

BEFORE THE CORPORATION COMMISSION  
OF THE STATE OF KANSAS

Received  
on

**JUN 17 2011**

IN THE MATTER OF THE PETITION ]  
OF KANSAS CITY POWER AND LIGHT ]  
COMPANY FOR DETERMINATION OF THE ]  
RATEMAKING PRINCIPLES AND ]  
TREATMENT THAT WILL APPLY TO ]  
RECOVERY IN RATES OF THE COST TO ]  
BE INCURRED BY KCP&L FOR CERTAIN ]  
ELECTRIC GENERATION FACILITIES ]  
UNDER K.S.A. 66-1239 ]

by  
State Corporation Commission  
of Kansas

KCC Docket No. 11-KCPE-581-PRE

CROSS-ANSWERING TESTIMONY OF

KARL RICHARD PAVLOVIC

ON BEHALF OF

THE CITIZENS' UTILITY RATEPAYER BOARD

June 17, 2011

## TABLE OF CONTENTS

	Page
I. Introduction	3
II. Subject of Testimony	3
III. Purpose of Testimony	3
IV. Summary of Conclusions	4
V. Staff's Least Cost Analysis	5

1 **I. INTRODUCTION**

2 **Q. Please state your name and summarize your position and qualifications.**

3 A. My name is Karl Richard Pavlovic. I am a Senior Consultant with Snavely King Majoros &  
4 O'Connor, Inc. ("Snavely King"), an economic consulting firm with offices at 8100  
5 Professional Place, Suite 306, Landover, Maryland 20785. I am the same Karl Richard  
6 Pavlovic who submitted direct testimony in this proceeding on June 3, 2011 on behalf of the  
7 Citizens' Utility Ratepayer Board ("CURB"). Appendices A and B to my direct testimony  
8 contain, respectively, a brief description of my qualifications and experience and a list of the  
9 regulatory projects and proceedings in which I have participated and/or made an appearance.  
10 I am submitting this cross-answering testimony on behalf of CURB.

11

12 **II. SUBJECT OF TESTIMONY**

13 **Q. What is the subject of your testimony?**

14 A. My testimony addresses (1) the direct testimony and confidential supplemental testimony of  
15 KCC Staff witness Nicolas Puga and Exhibits BW-1 and BW-1S and (2) KCC Staff's  
16 recommendation as presented at pages 8 – 13 of the direct testimony and page 1 of the  
17 supplemental testimony of KCC Staff witness Robert Glass.

18

19 **III. PURPOSE OF TESTIMONY**

20 **Q. What is the purpose of your testimony?**

21 A. Staff witness Glass testifies in his direct testimony that Staff concludes that "retrofitting of

1 La Cygne Station is the least cost alternative” disposition of La Cygne Units 1 and 2.<sup>1</sup>  
2 CURB requested that Snavely King evaluate and, if possible, verify the analysis underlying  
3 Staff’s conclusion.  
4

5 **IV. SUMMARY OF CONCLUSIONS**

6 **Q. What are your conclusions and recommendations?**

7 A. Based on my evaluation of Staff’s analysis described below, I conclude:

- 8 • Staff presents no support for its selection of the Waxman-Markey Delayed CO<sub>2</sub>  
9 scenario as the most probable.
- 10 • The Bates White (BW) Supplemental Report provides no support for the Waxman-  
11 Markey Delayed CO<sub>2</sub> scenario as the most probable.
- 12 • Given its CO<sub>2</sub> price sensitivity analysis, BW’s analysis is unable to demonstrate  
13 which disposition of La Cygne is least cost.
- 14 • Neither Staff’s analysis nor BW’s analysis demonstrates that the La Cygne  
15 Environmental Project is the least-cost alternative for La Cygne Units 1 and 2.

16 My recommendation is that the Commission find that the La Cygne Environmental Project as  
17 presented in Staff’s analysis and the BW Supplemental Report has not, at this time, been  
18 shown to be reasonable and prudent and that the Commission deny KCP&L’s petition.  
19

