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Missouri Public Service Commission

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Issues: Nuclear Fuel Costs Witness: Randall J. Irwin

Type of Exhibit:

Sponsoring Party: Union Electric Company Surrebuttal Testimony

Case No.:

Date Testimony Prepared:

ER-2007-0002 February 27, 2007

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2007-0002

SURREBUTTAL TESTIMONY

OF

RANDALL J. IRWIN

ON

BEHALF OF

UNION ELECTRIC COMPANY d/b/a AmerenUE

St. Louis, Missouri February, 2007

Public

1		SURREBUTTAL TESTIMONY
2		OF
3		RANDALL J. IRWIN
4		CASE NO. ER-2007-0002
5	Q.	Please state your name and business address.
6	Α.	My name is Randall J. Irwin. My business address is One Ameren Plaza,
7	1901 Chouteau Avenue, St. Louis, Missouri 63103.	
8	Q.	By whom are you employed and in what capacity?
9	A.	I am employed by AmerenUE as Supervising Engineer, Fuel Cycle
10	Management in the Nuclear Division.	
11	Q.	Are you the same Randall J. Irwin who filed Rebuttal Testimony in this
12	case on January 31, 2007?	
13	A.	Yes.
14	Q.	What is the purpose of your Surrebuttal Testimony?
15	A.	With reference to the Rebuttal Testimony of Mr. John P. Cassidy of the
16	Commission Staff, the purpose of this testimony is to address updated nuclear fuel costs that	
17	the Staff plans to include in the true-up process of the cost of service calculation.	
18	Q.	What nuclear fuel cost has the Staff proposed?
19	A.	In response to Company Data Request RJI-Staff-001, the Staff has calculated
20	a generation weighted average nuclear fuel cost for 2006 of ** ** cents/MMBtu. This	
21	cost was based on the monthly generation and nuclear fuel costs for each of the months in	
22	2006.	

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increased from the pre May 2006 values.

Is a weighted average nuclear fuel cost for the entire calendar year 2006 1 O. 2 the most accurate representation of actual current costs? 3 A. No. 4 Please explain. Q. 5 Nuclear fuel costs are based on the amortization of each of the 193 nuclear Α. fuel assemblies in the reactor. Monthly nuclear fuel costs represent the total of the 6 amortization of each of the fuel assemblies during a given month. A key component in 7 8 monthly fuel expense determination is the forecast of remaining total generation (MWh or 9 MMBtu) of each fuel assembly during its lifetime in the reactor. Fuel assemblies typically reside in the reactor for two fuel cycles, or a total of 3 years. As the operation of a given fuel 10 11 cycle evolves, the remaining production from each fuel assembly becomes more accurate. 12 Also, after the initial months of operation in a given cycle, reload design planning for the 13 subsequent cycle begins. This can impact the remaining lifetimes of fuel assemblies in the 14 current cycle. Fuel assembly lifetimes are monitored routinely and are updated as more 15 accurate information becomes available. 16 Q. How does this process impact the average fuel costs for 2006? 17 In May 2006, an updated fuel utilization plan was developed and A. 18 implemented. Fuel assembly generation lifetimes were updated to reflect current operational 19 plans. As I mentioned previously, remaining generation is a key component of nuclear fuel 20 cost determination. As a consequence of implementing these changes, nuclear fuel costs

1 Q. What period of 2006 provides the most accurate representation of 2 AmerenUE's current nuclear fuel costs? 3 The period July – December 2006 provides the most accurate reflection of A. 4 current nuclear fuel costs. Updated fuel assembly lifetimes have been incorporated and a 5 representative generation profile is included. 6 Q. What are the actual nuclear fuel costs for this period? 7 A. Using the Staff's method of generation weighting, the average nuclear fuel cost for the period July through December 2006 is ** cents/MMBtu. 8 9 Q. Does this value more accurately reflect current nuclear fuel costs for 2006 than the Staff's value of ** cents/MMBtu? 10 11 A. Yes, I believe it does. 12 As of January 1, 2007, are there known and measurable nuclear fuel costs Q. for 2007? 13 14 A. Yes. Nuclear fuel costs throughout 2007 are based on two major components: 15 1) the unamortized cost of nuclear fuel in the reactor as of December 31, 2006, and 2) the 16 cost of the new fuel assemblies that will be loaded into the reactor in April 2007. The 17 unamortized costs of the fuel currently in the reactor are known. In addition, the cost of the 18 new fuel assemblies to be loaded into the reactor in April 2007 is also known as of January 1, 19 2007. Due to the lead-time necessary to procure and manufacture nuclear fuel assemblies, 20 costs are known prior to a refueling. The fuel assemblies that will be loaded into the reactor in April 2007 have already been purchased and delivered to the Callaway Plant. In summary, 21 22 the costs which form the basis for the 2007 nuclear fuel expense are known and measurable 23 as of January 1, 2007.

Surrebuttal Testimony of Randall J. Irwin

- Q. As of January 1, 2007, what would the known nuclear costs be for 2007?
- 2 A. Using the Staff's methodology of generation weighting, the average nuclear
- 3 fuel cost for calendar year 2007 would be ** cents/MMBtu.
- 4 Q. As of January 1, 2007, would ** cents/MMBtu be the most
- 5 accurate, known and measurable, nuclear fuel cost for calendar year 2007?
- 6 A. Yes, it would.
- 7 Q. Does this conclude your Surrebuttal Testimony?
- 8 A. Yes, it does.

Public

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

OF THE STATE OF MISSOCIA
In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area. Case No. ER-2007-0002 Case No. ER-2007-0002
AFFIDAVIT OF RANDALL J. IRWIN
STATE OF MISSOURI)
CITY OF ST. LOUIS)
Randall J. Irwin, being first duly sworn on his oath, states:
1. My name is Randall J. Irwin. I work in St. Louis, Missouri and I am
employed by AmerenUE as Supervising Engineer, Fuel Cycle Management in the Nuclear
Division.
2. Attached hereto and made a part hereof for all purposes is my Surrebuttal
Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 4 pages,
which has been prepared in written form for introduction into evidence in the above-
referenced docket.
3. I hereby swear and affirm that my answers contained in the attached testimony
to the questions therein propounded are true and correct.
Rapidall J. Irwin Subscribed and sworn to before me this 21 day of February, 2007. Notary Public
My commission expires: May 19, 2008
CAROLYN J. WOODSTOCK Notary Public - Notary Seal STATE OF MISSOURI Franklin County

My Commission Expires: May 19, 2008