ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

SUPPLEMENTAL TESTIMONY OF BRADLEY E. KUSHNER

ON BEHALF OF

FLORIDA MUNICIPAL POWER AGENCY

JEA

REEDY CREEK IMPROVEMENT DISTRICT

AND

CITY OF TALLAHASSEE

DOCKET NO. 060635-EU

DECEMBER 12, 2006

Q. Please state your name and business address.

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

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

A. I am employed by Black & Veatch Corporation. My current position is Senior Consultant/Project Manager.

Q. Have you previously filed testimony in this proceeding?

A. Yes.

Q. What is the purpose of your supplemental testimony?

A. The purpose of my supplemental testimony is to discuss the results of the economic analyses that were updated to reflect the updated capital cost estimate of $2,039,074,000 for the Taylor Energy Center (TEC) as discussed in the Participants' response to Staff Interrogatory No. 58 (served November 20, 2006) and the rebuttal testimony of Paul Hoornaert (filed November 21, 2006), as well as updated capital cost estimates of the supply-side alternatives as discussed in the rebuttal testimony of Chris Klausner (filed November 21, 2006). I will demonstrate that TEC remains the least-cost alternative for the Florida Municipal Power Agency (FMPA), JEA, Reedy Creek Improvement District (RCID), and the City of Tallahassee (collectively referred to as the Participants) when considering the updated capital costs for TEC and the supply-side alternatives. I also will demonstrate that the conclusions related to the cost-effectiveness of demand-side management (DSM) discussed in my direct testimony are not affected by the updated TEC capital cost estimate.

Q. Have you prepared any exhibits to your testimony?

A. Yes. Exhibit No. ___ [BEK-2R] is a revised version of Exhibit No. __ [BEK-2] to my direct testimony. Exhibit No. ___ [BEK-2R] is a series of graphs presenting the results of the base case economic analysis for each Participant taking into consideration the increased capital costs of TEC and the supply-side alternatives. Exhibit No. ___ [BEK-3R] is a revised version of Exhibit No. __ [BEK-3] to my direct testimony. Exhibit No. ___ [BEK-3R] is a series of tables presenting the results of the economic analyses performed for each

Participant taking into consideration the increased capital costs for TEC and the supply-side alternatives.

Q. Were there any changes to the methodology described in your direct testimony related to the economic analysis?

A. No.

Q. What were the results of the updated economic analysis for FMPA?

A. The cumulative present worth cost (CPWC) of FMPA's least-cost expansion plan including participation in TEC was approximately $417.1 million less than the plan not including participation in TEC. These results are shown in Figure 1 of Exhibit No.__ [BEK-2R].

Q. What were the results of the economic analysis for JEA?

A. The CPWC of JEA's least-cost expansion plan including participation in TEC was approximately $38.1 million less than the plan not including participation in TEC. These results are shown in Figure 2 of Exhibit No. __ [BEK-2R].

Q. What were the results of the economic analysis for RCID?

A. The CPWC of RCID's least-cost expansion plan including participation in TEC was approximately $255.6 million less than the plan not including participation in TEC. These results are shown in Figure 3 of Exhibit No.__ [BEK-2R].

Q. What were the results of the economic analysis for the City of Tallahassee?

A. The CPWC of the City of Tallahassee's least-cost expansion plan including participation in TEC was approximately $188.6 million less than the plan not including participation in TEC. These results are shown in Figure 4 of Exhibit No. __ [BEK-2R].

Q. Is TEC the most cost-effective alternative available to each Participant when considering the updated capital cost estimates for TEC and the supply-side alternatives?

A. Yes. As previously discussed in my testimony, TEC is the most cost-effective alternative available to each Participant when considering the updated capital cost estimates for TEC and the supply-side alternatives. Participation in TEC will result in combined CPWC savings of approximately $899.3 million.

Q. Were all of the sensitivity analyses discussed in your direct testimony updated to reflect the updated capital costs for TEC and the supply-side alternatives?

A. Yes.

Q. What were the results of these sensitivity analyses?

A. Exhibit No. ___ [BEK-3R] presents a summary of the results of the sensitivity analyses performed for each of the Participants. As shown in Exhibit No. ___ [BEK-3R], participation in TEC is included in each Participant's least-cost capacity expansion plan under all but one sensitivity scenario. The lone

exception is JEA's low fuel price sensitivity, which indicates the least-cost expansion plan not including participation in TEC would be approximately $12.7 million lower in CPWC than participation in TEC. It is important to note that the least-cost expansion plan for JEA under the low fuel price sensitivity includes a coal-fired circulating fluidized bed (CFB) alternative in lieu of participation in TEC.

