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Public Counsel
EO-2017-0065

SURREBUTTAL TESTIMONY

OF

JOHN S. RILEY

Submitted on Behalf of the Office of the Public Counsel

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. EO-2017-0065

**

**

**Denotes Highly Confidential Information
that has been Redacted**

July 28, 2017

NP

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

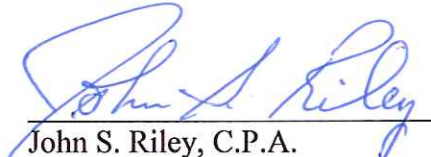
In the Matter of the Sixth Prudence)	
Review of Costs Subject to the)	
Commission-Approved Fuel Adjustment)	Case No. EO-2017-0065
Clause of The Empire District)	
Electric Company)	

AFFIDAVIT OF JOHN S. RILEY

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

John S. Riley, of lawful age and being first duly sworn, deposes and states:

1. My name is John S. Riley. I am a Public Utility Accountant III for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.




John S. Riley, C.P.A.
Public Utility Accountant III

Subscribed and sworn to me this 28th day of July 2017.



JERENE A. BUCKMAN
My Commission Expires
August 23, 2017
Cole County
Commission #13754037



Jerene A. Buckman
Notary Public

My Commission expires August 23, 2017.

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SURREBUTTAL TESTIMONY

OF

JOHN S. RILEY

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. EO-2017-0065

Q. Please state your name and business address.

A. John S. Riley, PO Box 2230, Jefferson City, Missouri 65102

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Office of the Public Counsel ("OPC") as a Public Utility Accountant III.

Q. Are you the same John S. Riley that filed direct and rebuttal testimony in this case?

A. Yes I am.

Q. What is the purpose of your surrebuttal testimony?

A. Due to Company witnesses' contradictory and misleading rebuttal testimony, I find it important to reiterate the major points that OPC has developed in arguing that the Empire District Electric Company's ("Empire" or "Company") hedging policy and practices are imprudent due to inflexible and rigid purchasing mandates and have harmed ratepayers with unnecessary hedging costs that have been shouldered by the customers. Company witnesses spend a great deal of print nitpicking my testimony for error instead of laying out a convincing argument that its hedging is prudent. It appears to me that the Company's tactic is to distract the Commission from the bigger picture.

Q. Please state and explain each argument that OPC has against Empire's hedging policy and practices.

A. First, the policy is too rigid and inflexible for the low price and low volatility natural gas environment that has existed since 2011. As pointed out in direct testimony, Empire's hedging policy was never intended to protect ratepayers from upward price volatility but the goal was to provide budgetary certainty to the Company between rate cases. Empire's policy of purchasing natural gas contracts and derivatives five years in advance only because an out-of-date, 16-year old hedging strategy is dictating your actions is imprudent and has caused ratepayers harm. OPC contends that the Company should not have hedged for this prudence review period at all.

Secondly, the Company knew prices were declining and did not adjust the type of purchases, the amount of purchases, or the timing of those purchases, and the ratepayer suffered harm because of the Company's disregard for the market's changing conditions. I have quoted sources from as far back as 2011 that indicated natural gas inventory levels were elevated and as a result the natural gas prices would be coming down, or as in the case of the Energy Information Administration (EIA) graph on page 9 of my rebuttal testimony, prices would not reach the Company's hedged price for more than a decade. Even more telling is the Company's own updates to the Commission that point out declining prices, and Company witnesses recognizing that hedging in that market environment would produce losses, yet Empire did not alter its hedging practices.

Third, Company personnel readily admit they do not adjust its hedging strategy for changes in market dynamics which has caused over \$13 million in losses that the ratepayer has been subsidizing through the fuel adjustment clause ("FAC").

The Commission should find that a reasonable person would behave in a manner that would reflect decision making that would personally affect them, would not have hedged in that market.

REBUTTAL OF BLAKE MERTENS

Q. How have Company witnesses contradicted their own arguments that Empire's hedging has been prudent?

A. In Mr. Mertens rebuttal testimony, he questions my assertion that continued inventory levels near or above the five-year average has suppressed prices and will prevent price spikes. Mr. Mertens is arguing against the fundamental economics of supply and demand. Near record inventory levels is just an indication that supply is outpacing demand. It is generally accepted that an oversupply of a product will cause producers to cut prices to increase demand and help reduce inventory levels. If inventory levels stay high, prices will continue to stay low.

