by the water
17 released upstream from Table Rock Lake by the Corp of Engineers and the level of water
18 maintained by the Corp of Engineers on Bull Shoals Lake, which is downstream from the
19 Ozark Beach facility. At the end of 2005, Empire began receiving output from the 150
20 MW Elk River Wind Project located in Butler County, Kansas via a purchased power
21 agreement ("PPA"). Empire has a contractual commitment to purchase 100 percent of the
22 output from this project for 20 years. Near the end of 2008, Empire began receiving output
23 from 105 MWs of the Meridian Way Wind Project located in Cloud County, Kansas. This

1 is also a 20-year PPA. The energy from both of these wind farms are purchased at a cost
2 per MWh established by contract. Finally, as introduced earlier in this testimony, the
3 Company has three new wind resources that began commercial operation in 2021. The
4 Company purchased the North Fork Ridge wind project on January 27, 2021, and
5 purchased the Kings Point and Neosho Ridge projects on May 5, 2021. All three wind
6 projects are currently in operation and in service. The North Fork Ridge Wind Project,
7 which was constructed by Mortenson Construction, has a capacity of approximately 149.4
8 MW and interconnects at Empire's substation at Asbury. This wind project consists of
9 sixty-nine wind turbine generators. The Kings Point Wind Project was also constructed by
10 Mortenson Construction and also has a capacity of approximately 149.4 MW. It
11 interconnects at the substation at Empire's La Russell Energy Center and it consists of
12 sixty-nine wind turbine generators. Neosho Ridge, the largest of the three new wind
13 projects, was constructed by IEA Constructors, LLC. It has a capacity of approximately
14 301 MW and interconnects to a new substation on Evergy Kansas Central, Inc.'s Neosho-
15 to-Caney River 345 kV transmission line. Neosho Ridge consists of 139 wind turbine
16 generators.

17 **COAL AND FREIGHT**

18 **Q. WHAT APPROACH DOES EMPIRE USE TO PURCHASE ITS COAL**
19 **REQUIREMENTS?**

20 **A.** As previously mentioned, Empire is not directly responsible for the coal procurement at
21 the jointly-owned Iatan and Plum Point facilities. Further, the Asbury generating resource
22 was de-designated from the SPP market as of the end of March 1, 2020.

23 **NATURAL GAS AND RELATED TRANSPORTATION**

1 **Q. PLEASE DESCRIBE HOW EMPIRE ACQUIRES ITS NATURAL GAS**
2 **REQUIREMENTS.**

3 A. All of Empire's natural gas-fired generation resources are located on the Southern Star
4 Central Gas Pipeline ("SSCGP"). Empire currently has approximately 75,000 MMBtu/day
5 firm production zone capacity and more than 110,000 MMBtu/day firm market zone
6 capacity. This firm market zone capacity includes a new contract with Southern Star
7 Central Pipeline for 25,000 dekatherms ("Dth") of firm natural gas transportation that
8 became effective June 1, 2020. The primary delivery location for this new capacity is at
9 the Energy Center generating facility which did not have any firm natural gas transport
10 capacity prior to this contract. However, the new natural gas transport contract can also be
11 used to supplement the firm transportation to the State Line and Riverton Combined Cycle
12 plants. If natural gas transportation is not available, most of Empire's simple cycle natural
13 gas turbines have the ability to operate on fuel oil. Empire acquires physical natural gas
14 on a long-term, monthly, and daily basis. Typically, these physical purchases are
15 competitively bid when possible.

16
17 **MANAGING PRICE VOLATILITY OF NATURAL GAS**

18 **Q. HOW HAS EMPIRE'S MANAGEMENT CHOSEN TO MANAGE NATURAL GAS**
19 **PRICE VOLATILITY?**

20 A. Empire works diligently to mitigate the price volatility associated with changes in natural
21 gas pricing. From an historical perspective Empire developed and implemented a Risk
22 Management Policy ("RMP") during 2001 to manage this volatility. The RMP outlined
23 the instruments that may be used to help manage volatility. In general terms, Empire's