The results of the sensitivity analyses, coupled with the results of the base case analysis, continue to demonstrate that the capacity expansion plan including participation in TEC is a robust plan for each Participant, and is sufficiently flexible to overcome variations and deviations from the base case assumptions, even in light of the updated capital cost estimates.

Q. How was DSM and conservation evaluated in your updated analyses?

A. The DSM evaluation was consistent with the methodology discussed in my direct testimony.

Q. Did any of the DSM and conservation measures evaluated for FMPA or JEA pass the Rate Impact Test when considering the updated TEC capital cost estimate?

A. No. Consistent with the results of the DSM evaluation discussed in my direct testimony (and also as stated in my rebuttal testimony), none of the measures considered by FMPA or JEA had a Rate Impact Test score greater than 1.0 when

considering the updated TEC capital cost estimate. Thus, none of the DSM or conservation measures were found to be cost-effective.

Q. What were the results of the City of Tallahassee's DSM cost-effectiveness evaluation when considering the updated TEC capital cost estimate?

A. The results were consistent with the results of the City of Tallahassee's DSM evaluation discussed in my direct testimony. The City of Tallahassee's participation in TEC in 2012 (taking into consideration the updated TEC capital cost estimate) would provide significant additional CPWC savings when compared to a capacity expansion plan with the DSM portfolio that does not include participation in TEC.

