

1                   BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION  
2                   SUPPLEMENTAL TESTIMONY OF BRADLEY E. KUSHNER

3                                   ON BEHALF OF

4   JEA

5   DOCKET NO. 080614

6   NOVEMBER 21, 2008

7  
8   **Q.   Please state your name and business address.**

9   A.   My name is Bradley E. Kushner. My business mailing address is 11401 Lamar  
10       Avenue, Overland Park, Kansas 66211.

11  
12   **Q.   By whom are you employed and in what capacity?**

13   A.   I am employed by Black & Veatch Corporation where I am currently a Manager.

14  
15   **Q.   Have you previously filed testimony in this proceeding?**

16   A.   Yes. My Direct Testimony in this proceeding was filed September 30, 2008.

17  
18   **Q.   What is the purpose of your supplemental testimony in this proceeding?**

19   A.   As discussed in the supplemental testimony of Mr. Gilbert, recent developments in the  
20       municipal credit markets have caused JEA to change its forecast of long term interest  
21       rates to a maximum of 7 percent. Additionally, as Mr. Gilbert explains, JEA will be  
22       delaying some capital expenditures from fiscal year 2009 to fiscal year 2010. The  
23       purpose of my supplemental testimony is to discuss additional economic analyses  
24       performed to address the possible impact of these changed circumstances on the

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1 economics of the proposed Greenland Energy Center (GEC) combined cycle  
2 conversion. I will also discuss revisions to the economic analyses included in the  
3 GEC Need for Power Application (Exhibit No. \_\_ [GEC-1]) and my direct testimony  
4 filed in this proceeding.

5  
6 **Q. Have you prepared any exhibits to your testimony?**

7 A. Yes. Exhibit No. \_\_[BEK-2R] is a revised version of Exhibit No. \_\_[BEK-2] to my  
8 direct testimony. Exhibit No. \_\_[BEK-2R] is a series of tables presenting the results  
9 of the revised economic evaluations originally included in the GEC Need for Power  
10 Application (Exhibit No. \_\_[GEC-1] and my direct testimony. I am also sponsoring  
11 Exhibit No. \_\_[BEK-3] which includes a table presenting results of the additional  
12 economic analyses performed as a result of recent credit market developments.

13  
14 **Q. Are there any changes or corrections to your direct testimony filed September 30,**  
15 **2008?**

16 A. Yes. The 5.0 percent present worth discount rate referenced on page 10, line 9 should  
17 be changed to 7.0 percent. The cumulative present worth costs (CPWC) results  
18 reported on pages 12 and 13 of my direct testimony, including Exhibit No.  
19 \_\_[BEK-2], should be updated to reflect the revised results presented in my  
20 supplemental testimony.

1 **Q. Are there any changes or corrections to the sections of the GEC Need for Power**  
2 **Application (Exhibit No. \_\_[GEC-1]) that you sponsored in your direct**  
3 **testimony?**

4 A. Yes. The CPWC results discussed in Sections 17 and 18 should be updated to reflect  
5 the revised results presented in my supplemental testimony. In addition, Exhibit No.  
6 \_\_[BEK-2R] updates Table 17-2 and Table 17-3 of the GEC Need for Power  
7 Application.

8  
9 **Q. Please discuss the additional economic analyses that have been conducted as a**  
10 **result of recent credit market developments?**

11 A. Additional STRATEGIST cases have been evaluated to address the impact of the  
12 increase in the interest rate to 7 percent, the resulting changes to the economic  
13 parameters, and a delay of one year in the conversion of GEC to combined cycle  
14 operation.

15  
16 **Q. What additional cases were evaluated to address potential impacts of the recent**  
17 **credit market developments?**

18 A. The additional cases include:

- 19 1. The Scenario 1 Reference Case without the GEC conversion
- 20 2. The Scenario 1 Reference Case with the GEC conversion delayed one year  
21 to June 2013
- 22 3. The Scenario 3 (DSM) Reference Case without the GEC conversion
- 23 4. The Scenario 3 (DSM) Reference Case with the GEC conversion delayed  
24 one year to June 2013

1 In the cases with a one year delay in the conversion of GEC to combined cycle  
2 operation, a seasonal purchase was assumed to be made during the summer 2012  
3 months to address the projected capacity deficit in 2012.

