

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

DIRECT TESTIMONY OF

GREGG N. CLIZER

**ON BEHALF OF
KANSAS CITY POWER & LIGHT COMPANY
KANSAS GAS & ELECTRIC COMPANY
AND
KANSAS ELECTRIC POWER COOPERATIVE, INC.**

**IN THE MATTER OF THE 2014 WOLF CREEK
DECOMMISSIONING COST STUDY AS PROVIDED
BY WOLF CREEK NUCLEAR OPERATING
CORPORATION ON AUGUST 29, 2014 IN
ACCORDANCE WITH THE COMMISSION'S ORDER IN
DOCKET NUMBER 163,561-U ON DECEMBER 9, 1992,
AND THE COMMISSION'S ORDER IN
DOCKET NO. 13-WCNE-204-GIE ON JUNE 13, 2013.**

DOCKET NO. 15-WCNE-093-GIE

1 **Q: Please state your name and business address.**

2 A: My name is Gregg N. Clizer. My business address is 1200 Main Street, Kansas City,
3 Missouri 64105.

4 **Q: By whom and in what capacity are you employed?**

5 A: I am employed by Kansas City Power & Light Company ("KCP&L") as Senior Manager,
6 Corporate Finance.

7 **Q: What are your responsibilities?**

8 A: My responsibilities include the development, analysis, and implementation of financing
9 plans and a capital structure that maintain continuous access to capital at the lowest

1 overall cost. My responsibilities also include serving on the committee responsible for
2 the administration and investment management oversight of KCP&L's Nuclear
3 Decommissioning Trust Fund.

4 **Q: Please describe your education, experience and employment history.**

5 A: I graduated from the University of Missouri-Columbia in 1981 with a Bachelor of
6 Science degree in Industrial Engineering. I received a Master of Business Administration
7 degree from the University of Missouri-Kansas City in 1987. I have been employed by
8 KCP&L or its affiliates since 1981 in various roles in the areas of Corporate Planning,
9 Corporate Modeling, Business Development, Financial Planning and Corporate Budgets
10 as well as my current role in Corporate Finance.

11 **Q: Have you previously testified in a proceeding at the State Corporation Commission**
12 **for the State of Kansas ("KCC" or "Commission") or before any other utility**
13 **regulatory agency?**

14 A: Yes. I previously provided testimony to the KCC. Also, I have previously provided
15 written testimony to the Missouri Public Service Commission.

16 **Q: What is the purpose of your testimony?**

17 A: The purpose of my testimony is to recommend a rate of inflation appropriate for
18 estimating the escalation of costs associated with decommissioning a nuclear facility such
19 as the Wolf Creek Nuclear Generating Station ("Wolf Creek"). The decommissioning
20 study prepared by TLG Services, Inc. ("TLG") includes a cost estimate in current year
21 dollars i.e., 2014 dollars. The annual inflation rate I am recommending escalates the
22 current year cost estimate prepared by TLG to the year the Wolf Creek operating license
23 expires and decommissioning cost commences.

1 **Q: On whose behalf are you presenting this testimony?**

2 A: I am presenting this testimony on behalf of all three Wolf Creek co-owners: KCP&L,
3 Kansas Gas and Electric Company d/b/a Westar Energy (“Westar”), and Kansas Electric
4 Power Cooperative, Inc. (“KEPCo”).

5 **I. RECOMMENDED RATE OF INFLATION**

6 **Q: What is the current dollar decommissioning cost estimate for Wolf Creek and what**
7 **is the basis for the cost estimate?**

8 A: The current decommissioning cost estimate for Wolf Creek is \$765,060,000 in 2014
9 dollars. This cost estimate is based on a study dated August 2014 performed by TLG.
10 TLG is a recognized industry leader in the area of nuclear decommissioning cost analysis.
11 The \$765,060,000 cost estimate is based on the immediate dismantlement and site
12 restoration alternative for decommissioning. The TLG study was filed with the
13 Commission in this proceeding on August 29, 2014.

14 **Q: What is the assumed timing of the future decommissioning costs?**

15 A: Wolf Creek’s operating license expires in 2045 and the 2014 TLG Wolf Creek
16 decommissioning study includes a schedule of decommissioning costs beginning in 2045
17 and continuing through 2053.

18 **Q: What is the decommissioning cost escalation rate that you are recommending?**

19 A: I am recommending a cost escalation rate of 3.15% per year to escalate the 2014
20 decommissioning cost estimate of \$765,060,000 from 2014 dollars to the appropriate
21 year dollars for when the decommissioning costs are expected to occur.