Q. Please explain the contradiction.

A. As was pointed out on page 10 and 11 of my rebuttal testimony; the Company updated its integrated resource plan ("IRP") in March 2012, three years before this prudence review period. Empire explained that fuel price estimates have been significantly reduced due to the increased gas production from horizontal gas drilling. The contradiction occurs when Mr. Mertens attempts to rebut my position, but his own Company uses OPC reasoning when updating the annual IRP that was presented to the Commission:

The added production has boosted natural gas supplies in storage facilities underground to levels that are about **40 percent higher than the five-year average, according to the Energy Department. According to the U.S. Energy Information Administration (EIA) Short-Term Energy Outlook** (February 7, 2012), natural gas spot prices averaged \$2.67 per MMBtu at the Henry Hub in January 2012, down \$0.50 per MMBtu from the December 2011 average and the lowest average monthly price since 2002. **Abundant storage levels, as well as ample supply, have contributed to the recent low prices.** EIA expects the Henry Hub spot price will begin to recover after this winter's inventory draw season ends and will average \$3.35 per MMBtu in 2012 and

1 \$4.07 per MMBtu in 2013. One of the factors contributing to
2 recent downward movements in natural gas prices has been
3 unusually warm weather throughout much of the United States
4 during the winter of 2011-2012, which has the effect of depressing
5 natural gas demand for space heating. **Natural gas working**
6 **inventories continue to set new record seasonal highs and**
7 **ended January 2012 at an estimated 2.86 trillion cubic feet**
8 **(Tcf), about 24 percent above the same time last year¹**
9 (Emphasis added).

10 The Company's updated IRP points out that above-average storage levels and excess supply
11 is the reason for the lower prices. Empire also mentions the information comes from the
12 EIA, the most authoritative agency when it comes to information regarding energy related
13 matters and the report even mentions *Short-Term Energy Outlook* publications that I refer to
14 in my rebuttal testimony. Mr. Mertens contends that my reliance on storage volume is an
15 unacceptable method in forecasting future prices yet his Company lowered its pricing
16 estimates for the very same reasons that I provided.

17 **Q. Mr. Mertens includes a Table BAM-2 in his rebuttal testimony that he contends**
18 **indicates that these were the forecasted prices for 2015 listed on the NYMEX Futures**
19 **Exchange five years prior to the prudence review period and that this is a better**
20 **indication of the expected prices for the periods in question. Do you agree?**

21 A. No. The NYMEX Futures market is simply a market created to transfer price risk. Just
22 because the word "Future" is in the description of the market it does not mean it is an
23 accurate forecast of future prices. This is another instance of Empire witnesses
24 contradicting each other's testimony.

25 **Q. Please explain the contradiction.**

26 A. Mr. Mertens provided no footnotes or references to the authenticity of his table which I
27 reproduced below, but the table does raise two interesting questions.

¹ EO-2012-0294, 2012 Integrated Resource Plan Annual Update Report, Page 6 and Riley Rebuttal, page 10 line 25 through line 10 Page 11

Surrebuttal Testimony of
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Futures Months	1/29/2010	2/26/2010	3/31/2010	4/30/2010	5/28/2010	6/30/2010	7/30/2010	8/27/2010	9/30/2010	10/29/2010	11/26/2010	12/31/2010
1/1/2015	7.405	7.200	7.060	7.094	6.972	6.739	6.264	6.376	5.929	5.933	6.122	5.983
2/1/2015	7.385	7.175	7.025	7.054	6.927	6.694	6.209	6.331	5.884	5.888	6.082	5.938
3/1/2015	7.170	6.955	6.825	6.854	6.727	6.494	6.029	6.156	5.709	5.713	5.912	5.760
4/1/2015	6.570	6.365	6.345	6.384	6.247	6.049	5.594	5.821	5.344	5.348	5.562	5.402
5/1/2015	6.525	6.320	6.305	6.349	6.212	6.019	5.569	5.806	5.334	5.333	5.549	5.390
6/1/2015	6.590	6.380	6.365	6.407	6.270	6.077	5.604	5.836	5.362	5.355	5.573	5.410
7/1/2015	6.665	6.455	6.440	6.479	6.340	6.147	5.656	5.881	5.404	5.390	5.613	5.452
8/1/2015	6.730	6.520	6.505	6.544	6.403	6.210	5.704	5.929	5.452	5.430	5.653	5.492
9/1/2015	6.765	6.555	6.540	6.577	6.436	6.243	5.729	5.954	5.477	5.450	5.673	5.512
10/1/2015	6.870	6.660	6.645	6.679	6.538	6.345	5.814	6.034	5.557	5.528	5.748	5.587
11/1/2015	7.125	6.910	6.895	6.929	6.776	6.580	6.014	6.224	5.742	5.708	5.926	5.757
12/1/2015	7.400	7.185	7.175	7.209	7.038	6.840	6.234	6.434	5.947	5.910	6.141	5.972