Q. Does this conclude your supplemental testimony?

A. Yes.

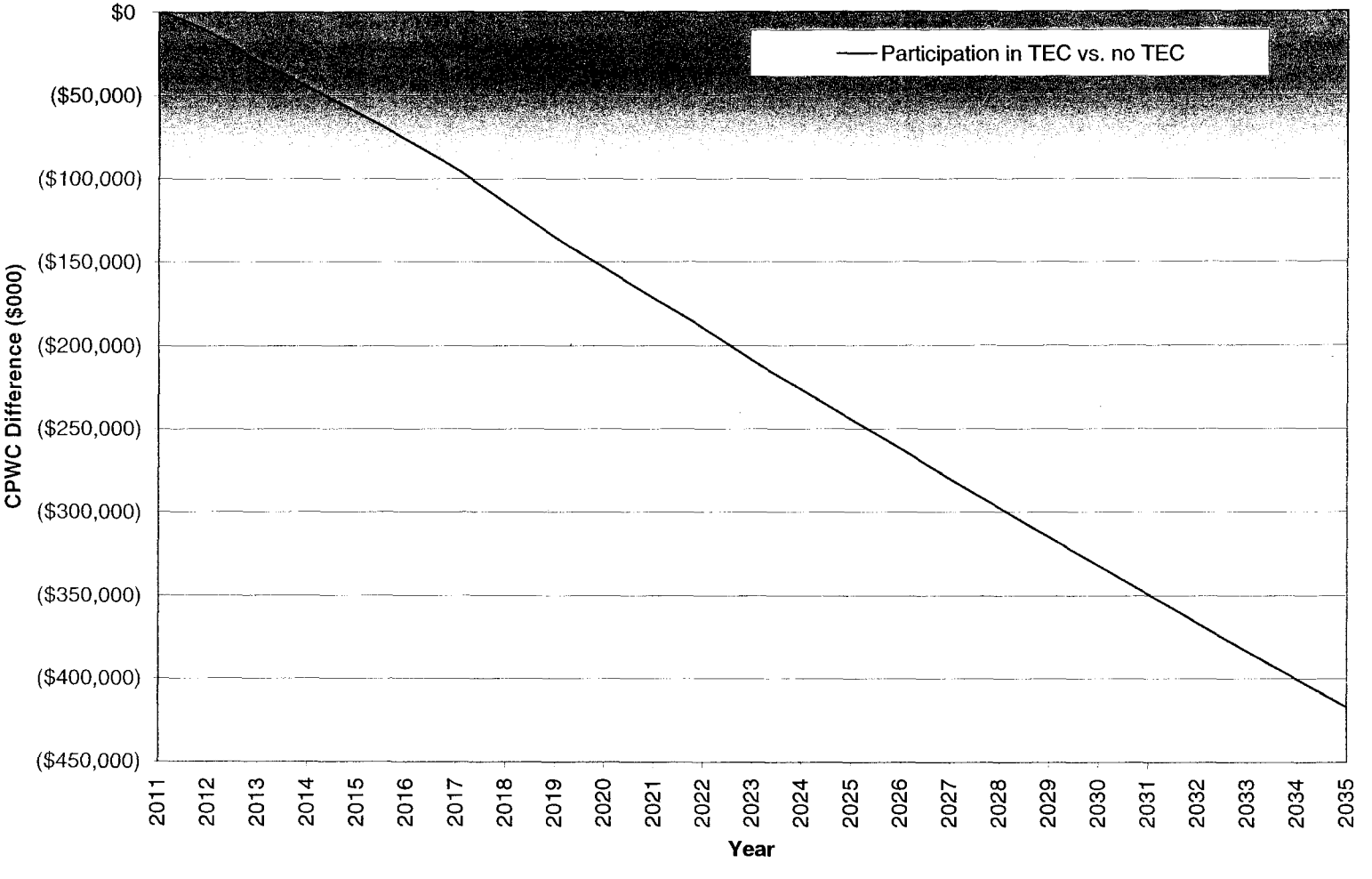

Figure 1. FMPA Cumulative Present Worth Cost (CPWC) Analysis

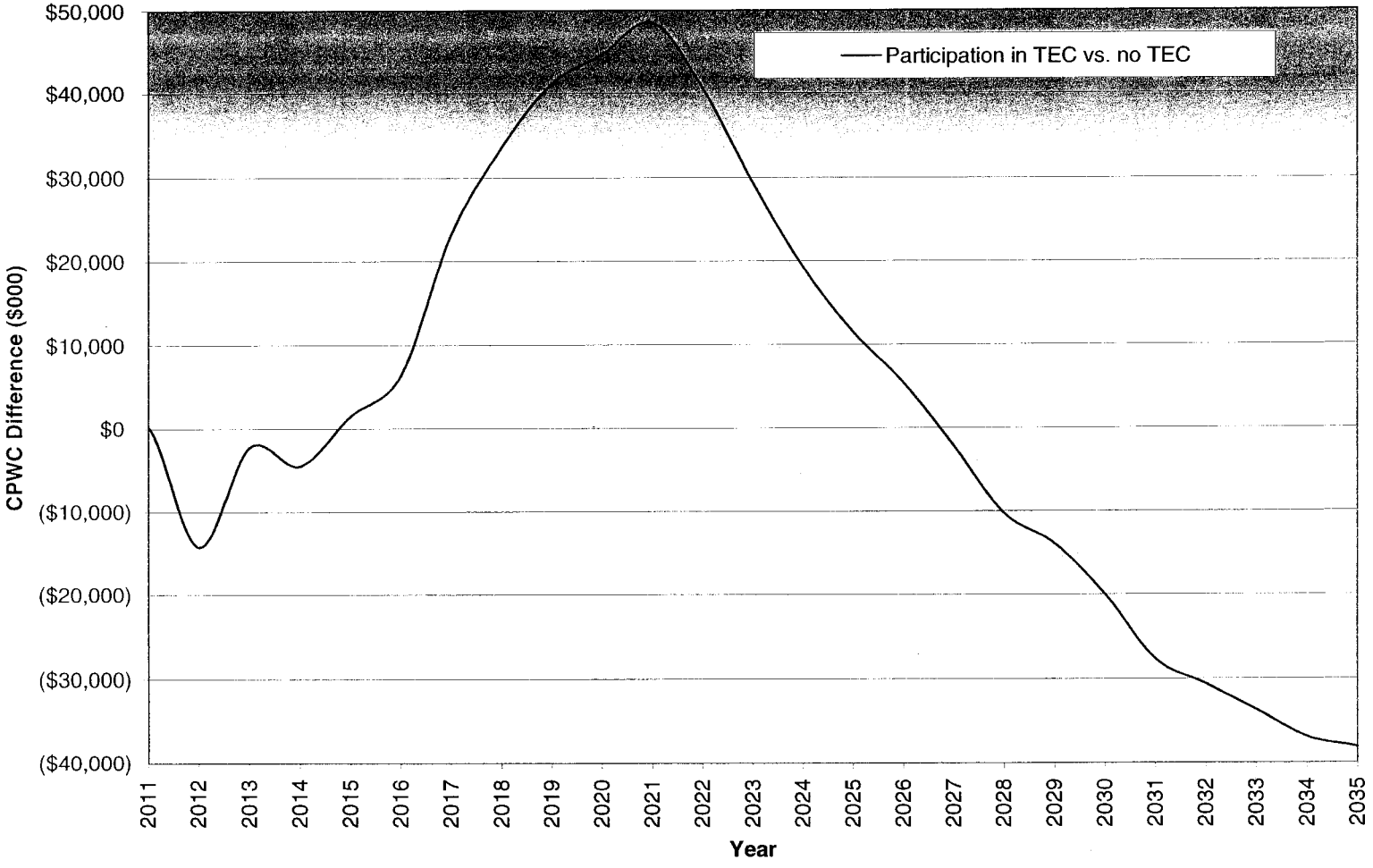