---

1. Glass Direct at 8.

1 **V. Staff's Least-Cost Analysis**

2 **Q. Please summarize Staff's least-cost analysis.**

3 A. Staff's least-cost analysis rests on the conclusion that La Cygne's capacity/energy is required  
 4 for KCP&L to meet SPP's margin requirements.<sup>2</sup> The analysis supporting this conclusion is  
 5 presented at pages 4 – 8 of Staff witness Glass' direct testimony. Staff then frames the least-  
 6 cost issue as a comparison of the investment and operating costs of retrofitting La Cygne  
 7 versus the investment and operating costs of replacing La Cygne with a natural gas fired  
 8 combined cycle unit.<sup>3</sup> Next Staff notes that the investment costs of retrofit and replacement  
 9 with a combined cycle are about the same<sup>4</sup> and that the operating costs of retrofit will be less  
 10 than those of a combined cycle under the most likely future natural gas and CO<sub>2</sub> price  
 11 scenario.<sup>5</sup> On that basis, Staff then concludes that retrofit of La Cygne is the least-cost  
 12 option.<sup>6</sup> The detailed logical steps in the analysis are outlined in Staff witness Glass' direct  
 13 testimony,<sup>7</sup> which I reproduce below revised per his supplemental testimony.<sup>8</sup>

- 14 1. The peak load and generation forecasts demonstrate that the capacity/energy of  
 15 La Cygne is needed.<sup>9</sup> Therefore, the question becomes what is the least cost  
 16 alternative: retrofitting La Cygne or replacing it with new generation?<sup>10</sup>  
 17  
 18 2. The capital cost of investment in either the La Cygne retrofit or a natural gas  
 19 combined cycle is about the same.<sup>11</sup>

---

2 Glass Direct at 8.

3 *Id.*

4 Glass Direct at 9.

5 Glass Supplemental at 1.

6 *Id.*

7 Glass Direct at 13.

8 Glass Supplemental at 1.

9 Glass Direct at 8, 13.

10 Glass Direct at 8.

11 Glass Direct at 13.

- 1  
2 3. The operational costs of running La Cygne are significantly lower than the  
3 operational costs of a natural gas combined cycle because the price of PRB coal  
4 is substantially lower than the price of natural gas and is expected to remain  
5 lower.<sup>12</sup>  
6  
7 4. The future uncertainty of only two exogenous factors is important to consider in  
8 the La Cygne retrofit decision: the price of C02 and the price of natural gas.<sup>13</sup>  
9  
10 5. The price of C02 is the dominant uncertainty and an increase in the price of C02  
11 should probably also drive up the price of natural gas.<sup>14</sup>  
12  
13 6. If the Waxman-Markey price path for C02 emissions begins in 2015, then the  
14 optimal resource plan is to retire La Cygne and build a new combined cycle plant.  
15 On the other hand, if the Waxman-Markey price path for C02 emissions is  
16 delayed until 2021, then retrofitting La Cygne is the optimal resource plan.<sup>15</sup>  
17  
18 7. Staff finds the second scenario, with the C02 price path beginning later, the more  
19 probable scenario.<sup>16</sup>  
20  
21 8. Therefore, in Staff's opinion, retrofitting La Cygne is the least cost option  
22 considering the most significant risk involved, C02 pricing.<sup>17</sup>  
23

24 **Q. Were you able to verify the steps in this analysis?**

25 A. I was able to verify Steps 2 through 6. I am highly critical of Steps 1 and 7 and, therefore , I  
26 am also highly critical of Step 8, Staff's conclusion.

27 **Q. How did you verify Steps 2 through 6?**

28 A. For Steps 2 through 6, Staff relies primarily on the BW Report<sup>18</sup> and Supplemental Report.<sup>19</sup>

---

12 *Id.*  
13 *Id.*  
14 *Id.*  
15 Glass Supplemental at 1.  
16 *Id.*  
17 *Id.*  
18 Puga Exhibit BW-1.  
19 Puga Exhibit BW-1S.

1 I have reviewed both reports without yet the benefit of discovery and find nothing  
2 exceptional or questionable in either the analyses or the conclusions. Should my assessment  
3 change, once I have been able to review responses to discovery, I will seek approval to  
4 submit supplemental testimony.