2015 NYMEX Henry Hub Futures as of												
Futures Months	1/28/2011	2/25/2011	3/31/2011	4/29/2011	5/27/2011	6/30/2011	7/29/2011	8/26/2011	9/30/2011	10/28/2011	11/25/2011	12/31/2011
1/1/2015	5.871	5.966	6.244	6.167	6.137	5.889	5.797	5.688	5.567	5.484	5.118	4.733
2/1/2015	5.838	5.936	6.224	6.142	6.117	5.855	5.765	5.653	5.532	5.450	5.083	4.705
3/1/2015	5.706	5.826	6.134	6.057	6.042	5.771	5.683	5.570	5.447	5.364	4.998	4.622
4/1/2015	5.431	5.576	5.864	5.757	5.757	5.486	5.423	5.311	5.217	5.154	4.775	4.444
5/1/2015	5.421	5.566	5.879	5.777	5.775	5.501	5.436	5.321	5.227	5.164	4.783	4.454
6/1/2015	5.441	5.586	5.909	5.807	5.815	5.536	5.469	5.349	5.255	5.192	4.811	4.481
7/1/2015	5.481	5.626	5.954	5.850	5.860	5.576	5.505	5.384	5.290	5.227	4.848	4.518
8/1/2015	5.514	5.661	5.994	5.882	5.897	5.609	5.535	5.408	5.312	5.249	4.870	4.538
9/1/2015	5.531	5.676	6.009	5.892	5.912	5.624	5.546	5.415	5.319	5.256	4.875	4.541
10/1/2015	5.601	5.746	6.069	5.944	5.962	5.672	5.588	5.445	5.349	5.286	4.905	4.576
11/1/2015	5.743	5.881	6.224	6.089	6.114	5.810	5.723	5.575	5.472	5.408	5.017	4.671
12/1/2015	5.948	6.091	6.464	6.329	6.364	6.042	5.957	5.798	5.697	5.635	5.244	4.881

First, why is a utility buying hedges over *four* years into the future? Before KCPL and GMO suspended their natural gas hedging programs, the companies extended hedging transactions out to 36 months. Neither Liberty Utilities nor Ameren Missouri hedge longer than three years out². Empire Electric is the only Missouri utility that I know of that hedges past three years. Empire's hedging policy calls for a minimum of 10% hedged for the year 2015 by December 31 of 2011, yet Empire was buying 2015 futures in October of 2010. OPC has already argued that the Company's policy is imprudent, but Company's practice of buying futures even farther out than its own policy parameters is even more speculative, and may be an imprudent purchase regardless of any price or cost impact.

² Referencing Liberty and Ameren Hedging Presentations

Second, Mr. Mertens argues that OPC should consider the “forward curve” of the futures market as the indicator of what prices will be in the future. As I stated before, the NYMEX futures market is a transfer of price risk and not a forecaster of future prices. The reason why a “forward curve” is a poor predictor of natural gas prices four or five years down the road is due to a lack of liquidity in the market that far into the future. I will explain market liquidity and the speculative nature of forward prices by using Mr. Doll’s NYMEX table AD-2 on page 6 of his rebuttal testimony.

Commodity Futures Price Quotes For Natural Gas (NYMEX)										
(Price quotes for NYMEX Natural Gas delayed at least 10 minutes as per exchange requirements) Also available: Electronic Session Quotes										
Trade Natural Gas now with:										
Click for Chart	Current Session					Prior Day		Opt's		
	Open	High	Low	Last	Time	Set	Chg	Vol	Set	Op Int
Jul'17	-	3.082	3.021	3.037	18:01 Jun 18	3.037	-0.019	119322	3.056	141820
Aug'17	-	3.102	3.042	3.060	18:01 Jun 18	3.060	-0.018	76977	3.078	227329
Sep'17	-	3.087	3.034	3.047	18:01 Jun 18	3.047	-0.017	31022	3.064	181116
Oct'17	-	3.108	3.057	3.070	18:01 Jun 18	3.070	-0.016	24075	3.086	177414
Nov'17	-	3.172	3.124	3.136	18:01 Jun 18	3.136	-0.014	12159	3.150	72402
Dec'17	-	3.304	3.263	3.272	18:01 Jun 18	3.272	-0.011	7801	3.283	65253
Jan'18	-	3.387	3.349	3.356	18:01 Jun 18	3.356	-0.010	11994	3.366	108998
Feb'18	-	3.367	3.327	3.337	18:01 Jun 18	3.337	-0.011	3699	3.348	45716
Mar'18	-	3.308	3.266	3.275	18:01 Jun 18	3.275	-0.012	8748	3.287	76466
Apr'18	-	2.904	2.878	2.882	18:01 Jun 18	2.882	-0.015	11441	2.897	84096
May'18	-	2.869	2.844	2.847	18:01 Jun 18	2.847	-0.015	3557	2.862	34940
Jun'18	-	2.896	2.872	2.876	18:01 Jun 18	2.876	-0.014	847	2.890	20420
Jul'18	-	2.923	2.905	2.904	18:01 Jun 18	2.904	-0.013	2065	2.917	25336
Aug'18	-	2.929	2.908	2.911	18:01 Jun 18	2.911	-0.014	1119	2.925	16999
Sep'18	-	2.903	2.884	2.888	18:01 Jun 18	2.888	-0.015	1275	2.903	17061
Oct'18	-	2.920	2.900	2.904	18:01 Jun 18	2.904	-0.016	2383	2.920	39682
Nov'18	-	2.960	2.952	2.952	18:01 Jun 18	2.952	-0.017	1040	2.969	20479
Dec'18	-	3.095	3.082	3.084	18:01 Jun 18	3.084	-0.015	983	3.099	21878
Jan'19	-	3.182	3.172	3.170	18:01 Jun 18	3.170	-0.016	2021	3.186	11206
Feb'19	-	3.163	3.154	3.146	18:01 Jun 18	3.146	-0.016	690	3.162	3505
Mar'19	-	-	-	3.096	18:01 Jun 18	3.080	-0.016	820	3.096	4808
Apr'19	2.720	2.720	2.720	2.726	18:01 Jun 18	2.726	-0.009	473	2.735	4655
May'19	2.684	2.684	2.684	2.681	18:01 Jun 18	2.681	-0.009	18	2.690	1551
Jun'19	-	-	-	2.716	18:01 Jun 18	2.709	-0.009	-	2.718	1406
Jul'19	-	-	-	2.746	18:01 Jun 18	2.739	-0.009	-	2.748	1205
Aug'19	-	-	-	2.760	18:01 Jun 18	2.753	-0.009	16	2.762	1160
Sep'19	-	-	-	2.753	18:01 Jun 18	2.746	-0.009	-	2.755	1115
Oct'19	-	-	-	2.778	18:01 Jun 18	2.771	-0.009	-	2.780	2149
Nov'19	-	-	-	2.853	18:01 Jun 18	2.846	-0.009	-	2.855	1345
Dec'19	-	-	-	3.001	18:01 Jun 18	2.991	-0.009	2	3.000	1350