Figure 2. JEA Cumulative Present Worth Cost (CPWC) Analysis

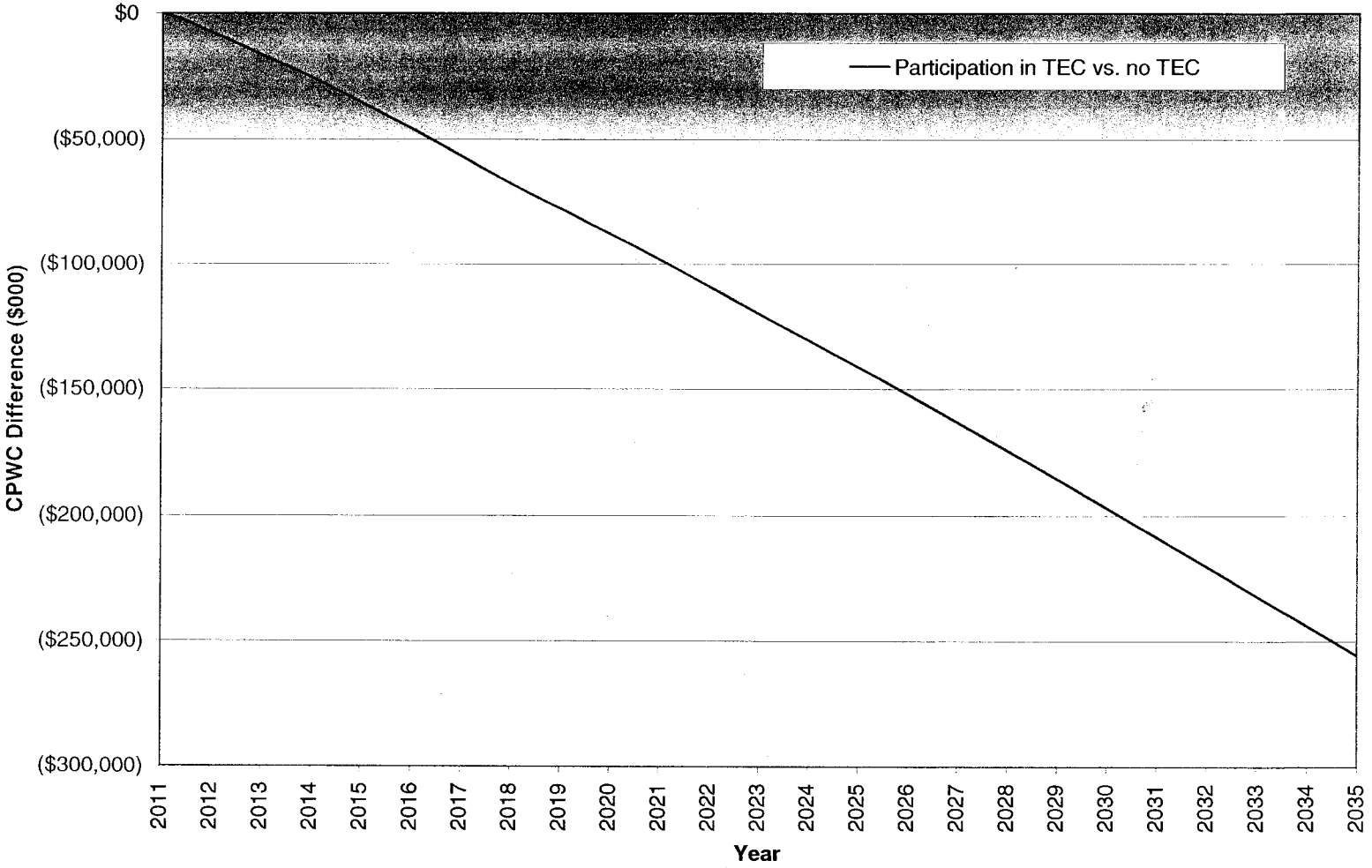

Figure 3. RCID Cumulative Present Worth Cost (CPWC) Analysis