1 **Q: What index or formula was the basis for your recommended cost escalation rate?**

2 A: There are a number of indices like the Consumer Price Index (“CPI”) or the Gross
3 Domestic Product (“GDP”) Deflator that are often used to measure changes in prices or
4 inflation. Unfortunately, none of these indices specifically relates to inflation in nuclear
5 decommissioning costs. The TLG Wolf Creek decommissioning cost study has identified
6 five main cost drivers (labor cost, equipment & material cost, energy cost, burial cost,
7 and other cost) in the nuclear decommissioning cost estimate. I used a formula based on
8 the allocation of cost to these cost drivers applied to indices appropriate for each cost
9 driver.

10 **Q: Please describe the allocation of cost used in the formula**

11 A: The TLG decommissioning cost estimate included the following allocation of cost
12 drivers:

13	\$444,503,000	Labor Cost	(58.1%)
14	\$123,095,000	Equipment & Materials Cost	(16.1%)
15	\$ 14,220,000	Energy Cost	(1.9%)
16	\$ 97,853,000	Burial Cost	(12.8%)
17	\$ 85,389,000	Other Costs	(11.1%)

18 In addition, the Energy Cost escalation is a weighted average of two components,
19 namely, Industrial Electric Power at 58% of total energy cost and Light Fuel Oil at 42%
20 of total energy cost.

1 **Q: What is the source for the indices used for each cost component of your**
2 **formula?**

3 A: I utilized a long range forecast published by Moody's Analytics as the source for the cost
4 escalation estimates for each of the cost components of the formula except for burial
5 costs. Moody's Analytics is a well-known and respected source of economic forecasts,
6 and its website at www.economy.com contains projections for numerous indices included
7 in the formula. The Moody's Analytics forecast includes projections for future years
8 through 2044. I utilized the compound annual growth rate from 2014 to 2044 as a proxy
9 for the growth rate from 2014 through the decommissioning period. For Labor Cost, I
10 used the Employment Cost Index ("ECI") for total compensation—all civilians and all
11 workers. For the electricity component of the Energy Cost, I used the Producer Price
12 Index ("PPI") for electric power—total. For the fuel oil component of the Energy Cost, I
13 used the PPI for No. 2 fuel oil. For the Equipment & Materials Cost, I used the PPI for
14 all commodities. For the Other Cost, I used the Consumer Price Index ("CPI") for urban
15 customers - all items.

16 **Q: How did you estimate the burial cost escalation rate?**

17 A: Unfortunately, the Moody's Analytics forecast does not include a projection of burial
18 costs. *NUREG-1307 Revision 11 and NUREG-1307 Revision 15*, however, contain some
19 historical indices for burial costs at the Washington and South Carolina low-level waste
20 storage sites. While neither of these storage sites currently accept low-level waste from
21 generators that are not located in the Northwest, Rocky Mountain, or Atlantic Compact
22 states, the historical burial cost indices for these sites can serve as reasonable proxies for
23 future burial cost escalation at other potential future low-level waste storage sites.

1 **Q: Please describe the results of your analysis for the cost escalation formula.**

2 A: For all of the cost components except burial cost I calculated the geometric mean of the
3 Moody's Analytics projections for years 2014 through 2044 as shown in attached
4 Schedule GNC-1 and used these geometric means in the formula. For the burial
5 component I calculated the geometric means for years 1995 through 2012
6 (PWR/Compact/Direct Disposal) for the Washington and South Carolina sites,
7 respectively, as shown in attached Schedule GNC-2 and averaged the geometric means
8 for the two sites. The results for the various components of the formula are:

9	Labor Cost	2.9%
10	Equipment & Material Cost	2.0%
11	Energy Cost	Electricity 2.9%
12		Fuel Oil 2.6%
13	Burial Cost	6.6%
14	Other Costs	2.2%

15 The resulting nuclear decommissioning cost escalation estimate calculated by weighting
16 the figures by the allocation of the costs is 3.15%. The calculation is shown below and in
17 attached Schedule GNC-3:

18 Escalation rate = $[58.1\% * 2.9\%] + [16.1\% * 2.0\%] + [1.9\% * ((58\% * 2.9\%) + (42\% * 2.6\%))] +$
19 $[12.8\% * 6.6\%] + [11.2\% * 2.2\%]$