1 Liquidity in the NYMEX natural gas market can be explained as the amount of buying and
2 selling (volume) of contracts for any given timeframe. The timeframe is usually a month.
3 Reviewing the schedule above, you can see that there is a large amount of volume in the
4 early months of 2017. There is a great deal of buying and selling. These are very *liquid*
5 timeframes. A high amount of liquidity fortifies the going price for natural gas in that
6 month - there is buying and selling in a narrow price range so the price is well established.
7 As can be seen towards the bottom of this schedule, after Apr'19, there is less and less
8 volume (liquidity) as the timeframe gets farther and farther from the current month. With
9 very few buyers and sellers; the expected price is less certain and is subject to unproven
10 price support.

11 The contradiction here is that Mr. Mertens contends that his schedule demonstrates the
12 expected price for 2015 natural gas way back in 2010. Mr. Doll's schedule tells us that
13 there is very little liquidity after 24 months and, therefore, not enough buyers and sellers 50
14 or 60 months in the future to accurately forecast the future price. To say that the forward
15 curve for January 2015 natural gas was \$6.74 MMBtu is purely speculative because there is
16 not an active market for natural gas that far into the NYMEX Futures Market³. Mr.
17 Mertens' own tables demonstrate that the NYMEX is a poor predictor of future prices by
18 noting that in January 2010 the price for January 2015 natural gas was \$7.40 but in January
19 of 2011, the futures price for January 2015 natural gas was \$5.87. That is a 21% drop in one
20 year.

21 It is interesting to note that Mr. Mertens argues that the Company was not imprudent
22 because it was purchasing at a price that was listed on the NYMEX futures market. OPC
23 has already pointed out that the future curve is not a good indicator of future prices so OPC
24 wants to reiterate that Empire's policy should have the flexibility to avoid and not purchase
25 at inflated prices, hence our contention that Empire's policy and practices are imprudent.

³ I used the June 2010 month end \$6.739 from Mr. Mertens table as the reference for the January 2015 pricing.

REBUTTAL OF AARON DOLL

Q. Empire witness Aaron Doll’s rebuttal testimony at the top of page 2 describes Empire’s hedging as a “ladder approach” that “provides maximum level volumetric thresholds... with the ability to procure above the bands if desired.” Mr. Doll states “this structure allows for strategic input to vary amount of natural gas hedged.” Is this description concerning?

A. Yes. Mr. Doll appears to be saying Empire’s approach is a one-way ladder that can only be climbed upward with more hedges and more expense to the ratepayer. In other words, the flexibility touted by Mr. Doll allows only for *more* hedging and not less hedging. This is another indication that Empire’s inflexible hedging will never result in less hedging even where hedging less than Empire’s strict programmatic approach is clearly the prudent decision.

Q. Mr. Doll responded to your direct testimony example where Empire hedged 1 million Dekatherm at \$5.44/MMBtu. He stated that the transactions in question were acquired in five transactions, not one transaction. Assuming Mr. Doll is correct, does this change the point you made in direct testimony with this example?

A. No, but I do need to make a slight correction to my direct testimony I mentioned the 2011 December Gas Position Report because the Company’s hedging policy requires that a minimum of 10% of the 2015 expected gas burn be hedged by the end of December 31, 2011. I should have used the word “by” instead of “in December of 2011” when referring to the gas purchased at \$5.44/MMBtu. The Company had 11% of the 2015 gas requirements hedged by the end of December 31, 2011. An incorrect word choice does not change the fact that the Company employs a “lock and leave” strategy that hedged well in advance of the settlement date even though it acknowledge that natural gas prices were falling. Empire experienced hedging losses in every month of the prudence review period, which were then

1 passed through to the customers, because the hedging policy required the Company to
2 hedge.