5 **Q. What are your criticisms of Step 1?**

6 A. Concluding that KCP&L needs the capacity/energy of La Cygne does not logically mean that  
7 the only alternatives to meeting that need are either retrofit La Cygne or replacement with  
8 natural gas combined cycle. As I pointed out in my direct testimony, there are at least two  
9 other alternatives: (1) replacement with purchased power and (2) delayed implementation of  
10 environmental retrofit.<sup>20</sup> The BW Supplemental Report reports that its modeling Case 5  
11 showed that off-system purchases could provide a cost effective means of meeting load,<sup>21</sup>  
12 producing NPV savings of \$334 million.<sup>22</sup> While Case 5 did not model capacity payments,  
13 the report concludes “that power purchase agreements may be a viable and economic  
14 alternative to self-build capacity should La Cygne be retired.”<sup>23</sup>

15 **Q. What are your criticisms of Step 7?**

16 A. Staff witness Glass does not indicate in his supplemental testimony the basis of Staff’s  
17 conclusion that delayed Waxman-Markey price path for CO<sub>2</sub> is more probable than the  
18 implementation in 2015 Waxman-Markey price path. More importantly, however, the  
19 predicate of this conclusion is a false dichotomy. The BW Supplemental Report modeled

---

20 Pavlovic Direct at 10.  
21 Exhibit BW-1S at ¶ (40)c.  
22 Exhibit BW-1 at ¶ (16).  
23 Exhibit BW-1 at ¶ (16).

1 five CO<sub>2</sub> price scenarios and considered, but did not model a sixth: (1) Zero CO<sub>2</sub> Price, (2)  
2 Waxman-Markey Basic with prices beginning in 2015, (3) Waxman-Markey Delayed with  
3 prices beginning in 2021, (4) Full Model Period, in which BW estimated the CO<sub>2</sub> price over  
4 the entire forecast period that would produce equal NPVs for both retrofit and gas  
5 replacement, (5) Delayed CO<sub>2</sub> Price, in which BW estimated the CO<sub>2</sub> price over the forecast  
6 period beginning in 2021 that would produce equal NPVs for both retrofit and gas  
7 replacement, and (6) delayed Waxman-Markey with prices increased to achieve the target  
8 levels of reduction.<sup>24</sup> The CO<sub>2</sub> prices and resulting NPV differences in each of the five cases  
9 are shown in Table 7 of the BW Supplemental Report.<sup>25</sup> The relevant question here is the  
10 relative probabilities of all six scenarios.

11 **Q. How does the BW Supplemental Report assess the probability of these scenarios?**

12 A. The BW Supplemental Report assesses the probability of zero CO<sub>2</sub> prices as “vanishingly  
13 small.”<sup>26</sup> The BW Supplemental Report does not directly assess the probability of the other  
14 five cases, but does conclude that its analysis results underscore the risk associated with CO<sub>2</sub>  
15 prices.

16 “Our estimate of CO<sub>2</sub> breakeven prices indicates that CO<sub>2</sub> prices  
17 significantly below the Waxman-Markey level series would be needed to  
18 equalize the NPV costs of the retrofit and retirement alternatives, if prices  
19 were implemented beginning in 2015. But, if CO<sub>2</sub> price implementation were  
20 delayed until 2021, the inflation-adjusted Waxman-Markey price series  
21 would have to be increased to equalize the NPV costs of the retrofit and retire  
22 cases. As noted above, delayed implementation of CO<sub>2</sub> prices may, in fact,  
23 warrant such price increases to produce effective reductions in emissions.

---

24 Exhibit BW-1 at ¶¶ (9) – (19).

25 Exhibit BW-1 at ¶ (19).

26 Exhibit BW-1S at ¶ (27).



1            *These results further underscore the risk associated with investing in a*  
2            *technology that would be made uneconomic under plausible CO2 price*  
3            *scenarios.”<sup>27</sup> (emphasis added)*  
4

5            I infer from BW’s underscoring of the “risk associated with investing in a technology that  
6            would be made uneconomic under plausible CO2 price scenarios” that, relative to the  
7            Waxman-Markey Delayed price scenario, BW puts an equal or greater probability on the  
8            Waxman-Markey scenario and Waxman-Markey Delayed with higher prices scenario.

9            **Q. How do you assess the probabilities?**

10          A.     What CO<sub>2</sub> price series will be implemented and when are political decisions. As a  
11          consequence, at best one can only make an informed but subjective assessment of the  
12          probability. I agree with BW that probability of zero CO<sub>2</sub> prices is vanishingly small and I  
13          would rank the probability of Waxman-Markey in 2015 as low, but higher than Waxman-  
14          Markey delayed to 2021. I would rank the probability of delayed Waxman-Markey with  
15          higher prices above either of the latter two.