4

5 Collectively, these cases are referred to as the High Interest Rate cases.

6

7 **Q. What are the CPWCs of the High Interest Rate cases?**

8 A. The CPWCs for the High Interest Rate cases are presented in Exhibit No. \_\_[BEK-3].  
9 The CPWC are presented in 2008 dollars over the 2008 through 2027 evaluation  
10 period using the 7 percent present worth discount rate discussed previously.

11

12 **Q. How did you reflect the changes to the DSM portfolio discussed in the**  
13 **supplemental testimony of Mr. Vento in the High Interest Rate cases for Scenario**  
14 **3?**

15 A. The changes to the DSM portfolio discussed in the supplemental testimony of Mr.  
16 Vento did not necessitate changes to the evaluation of the DSM portfolio in Scenario  
17 3. The impact of the one year delay in the DSM programs discussed by Mr. Vento is  
18 the same for all cases in Scenario 3 prior to the commercial operation of the GEC  
19 combined cycle conversion, and therefore does not influence the comparative  
20 economics between cases in Scenario 3.

21

22

23

1 **Q. Is the GEC combined cycle conversion the most cost-effective alternative as**  
2 **evaluated in the High Interest Rate cases?**

3 A. Yes. Analysis of the CPWC associated with each of the High Interest Rate cases  
4 indicates that conversion of GEC to combined cycle operation in June 2013 is more  
5 cost-effective than not converting GEC to combined cycle operation. Conversion of  
6 GEC to combined cycle operation in June 2013 results in CPWC savings of  
7 approximately \$21.6 million for the conventional expansion plan scenario (Scenario 1)  
8 and approximately \$18.6 million for the DSM expansion plan scenario (Scenario 2).

9  
10 **Q. Please discuss the revised economic analyses you alluded to earlier in your**  
11 **supplemental testimony.**

12 A. After the GEC Need for Power Application (Exhibit No. \_\_\_[GEC-1]) and my direct  
13 testimony were filed, it was discovered that STRATEGIST was not treating the  
14 calculation of peak demands properly. This resulted in STRATEGIST using higher  
15 peak demands than the peak demands projected by JEA. Given that JEA's need for  
16 power is governed by the difference in summer peak and the summer ratings of its  
17 generating resources, the higher summer peaks resulted in STRATEGIST selecting  
18 more capacity additions than required. The incorrect treatment of peak demands was  
19 confirmed with the developers of STRATEGIST and the method of inputting peak  
20 demands was changed for purposes of the economic analyses I am presenting in this  
21 supplemental testimony.

22  
23 **Q. Were the peak demands incorrect in all of the economic results presented in the**  
24 **Application?**

1 A. No. The peak demands were incorrect in the economic analyses performed for  
2 Scenario 1 (Conventional Expansion Scenario) and Scenario 2 (Renewable Expansion  
3 Scenario). The peak demands used by STRATEGIST for Scenario 3 (DSM Expansion  
4 Scenario) and Scenario 4 (Renewables and DSM Expansion Scenario) were correct.  
5

6 **Q. Are there any other changes reflected in the revised economic analyses?**

7 A. Yes. The costs for JEA's new DSM portfolio were improperly continued and  
8 escalated past 2012. This is corrected in the revised economic analyses, but the  
9 correction does not change the comparative savings of the GEC combined cycle  
10 conversion because the costs for DSM were included in both the cases with and  
11 without the GEC combined cycle conversion.  
12