3 **Q. Mr. Doll responds to your example of the 1 million Dekatherm purchase by including**
4 **a table that he says shows Empire was “in the money” at the time of the transactions as**
5 **indicated by the forward curves leading up to the hedge transaction dates (p.3). What**
6 **does Mr. Doll mean when he says Empire was “in the money” and do you agree with**
7 **his testimony?**

8 A. I’m not completely sure what Mr. Doll is describing. The term “in the money” is defined by
9 Investopedia.com as “**In the money** means that a call option's strike price is below the
10 market price of the underlying asset or that the strike price of a put option is above the
11 market price of the underlying asset. Being **in the money** does not mean you will profit, it
12 just means the option is worth exercising.”

13 Another way to describe the phrase is “**in the money**” refers to an option contract that, if it
14 were exercised today, would be worth more than \$0.

15 If I understand Mr. Doll’s statement correctly, then I would agree that it is a self-fulfilling
16 prophecy.

17 **Q. Please explain.**

18 A. Both Mr. Doll and Mr. Mertens have argued that the forward curve is the appropriate future
19 price to use when placing hedges. To place hedge purchases at the forward curve price and
20 then later argue that your purchase was “in the money” at the time of the transaction can
21 hardly be challenged. Of course it is in the money. The point that needs to be emphasized
22 is that purchasing contracts at the forward curve price four or five years in advance is
23 nothing more than a bet. The Company is not placing hedging transactions that far in
24 advance to protect the ratepayer. It has pointed out in the Hedging Section of the Risk
25 Management Policy (“RMP”) that it makes these transactions for budgetary certainty and

1 regulatory lag.⁴ It could care less what price is locked up in 2010 or 2011 for natural gas
2 that will be delivered in 2015 because the ratepayer will reimburse them through the FAC
3 no matter how bad a bet the Company made.

4 Let us review some of the transactions that Mr. Doll has referred to above and see how the
5 Company disregards prudent purchases for the sake of forecasting certainty. Below is a
6 table from Empire's October 2010 *Company Gas Position Report*. These were purchases
7 made in October for various dates but the last two are for periods within the prudence
8 review period. It is my understanding that these are financial swaps placed with either
9 Wells Fargo or Bank of America. Swaps are financial transactions that exchange a floating
10 price for a constant price to come due on a particular date (swapping cash flows). It is my
11 understanding that swaps are more negotiable due to the more individual nature of the
12 transaction as opposed to purchasing futures on the NYMEX futures market. The far
13 column on the right in the below table is the Market Price which I believe is the forward
14 curve that Mr. Doll and Mr. Mertens contend is the price that should be relied on to
15 determine if a hedge is "in the money." The interesting fact concerning this table is that
16 Empire's 10/29/2010 purchases for June and July of 2015 were purchased above the Market
17 Price. The Market Price is approximately 30 cents more than what the Company will
18 actually pay when it buys natural gas from the Southern Star Pipeline.⁵

⁴ 2003 RMP, opening paragraph of the Section 4 Hedging Strategy

⁵ Information gathered from the "market details" tab on the monthly Gas Position Reports

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Transaction Date	Delivery Date	Settlement Date	Trade Ticket	Supplier	DTh	Av. Price	Contract \$	Basis (1=Nymex, 2=S Star, 3=PEPL)	Market Price
10/19/2010	1/1/2013	12/27/2012	BB29E	Wells Fargo Wells	70,000	5.36	375,200	1	5.623
10/19/2010	2/1/2013	1/29/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.579
10/19/2010	3/1/2013	2/26/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.421
10/19/2010	4/1/2013	3/27/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.106
10/19/2010	5/1/2013	4/26/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.091
10/19/2010	6/1/2013	5/29/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.111
10/19/2010	7/1/2013	6/26/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.151
10/19/2010	8/1/2013	7/29/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.186
10/19/2010	9/1/2013	8/28/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.206
10/19/2010	10/1/2013	9/26/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.281
10/19/2010	11/1/2013	10/29/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.453
10/19/2010	12/1/2013	11/26/2013	BB29E	Fargo Wells	70,000	5.36	375,200	1	5.655
10/21/2010	6/1/2014	6/26/2014	BB31E	B of A	100,000	5.24	524,000	1	5.238
10/21/2010	7/1/2014	7/29/2014	BB31E	B of A	200,000	5.285	1,057,000	1	5.274
10/21/2010	8/1/2014	8/27/2014	BB31E	B of A	200,000	5.33	1,066,000	1	5.309
10/29/2010	7/1/2015	6/26/2015	BB32E	B of A	200,000	5.50	1,100,000	1	5.390
10/29/2010	8/1/2015	7/29/2015	BB32E	B of A	200,000	5.50	1,100,000	1	5.430

This begs the question, why did the Company negotiate a natural gas price above the Forward Curve? Why would the Company be compelled to make that arrangement four years and eight months before the settlement date when Henry Hub spot price for that day was \$3.36 MMBtu? The answer is that the Empire only cares about price certainty and not whether it is prudent to make the transaction from an end-user's perspective.