16          **Q. What do you conclude?**

17          A.     I conclude that there is no basis in the BW Supplemental Report to select one of the CO<sub>2</sub>  
18          price scenarios over any other and that Staff has presented no reasons to support their  
19          selection of the Delayed Waxman-Markey scenario. Further, I note that of the scenarios  
20          modeled by BW only the extreme scenarios Zero CO<sub>2</sub> Price and Waxman-Markey in 2015  
21          produce anything like a decisive NPVRR differential – approximately 5% for Waxmen-  
22          Markey and approximately 10% for Zero CO<sub>2</sub>. Delayed Waxman-Markey’s NPVRR

---

27          Exhibit BW-1S at ¶ (40)f.

1 differential is only 2%, well within any reasonable estimate of the margin of error. On that  
2 basis, I conclude as I did in my direct testimony with regard to KCP&L's analysis, that  
3 neither the BW analysis nor Staff's analysis demonstrates that the La Cygne Environmental  
4 Project is the least-cost alternative for La Cygne Units 1 and 2.

5 **Q. Do you draw any methodological conclusions from BW's CO<sub>2</sub> sensitivity analysis?**

6 A. Yes. The BW Supplemental Report demonstrates that CO<sub>2</sub> is the dominant uncertainty here.  
7 And risk of compliance with CO<sub>2</sub> regulation is the decisive risk. The prudent response to  
8 this finding would be to explore resource plans that eliminate or mitigate this risk.  
9 Retirement and replacement with purchased capacity would eliminate this risk, but, as the  
10 BW Supplemental report points out, might not be least cost.<sup>28</sup> Such a resource plan should  
11 be included in any analysis of the least-cost disposition of La Cygne. Delaying the  
12 retrofit/replace decision for La Cygne until a future time when CO<sub>2</sub> prices are known would  
13 mitigate the risk. We do not know whether such a resource plan would be least cost, but  
14 such a resource plan should be included in any analysis of the least cost disposition of La  
15 Cygne.

16 **Q. What is your recommendation?**

17 A. My recommendation is that the Commission find that the La Cygne Environmental Project as  
18 presented in Staff's analysis and BW's analysis has not, at this time, been shown to be  
19 reasonable and prudent and that the Commission deny KCP&L's petition.  
20

---

28 Exhibit BW-1S at ¶ (40)f.

1 **Q. Does this conclude your testimony?**

2 A. Yes.

VERIFICATION

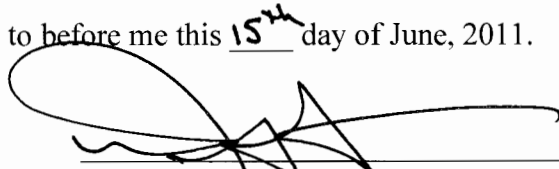
STATE OF MARYLAND )

COUNTY OF PRINCE GEORGES ) ss:

I, Karl R. Pavlovic, being duly sworn upon his oath, deposes and states that he is a consultant for the Citizens' Utility Ratepayer Board, that he has read the above and foregoing document, and, upon information and belief, states that the matters therein appearing are true and correct.

  
Karl R. Pavlovic

SUBSCRIBED AND SWORN to before me this 15<sup>th</sup> day of June, 2011.

  
Notary Public

My Commission expires:

**DONNA ANN JEFFRIES**  
**NOTARY PUBLIC DISTRICT OF COLUMBIA**  
My Commission Expires July 14, 2015

**CERTIFICATE OF SERVICE**

11-KCPE-581-PRE

I, the undersigned, hereby certify that a true and correct copy of the above and foregoing document was placed in the United States mail, postage prepaid, electronic service, or hand-delivered this 17<sup>th</sup> day of June, 2011, to the following:

CRAIG D. SUNDSTROM, ATTORNEY  
A NEW ENERGY, LLC  
101 N ROBINSON, THIRTEENTH FLOOR  
OKLAHOMA CITY, OK 73112

GLEND A CAFER, ATTORNEY  
CAFER LAW OFFICE, L.L.C.  
3321 SW 6TH STREET  
TOPEKA, KS 66606

TERRI PEMBERTON, ATTORNEY  
CAFER LAW OFFICE, L.L.C.  
3321 SW 6TH STREET  
TOPEKA, KS 66606

DENISE M. BUFFINGTON, CORPORATE COUNSEL  
KANSAS CITY POWER & LIGHT COMPANY  
ONE KANSAS CITY PLACE 1200 MAIN STREET (64105)  
P.O. BOX 418679  
KANSAS CITY, MO 64141-9679