13 **Q. Please discuss the revised CPWC results.**

14 A. The CPWC projections for all of the cases (reference and sensitivity cases) from  
15 Scenarios 1 and 2 are presented in Exhibit No. \_\_ [BEK-2R]. The CPWC are  
16 presented in 2008 dollars over the 2008 through 2027 evaluation period using the 5.0  
17 percent present worth discount rate discussed in the direct testimony of Mr. Rollins.  
18 The results presented in Exhibit No. \_\_ [BEK-2R] update the results presented in  
19 Tables 17-2 and 17-3 in the Application and in Tables 1 and 2 of Exhibit No. \_\_  
20 [BEK-2] in my direct testimony. Analysis of Exhibit No. \_\_ [BEK-2R] indicates that  
21 conversion of GEC to combined cycle remains the most cost-effective alternative  
22 available to JEA after considering the revisions described previously.  
23

1 **Q. Did you perform a revised analysis of the economic consequences of delaying the**  
2 **GEC combined cycle conversion?**

3 A. Yes. The revised analysis indicates the economic consequence of delaying the  
4 commercial operation of the GEC combined cycle conversion from June 2012 until  
5 June 2013 is approximately \$31.8 million in CPWC, compared to the next most cost-  
6 effective expansion plan.

7

8 **Q. Did the additional analyses you discussed earlier in your supplemental testimony**  
9 **use the correct peak demands and DSM costs addressed in your discussion of the**  
10 **revised economic analyses?**

11 A. Yes. All additional analyses reflect the revised method of inputting peak demand into  
12 the STRATEGIST model and the proper treatment of the DSM costs.

13

14 **Q. Do either the additional analyses or revised analyses you've discussed in your**  
15 **supplemental testimony change the overall conclusion presented in your direct**  
16 **testimony?**

17 A. No. The GEC combined cycle conversion remains the most cost-effective alternative  
18 available to JEA.

19

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

21 A. Yes.

Table 1 CPWC Summaries for Scenario 1 (\$000)			
Case	CPWC of Expansion Plan Including GEC Conversion in 2012	CPWC of Expansion Plan Without GEC Conversion in 2012	CPWC Savings for Expansion Plan with GEC Conversion in 2012
Reference Case	10,944,111	11,076,282	132,171
High Fuel	11,445,988	11,531,656	85,668
Low Fuel	10,388,848	10,475,006	86,158
High Load	12,622,952	12,706,975	84,023
Low Load	9,982,509	10,071,060	88,551
High Capital Cost	11,054,207	11,183,726	129,519
Regulated CO <sub>2</sub>	15,748,964	15,923,219	174,255
High Fuel with Regulated CO <sub>2</sub>	16,584,764	16,721,907	137,143
High Regulated CO <sub>2</sub>	23,736,690	24,092,564	355,874

Table 2 CPWC Summaries for Scenario 2 (\$000)			
Case	CPWC of Expansion Plan Including GEC Conversion in 2012	CPWC of Expansion Plan Without GEC Conversion in 2012	CPWC Savings for Expansion Plan with GEC Conversion in 2012
Reference Case	11,116,856	11,211,133	94,277
Regulated CO <sub>2</sub>	15,881,845	16,030,780	148,935



Table 3 CPWC Summaries for Scenario 3 (\$000)			
Case	CPWC of Expansion Plan Including GEC Conversion in 2012	CPWC of Expansion Plan Without GEC Conversion in 2012	CPWC Savings for Expansion Plan with GEC Conversion in 2012
Reference Case	10,702,856	10,837,724	134,869
Regulated CO <sub>2</sub>	15,480,656	15,666,889	186,234

Table 4 CPWC Summaries for Scenario 4 (\$000)			
Case	CPWC of Expansion Plan Including GEC Conversion in 2012	CPWC of Expansion Plan Without GEC Conversion in 2012	CPWC Savings for Expansion Plan with GEC Conversion in 2012
Reference Case	10,886,730	10,957,378	70,648
Regulated CO <sub>2</sub>	15,623,821	15,750,540	126,719

Table 5  
CPWC Summaries for High Interest Rate Cases  
(\$000)

Case	CPWC of Expansion Plan Including GEC Conversion in 2013	CPWC of Expansion Plan Without GEC Conversion in 2013	CPWC Savings for Expansion Plan with GEC Conversion in 2013
Reference Case-Scenario 1	9,281,091	9,302,643	21,552
Reference Case-Scenario 3	9,079,388	9,097,998	18,610