20 Escalation rate = $1.69\% + 0.32\% + 0.05\% + 0.84\% + 0.25\%$

21 Escalation rate = 3.15%

1 **Q: Does your proposed methodology for determining an escalation rate for Wolf Creek**
2 **decommissioning costs differ from the methodology proposed in the previous Wolf**
3 **Creek Decommissioning Cost Study case in 2011?**

4 **A: No.**

5 **Q: Does that conclude your testimony?**

6 **A: Yes, it does.**

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

In the Matter of the 2014 Wolf Creek Decommissioning)
Cost Study as Provided by Wolf Creek Nuclear)
Operating Corporation in Accordance with the) Docket No. 15-WCNE-093-GIE
Commission's Order in Docket Number 163,561-U on)
December 9, 1992, and the Commission's Order in)
Docket 13-WCNE-204-GIE on June 13, 2013.)

AFFIDAVIT OF GREGG N. CLIZER

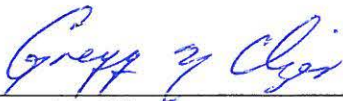
STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

Gregg N. Clizer, being first duly sworn on his oath, states:

1. My name is Gregg N. Clizer. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Senior Manager, Corporate Finance.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Kansas City Power & Light Company consisting of Seven (7) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.



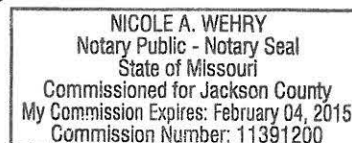
Gregg N. Clizer

Subscribed and sworn before me this 3rd day of October, 2013.



Notary Public

My commission expires: Feb 4, 2015



SCHEDULE GNC-1
THIS DOCUMENT CONTAINS
CONFIDENTIAL AND PROPRIETARY
INFORMATION NOT AVAILABLE
TO THE PUBLIC

Bx Values for Washington Site (U.S. Ecology)					Bx Values for South Carolina Site (Barnwell)							
					Atlantic Compact				Non-Atlantic Compact			
Direct Disposal		Direct Disposal with Vendors			Direct Disposal		Direct Disposal with Vendors		Direct Disposal		Direct Disposal with Vendors	
Year	PWR	BWR	PWR	BWR	PWR	BWR	PWR	BWR	PWR	BWR	PWR	BWR
2012	7.335				30.581							
2010	8.035				27.292							
2008	8.283				25.231							
2006	6.829				22.933							
2004	5.374				19.500							
2002	3.634				17.922							
2000	2.223				17.922							
1998	3.165				15.886							
1997	3.112				15.852							
1996	2.845				12.771							
1995	2.015				12.824							

Geometric Means

2008	2012	-3.0%				4.9%							
2006	2012	1.2%				4.9%							
2004	2012	4.0%				5.8%							
2002	2012	7.3%				5.5%							
2000	2012	10.5%				4.6%							
1998	2012	6.2%				4.8%							
1997	2012	5.9%				4.5%							
1996	2012	6.1%				5.6%							
1995	2012	7.9%				5.2%							

Averages

1.0%
3.1%
4.9%
6.4%
7.5%
5.5%
5.2%
5.9%
6.6%

Average	6.6%
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Sources

NRC, NUREG-1307, Revision 11, June 2005
NRC, NUREG-1307, Revision 15, January 2013

Schedule GNC-3

Weighted Escalation Rate

	Total Cost (\$000)	Allocations	Escalation Rate	Weighted Rate	Escalation Description (Source)
Labor	\$444,503	58.1%	2.9%	1.68%	ECI: Total Compensation - All Civilian, All Workers (Moody's Analytics)
Energy	\$14,220	1.9%			
Electricity (Px)		58%	2.9%	0.03%	PPI: Electric Power - Total (Moody's Analytics)
Fuel Oil (Fx)		42%	2.6%	0.02%	PPI: No. 2 Fuel Oil (Moody's Analytics)
		<u>100%</u>			
Burial	\$97,853	12.8%	6.6%	0.84%	Average of 1995-2012 geometric means for PWR direct disposal at Barnwell S.C. and Washington State sites (NRC, NUREG-1307, Revisions 11 and 15)
Equipment & Material	\$123,095	16.1%	2.0%	0.32%	PPI: All Commodities (Moody's Analytics)
Other	\$85,389	11.2%	2.2%	0.25%	CPI: Urban Consumer - All Items (Moody's Analytics)
Total	<u>\$765,060</u>	<u>100.0%</u>		<u>3.15%</u>	

Allocation Source:

Wolf Creek Decommissioning Cost Analysis, August 2014 Section 3, Page 19 of 28