1 RMP allowed the use of NYMEX Futures, Swaps, and Physical purchases to help manage
2 price volatility. Historically, the RMP included a minimum annual quantity of expected
3 natural gas needs whose price must be hedged in advance through either a financial
4 instrument and/or a physical gas contract. However, in September 2018, the Company's
5 Risk Management Oversight Committee ("RMOC") suspended adherence to the hedging
6 requirements while the strategy was being reviewed. The Company hired the services of
7 Risk Management Incorporated ("RMI") to review the process and the Company also
8 worked with various interested stakeholder groups on this endeavor. The Company
9 formally adopted changes to its natural gas hedging policy on July 19, 2019. Under this
10 new policy no financial hedging instruments are used. Allowable advance procurement
11 vehicles include Forward Physical Index Contracts and Forward Physical Fixed Contracts
12 triggered by historical pricing levels. The new natural gas hedging policy also addresses
13 how far in the future advanced procurement may take place and for which months the
14 hedging may apply. This approach is intended to protect customers from volatility in the
15 marketplace and provide the ability to procure natural gas in advance when pricing
16 indicates economic value as defined by the price matrix described in the RMP. In addition,
17 the approach protects against volatility in local natural gas supply, ensuring the supply
18 management group will have the required natural gas available to meet budgeted native
19 load targets. In summary, the ACA period does include some legacy hedges from the
20 previous policy since that policy required minimum annual quantities of expected natural
21 gas needs whose price must be hedged in advance. For example, a portion of the natural
22 gas hedges for 2021 may have been made prior to the legacy policy's suspension and prior
23 to the adoption of the new policy in July 2019.

2020 PROCUREMENT PLAN FOR 2021

Q. PLEASE DESCRIBE THE STATUS OF THE NATURAL GAS PROCUREMENT PROCESS AT THE BEGINNING OF CALENDAR YEAR 2021.

A. As of December 31, 2020, Empire had ** ** MMBtu of its estimated 2021 calendar year natural gas requirements for native load either physically purchased at a fixed price or financially hedged out of a total expected natural gas requirement for native load customers of ** ** MMBtu. The ** ** MMBtu represented about 11% of Empire's anticipated 2021 natural gas requirement for native load and carried an average cost of \$** **/MMBtu. Of the ** ** MMBtu, a total of ** ** MMBtu was purchased under physical contracts and ** ** MMBtu was hedged using financial instruments. The financial hedges are legacy hedges from the former hedging policy that allowed for financial instruments such as a combination of NYMEX contracts and associated basis swaps or swap transactions with Over the Counter ("OTC") counterparties. After burning the natural gas it has physically purchased, Empire will buy its additional physical gas requirements on an intra-month, daily or weekly basis on a competitive basis to balance the system natural gas requirements.

Q. ARE THE BENEFITS AND COSTS OF EMPIRE'S ENERGY RISK MANAGEMENT POLICY RECORDED ON THE GENERAL LEDGER?

A. Yes. The results of Empire's risk management policies, including the settlement of financial hedges, are reflected in the fuel expense accounts on the general ledger, namely accounts 501 and 547 in accordance with Generally Accepted Accounting Principles ("GAAP"). The gains/losses arising from the periodic settlement of the financial instruments have been eliminated from the Kansas ECA filing as have the gains/losses that

1 arose from the periodic sale of financial instruments related to excess natural gas during
2 the ACA period. This is in accordance with an agreement reached with the Staff and
3 approved by the Commission in Docket No. 07-EPDE-712-ACA ("712 Docket").

4 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

5 **A. Yes.**

CERTIFICATE OF SERVICE

I hereby certify that a copy of the above and foregoing was sent via electronic mail, this 26th day of January, 2022, addressed to:

Joseph R. Astrab
j.astrab@curb.kansas.gov

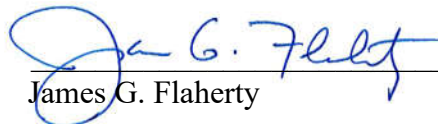
Todd E. Love
t.love@curb.kansas.gov

David W. Nickel
d.nickel@curb.kansas.gov

Shonda Rabb
s.rabb@curb.kansas.gov

Della Smith
d.smith@curb.kansas.gov

Jared Jevons
j.jevons@kcc.ks.gov



James G. Flaherty