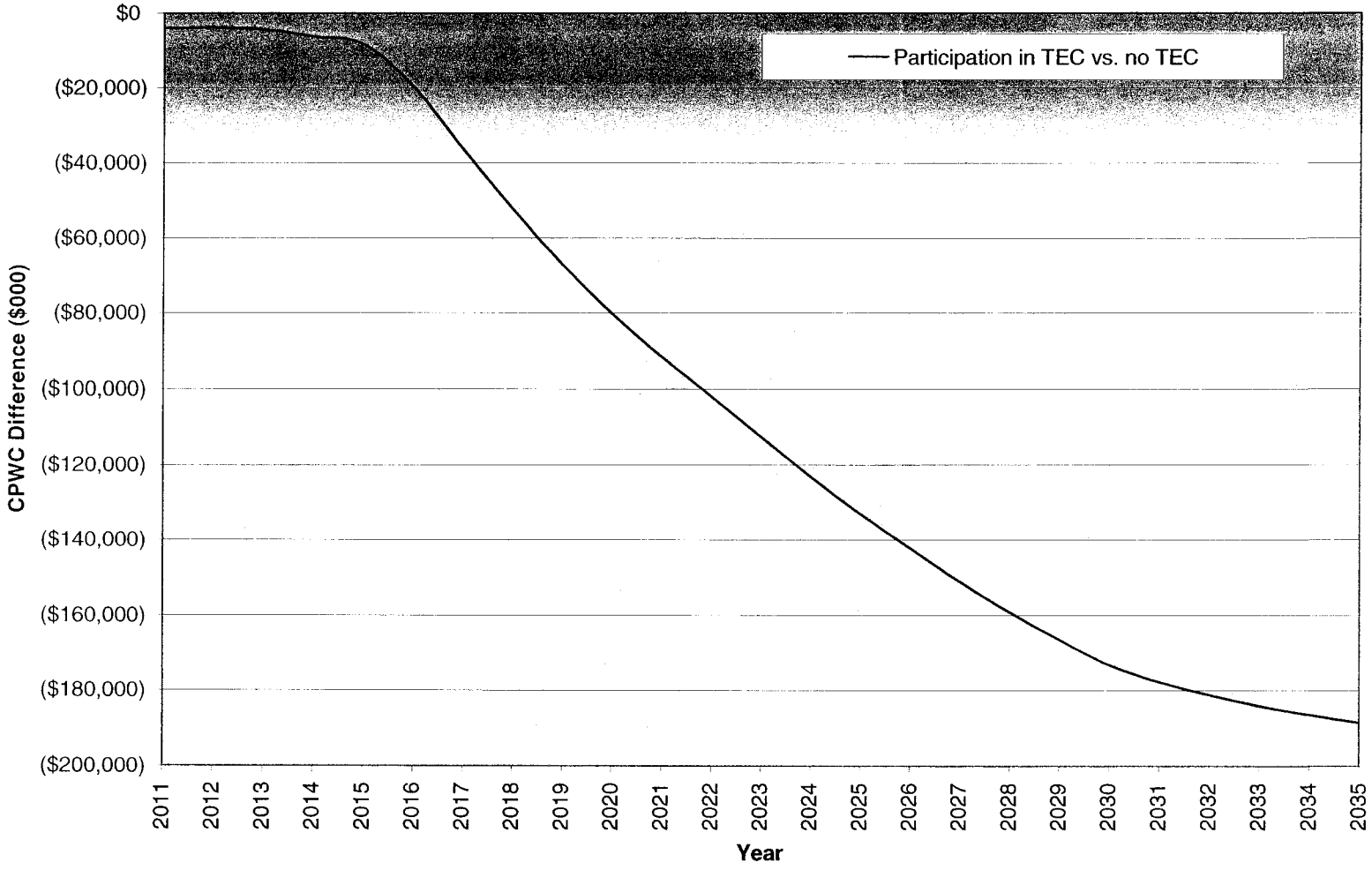

Figure 4. City of Tallahassee Cumulative Present Worth Cost (CPWC) Analysis

Table 1
Summary of FMPA's Sensitivity Analyses
(Varying Base Case Input Parameters)