1 **Q. Mr. Doll is critical of your references to Henry Hub spot prices rather than the futures**
2 **price (pp. 4-5). He states your analysis is flawed because Empire does not have fixed**
3 **transportation contracts at Henry Hub, and instead sources its fixed contracts from**
4 **the Southern Star Central Gas Pipeline (“SSCGP”). Has he confused the issue?**

5 A. Yes. References to the Henry Hub pipeline interchange are rarely used to indicate an actual
6 delivery of natural gas. Rather, the Henry Hub is the benchmark daily natural gas settlement
7 price. Normally, the natural gas purchased or sold at Henry Hub through a NYMEX futures
8 contract is financial in nature and the transaction is unrelated to an electric utility’s actual
9 purchase of natural gas to fuel its generation plants.⁶ The average monthly spot price at
10 Henry Hub helps illustrate this point. If it is October of 2010 and the current spot price is
11 \$3.36, should Empire unquestionably purchase natural gas for \$5.50 to be settled in July of
12 2015? OPC argues that there was nothing in that present moment to indicate that a hedge
13 needed to be made for 63.7% more than the current price four years and eight months into
14 the future.

15 Mr. Doll does bring up an interesting point. Empire purchases its gas from the SSCGP
16 which normally has a cheaper price, usually 20 to 30 cents cheaper than Henry Hub quoted
17 settlement prices. However, financial gains and losses on swaps/futures contracts are
18 determined using the Henry Hub price for settlement purposes. OPC has calculated
19 financial losses of \$10,712,168.00 based on the Henry Hub settlement price. If losses were
20 calculated on the SSCGP prices, the loss would be even greater due to the even lower
21 pricing activity from that pipeline.

22 **Q. Mr. Doll argues that hedging losses that equal 38.5% of the cost of natural gas during**
23 **the 18 month prudence review period does not accurately reflect the impact of the**
24 **Company’s hedging program. How do you respond?**

⁶ NYMEX began using Henry Hub Natural Gas Futures in April, 1990. From the CME Group article “Henry Hub Natural Gas Futures: Global Benchmark”

1 A. Mr. Doll's answer to that question on page 10, line 11 of his rebuttal testimony is probably
2 the most descriptive yet simple explanation that anyone could use to describe Empire's
3 hedging philosophy: "**Empire utilizes hedges to lock in prices.**" For the Company it has
4 never been about protecting the ratepayer from upward price volatility and it has never
5 really been about how much the Company actually pays for natural gas. It has always been
6 about budgetary certainty and recovering its costs in rates.

7 Now having to respond to Mr. Doll's contention that the Commission should review the
8 Company's hedging results over the life of the program is ironic.

9 **Q. Please explain the irony.**

10 A. When OPC submitted data requests to the Company asking for information concerning what
11 information the Company relied on prior to the prudence period to formulate its hedging
12 purchases for the prudence review timeframe, Empire objected to providing any information
13 that was outside of the 18 month prudence review period. Now Mr. Doll seeks to have the
14 Commission review the Company's entire history of financial hedging gains and losses.
15 What I see as extremely frustrating is that Mr. Doll added this history lesson while
16 judiciously leaving out key physical hedging losses so that the results look more favorable
17 than the actual facts.

18 **Q. What were the losses that Mr. Doll left out of his table?**

19 A. The annual physical hedge totals were omitted from Mr. Doll's calculations. OPC
20 understands that this docket is a prudence review for an 18 month timeframe from March
21 2015 through August of 2016, but Company witnesses are attempting to sway the
22 Commission with a feel good story implying that Empire only lost \$3.1 million in 15 years.
23 Schedule JSR-S-1 has a more complete listing of gains/losses. When the physical hedging
24 losses are included in the calculations, Empire lost approximately \$41 million.⁷ In fact since

⁷ Month end Gas Position Reports were used to tabulate the monthly losses.

1 the Company was granted a FAC in September 2008 the losses from both physical and
2 financial hedging losses are in excess of \$95 Million. That alone is \$11.5 million annually
3 that the ratepayers have been saddled with since the FAC was granted to the Company.

4 **Q. Claiming a \$41 million loss is quite a bit different than Empire's assertion that it only**
5 **had a \$3.1 million loss over 15 years. Can you explain how you determined the**
6 **physical hedging losses that are listed on your schedule?**

7 A. Yes. In response to OPC data request 1327, Empire provided weekly Gas Position Reports
8 from 2002 through 2016. I include in my direct testimony, as Schedule JSR-D-4 month-end
9 reports for the prudence review period. I reviewed the month-end reports for every month
10 from the beginning of 2003 through February 2015. To include all of the month-end reports
11 to this testimony would be voluminous but to get an understanding of the format of the
12 report you can view some selected reports in Schedule JSR-S-2.

13 Gas Position Reports list the total hedged amount for the month and then breakout physical
14 hedging (forward contracts) and financial hedging (swaps and futures) into sections. The
15 Physical Hedges section lists the amount purchased in Dekatherms ("Dth"), total cost of the
16 purchase, price paid per Dth and the market price per Dth. The final line in the section is the
17 difference between the contract price and the month end market price. This is the gain or
18 loss calculated as of the date at the top of the report. The reports are always projecting the
19 gains or losses for three months in advance. A December 31, 2015 report list January,
20 February and March 2016 totals as of the known market price as of December 31.