HEATHER A. HUMPHREY, GENERAL COUNSEL  
KANSAS CITY POWER & LIGHT COMPANY  
ONE KANSAS CITY PLACE 1200 MAIN STREET (64105)  
P.O. BOX 418679  
KANSAS CITY, MO 64141-9679

MARY TURNER, DIRECTOR, REGULATORY AFFAIRS  
KANSAS CITY POWER & LIGHT COMPANY  
ONE KANSAS CITY PLACE 1200 MAIN STREET (64105)  
P.O. BOX 418679  
KANSAS CITY, MO 64141-9679

ANDREW SCHULTE, LITIGATION COUNSEL  
KANSAS CORPORATION COMMISSION  
1500 SW ARROWHEAD ROAD  
TOPEKA, KS 66604-4027

**CERTIFICATE OF SERVICE**

11-KCPE-581-PRE

PATRICK T. SMITH, LITIGATION COUNSEL  
KANSAS CORPORATION COMMISSION  
1500 SW ARROWHEAD ROAD  
TOPEKA, KS 66604-4027

W. THOMAS STRATTON, CHIEF LITIGATION COUNSEL  
KANSAS CORPORATION COMMISSION  
1500 SW ARROWHEAD ROAD  
TOPEKA, KS 66604-4027

ROBERT V. EYE, ATTORNEY AT LAW  
KAUFFMAN & EYE  
112 SW 6TH AVE STE 202  
COLUMBIAN BUILDING  
TOPEKA, KS 66603-3850

JAMES A. ROTH  
PHILLIPS MURRAH P.C.  
CORPORATE TOWER, 13TH FLOOR  
101 NORTH ROBINSON  
OKLAHOMA CITY, OK 73102

ANNE E. CALLENBACH, ATTORNEY  
POL SINELLI SHUGHART  
6201 COLLEGE BLVD STE 500  
OVERLAND PARK, KS 66211-2435

FRANK A. CARO, ATTORNEY  
POL SINELLI SHUGHART  
6201 COLLEGE BLVD STE 500  
OVERLAND PARK, KS 66211-2435

DONALD K. SHANDY, ATTORNEY  
RYAN WHALEY COLDIRON SHANDY, PLLC  
900 ROBINSON RENAISSANCE  
119 NORTH ROBINSON  
OKLAHOMA CITY, OK 73102

HOLLY BRESSETT, ATTORNEY  
SIERRA CLUB ENVIRONMENTAL LAW PROGRAM  
85 2ND ST FL 2  
SAN FRANCISCO, CA 94105-3456

**CERTIFICATE OF SERVICE**

11-KCPE-581-PRE

DOUGLAS HAYES, ATTORNEY  
SIERRA CLUB ENVIRONMENTAL LAW PROGRAM  
1650 38TH ST STE 102W  
BOULDER, CO 80301-2624

GLORIA SMITH, ATTORNEY  
SIERRA CLUB ENVIRONMENTAL LAW PROGRAM  
85 2ND ST FL 2  
SAN FRANCISCO, CA 94105-3456

CHERYL A. VAUGHT, ATTORNEY  
VAUGHT & CONNER, PLLC  
1900 NW EXPRESSWAY STE 1300  
OKLAHOMA CITY, OK 73118-1822

MARTIN J. BREGMAN, EXEC DIR, LAW  
WESTAR ENERGY, INC.  
818 S KANSAS AVENUE  
PO BOX 889  
TOPEKA, KS 66601-0889

CATHRYN J. DINGES, CORPORATE COUNSEL  
WESTAR ENERGY, INC.  
818 S KANSAS AVENUE  
PO BOX 889  
TOPEKA, KS 66601-0889

C. MICHAEL LENNEN, VP REGULATORY AFFAIRS  
WESTAR ENERGY, INC.  
818 S KANSAS AVENUE  
PO BOX 889  
TOPEKA, KS 66601-0889

DICK F. ROHLFS, DIRECTOR, RETAIL RATES  
WESTAR ENERGY, INC.  
818 S KANSAS AVENUE  
PO BOX 889  
TOPEKA, KS 66601-0889

**CERTIFICATE OF SERVICE**

11-KCPE-581-PRE

JAMES P. ZAKOURA, ATTORNEY  
SMITHYMAN & ZAKOURA, CHTD.  
7400 W 110TH STREET, SUITE 750  
OVERLAND PARK, KS 66210

A handwritten signature in black ink, appearing to read "Della Smith", written over a horizontal line.

Della Smith  
Administrative Specialist