21 What I did then is tabulate the listed amount of gain or loss for each month end for each year
22 and listed the year-end totaled. To illustrate, I used the December 31, 2003 report to
23 determine the gain/loss for January 2004. I used January 2004 to record the total for
24 February, February month end for the March total and continue the process through
25 November 2003 to determine the physical gain/loss for 2003. I did the same steps for each
26 month and year from 2003 through February 2015 and then September through December

2016. The monthly totals for the 18 month prudence review period were calculated in the spreadsheet in Schedule JSR-D-5 from my direct testimony.

Q. How accurate are your annual totals?

A. Because I used the Company's prior month-end market prices there will be some variations in actual gain/loss due to the change in market price when the contract actually came due during the month. For example, the December 31, 2004 report lists a market price of \$5.833 per Dth. The Southern Star pipeline price in January was listed on the January report as \$5.763/Dth. So the actual gain/loss in the month of January when the contract came due would be adjusted by .07/Dth (\$5.833 less \$5.763) from the December month-end total. So in every month there will be some adjustment up or down when the contract is actually executed.

To have complete confidence in the gain/loss I would have to match the Southern Star Pipeline price for the day of the contract execution with the price/Dth set out in the contract much like I did with the prudence review months. That won't be necessary because OPC is not formulating an adjustment outside the prudence review period. This exercise was only completed because the Company interjected an incomplete picture of its hedging history in testimony. When the dust settled, an estimated \$37.5 million had been lost to physical hedging transactions from 2003 through 2016.

Q. How should the Commission view the 38.5% hedging loss totals?

A. The 38.5% represent the losses within the prudence review period. There is no reliance on hindsight in OPC's arguments that Empire's hedging is imprudent. Since April of 2015 OPC has been arguing that the Company's hedging practices have been imprudent.⁸ Having losses represent 38.5% of the cost of natural gas demonstrates that Empire Electric is ineffective as well as imprudent.

⁸ ER-2016-0023, Company hedging policy was officially questioned in April, 2015 during an issues meeting with Staff and Company. Testimony was filed May 2, 2015

Q. Do you have any final remarks concerning Mr. Doll's rebuttal of your testimony?

A. Yes. Both Mr. Doll and Mr. Mertens display a table of what they contend is the October 2010 futures prices for NYMEX 2015 natural gas. They provide a weak argument that the forward curve is the price that should be relied on to determine future price estimates. They do not provide any justification or historical reference to show that the forward curve is accurate. They do not provide any facts demonstrating the reasonableness of using forward curves for future pricing. A quick review of the Company's Gas Position reports will reveal that NYMEX pricing for July 2015 prices in October of 2010 were \$5.50. In October 2011 - \$5.23, in 2012-\$4.32, in 2013-\$4.02, in 2014-\$3.71 and finally in October 2015 the price was \$2.34. The Company cannot make a case for the accuracy of pricing by using NYMEX forward curve prices. The EIA predicted lower prices, less volatility and were constantly updating their evaluations with the latest information throughout 2011, 2012 and 2013. The Company should have relied on those predictions and used a more flexible hedging plan to take advantage of the price reductions occurring in the natural gas market instead of programmatic order placement that cost the ratepayers over \$13 million.

REBUTTAL OF ROBERT SAGER

Q. Mr. Robert Sager testifies primarily about the Risk Management Policy ("RMP") and the Risk Management Oversight Committee ("RMOC"). What is your takeaway from this discussion?

A. Mr. Sager misses the point of the case. He fails to argue that the Company has a prudent hedging plan; instead Mr. Sager spends a great deal of time explaining how the RMP is reviewed and has evolved as if the RMP is the focal point of this case. It is not. The OPC does not take issue with the RMP in general. Our argument is with Section 4, HEDGING STRATEGY pages 9 through 11 which OPC contends, with the exception of the opening paragraph, has not changed since 2003. The RMP may have gone through an evolution but

the hedging section of the RMP is stagnant and has remained stagnant despite significant changes in the gas markets.

Q. Mr. Sager says he doesn't understand how you can refer to Empire's hedging strategy as "rigid" or "inflexible". How do you respond?

A. Empire has a hedging strategy that has not been revised since 2003 despite major changes in the volatility of the natural gas market. Within this hedging strategy, the only mention of monitoring is the "expected gas burn". There is no mention of any gas market scenarios, whether that would be disruptions, weather phenomenon, or abrupt forecast changes one way or the other. The only change mentioned is gas consumption and nothing else is listed that would alter the buying requirements.

Company personnel have a simple set of rules to follow when it comes to natural gas purchasing:

- Hedge a minimum of 10% of year four expected gas burn
- Hedge a minimum of 20% of year three expected gas burn
- Hedge a minimum of 40% of year two expected gas burn
- Hedge a minimum of 60% of year one expected gas burn

(Emphasis added)

These minimum percentages must be in place by December 31 of each year. Nowhere in this section does it allow for purchases of less than these annual requirements. If the Company recalculates its expected gas burn and it indicates that it will burn more fuel than the Company previously expected, then Company personnel must hedge the appropriate amount to reach the new required percentage. Webster's defines "rigid" as: "Precise and accurate in procedure. Deficient in or devoid of flexibility."⁹ The above quoted guidelines can hardly be described in any other way than rigid and inflexible.

⁹ Merriam Webster's Collegiate Dictionary, tenth edition

1 **Q. Mr. Sager contends (p. 5 lines 12-14) that “one of the strengths of Empire’s hedging**
2 **policy is that it allows for flexibility within the strategy based on market conditions**
3 **without requiring constant revision to the policy.” Is this similar to Mr. Doll’s**
4 **characterization that was discussed earlier in this testimony?**

5 A. It is similar in that the only flexibility is to hedge more not less. What is bothersome about
6 this statement is that there is no place within the hedging section of the RMP that Mr. Sager
7 can point to that backs up his contention that hedging is based on market conditions.
8 Empire absolutely does not place hedges based on market conditions. As Empire attested to
9 in Docket EW-2013-0101 with its answer to Staff Question 10: Should utilities have a
10 budget for their hedging programs? Why, or why not?

11 Empire’s response: It would depend upon the structure of the hedging
12 program. For example, **Empire’s historical hedging program has involved**
13 **the dollar cost averaging of a predetermined percentage of its future**
14 **natural gas requirements (as forecasted by our fuel and purchased power**
15 **and customer demand budgeting processes) over multiple years.** This type
16 of program does not involve the use of specific annual budgets for hedging.
17 (Emphasis added)

18 The Company reinforces that stance with its answer to Staff Question 11: How active
19 should electric utilities be in changing hedging positions or strategy based on new market
20 conditions and new information?

21 Empire’s Response: Market conditions and new information should be
22 monitored by the electric utilities, **but the hedging program should be**
23 **designed to avoid wholesale changes in positions or strategy based on**
24 **speculative forecasts of prices or future events.** (Emphasis added)

1 What these answers confirm is that Empire hedges for natural gas *volume* requirements
2 without consideration of market conditions when making its hedging purchases which is
3 why ratepayers are footing the bill for \$13.1 million in this prudence review period.

4 **Q. Mr. Sager states that you and OPC witness Charles R. Hyneman do not provide any**
5 **examples of the rigidity or inflexibility of the Company's hedging policy. Can you**
6 **point out any transactions that substantiate your claim?**

7 A. Every transaction is geared toward satisfying the required year-end percentage level of the
8 RMP and a review of Empire's purchases indicates the company is satisfying its hedging
9 requirements. The first page of Schedule JSR-S-2 lists the Company's Gas Position Report
10 for September 2012. In keeping with the requirements set out in the Hedging Section of the
11 RMP, the Company must, by December 31, 2012, have 60% of the expected burn for 2013,
12 40% of 2014, 20% of 2015, and 10% of 2016 expected gas burns hedged. In September the
13 hedging amounts were 51%, 25%, 15% and 4% respectively. By the end of October 2012,
14 hedging purchases brought the percentages up to the year-end requirements of 60%, 40%,
15 20% and 10%. An interesting note to these 2012 year-end totals is that the Company
16 recalculated its expected burn for 2014 and increased its expectations causing the year-end
17 percentage to drop from 40% to 39%. However, by October 2013 the required percentage
18 of 60% for 2014, 40% for 2015, 20% for 2016 and 10% for 2017 had all been met. Again in
19 2014, the percentages in September were 63% for 2015, 43% for 2016 but only 17% for
20 2017 and only 6% for 2018. As expected, in October the 2017 and 2018 percentages jump
21 to 20% and 11% respectively. Every year, the Company meets its 60, 40, 20, 10 goals. It
22 does not deviate from this rigid, inflexible requirement regardless of what the market
23 conditions are at the time.

24 **Q. Has the OPC satisfied the requirements under the Commission's prudence standard**
25 **by raising serious doubt over the prudence of Empire's hedging practices?**

1 A. Yes. OPC has not only raised serious doubt, but has demonstrated that a reasonable person
2 would not have engaged in the hedging practices that Empire Electric has steadfastly
3 followed. The Company has disregarded the changes in the natural gas markets and has not
4 adjusted its hedging policy to reflect the stability in the gas markets. The Company's
5 imprudence has caused \$13.1 million in unnecessary losses that the Commission should
6 return back to the ratepayer through the FAC.

7 **Q. Are there any changes to your direct or rebuttal testimony that you would like to**
8 **correct at this time?**

9 A. Yes. My Schedule JSR-D-5 in direct testimony was the preliminary spreadsheet that
10 calculated the Company's hedging losses during the prudence audit timeframe. Steps were
11 taken to calculate the Missouri jurisdictional portion of the losses, however, I inserted the
12 original spreadsheet in as my schedule instead of the calculated Missouri losses. I'm
13 including the corrected schedule as Schedule JSR-S-3.

14 **Q. Does this conclude your surrebuttal testimony?**

15 A. Yes it does

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Empire District Electric

Schedule JSR-S-1

Schedule JSR-S-2

Schedule JSR-S-3

have been deemed

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