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	With TEC	Without TEC	Differential CPWC Savings with TEC
Base Case	$9,207.6	$9,624.7	$417.1
High Fuel Prices	$10,272.2	$10,640.3	$368.1
Low Fuel Prices	$8,088.2	$8,467.3	$379.0
High Load and Energy Growth	$10,763.0	$11,246.5	$483.4
Low Load and Energy Growth	$7,733.9	$8,170.1	$436.2
High Capital Cost	$9,500.0	$9,965.5	$465.5
Low Capital Cost	$8,859.7	$9,263.3	$403.6
High Emissions Allowances Costs	$9,327.2	$9,750.1	$422.8
Low Emissions Allowances Costs	$9,087.6	$9,499.7	$412.1
Regulated CO_2	$9,704.3	$10,092.7	$388.4

Table 2
Summary of FMPA's Sensitivity Analyses
(Varying External Parameters)

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
3x1 Combined Cycle Joint Development	$9,772.0	$9,207.6	$564.4
Three-Train 1x1 IGCC Joint Development	$9,448.7	$9,207.6	$241.1
Second Jointly Owned Pulverized Coal Unit	$8,842.2	$9,207.6	($365.4)
All Natural Gas Capacity Expansion Plan	$10,080.9	$9,207.6	$873.3
Biomass Supply-Side Addition with TEC	$9,286.0	$9,207.6	$78.4
Biomass Supply-Side Addition without TEC	$9,722.1	$9,207.6	$514.5
PRB Coal for TEC	$9,232.7	$9,207.6	$25.1

Table 3
Summary of FMPA's Share of Southern's Bids

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
Southern's Pulverized Coal Unit	$9,679.8	$9,207.6	$472.2
Southern's 2x1 Combined Cycle Unit	$9,796.0	$9,207.6	$588.4

Table 4
Summary of JEA's Sensitivity Analyses
(Varying Base Case Input Parameters)

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	With TEC	Without TEC	Differential CPWC Savings with TEC
Base Case	$14,437.5	$14,475.6	$38.1
High Fuel Prices	$15,858.6	$15,894.1	$35.5
Low Fuel Prices	$12,918.2	$12,905.5	($12.7)
High Load and Energy Growth	$17,909.2	$17,931.0	$21.8
Low Load and Energy Growth	$13,554.9	$13,635.3	$80.3
High Capital Cost	$14,804.4	$14,850.6	$46.1
Low Capital Cost	$14,049.6	$14,093.5	$43.9
High Emissions Allowance Costs	$14,745.5	$14,781.7	$36.2
Low Emissions Allowance Costs	$14,183.4	$14,194.0	$10.6
Regulated CO_2	$15,947.3	$16,000.3	$53.0

Table 5
Summary of JEA's Sensitivity Analyses
(Varying External Parameters)

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
3x1 Combined Cycle Joint Development	$14,712.7	$14,437.5	$275.2
Three-Train 1x1 IGCC Joint Development	$14,477.8	$14,437.5	$40.3
Second Jointly Owned Pulverized Coal Unit	$14,437.5	$14,437.5	$0.0
All Natural Gas Capacity Expansion Plan	$15,152.6	$14,437.5	$715.1
Biomass Supply-Side Addition with TEC	$14,515.8	$14,437.5	$78.4
Biomass Supply-Side Addition without TEC	$14,527.1	$14,437.5	$89.6
PRB Coal for TEC	$14,457.1	$14,437.5	$19.6

Table 6
Summary of JEA's Share of Southern's Bids

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
Southern's Pulverized Coal Unit	$14,838.7	$14,437.5	$401.2
Southern's 2x1 Combined Cycle Unit	$14,717.8	$14,437.5	$280.3

Table 7
Summary of RCID's Sensitivity Analyses
(Varying Base Case Input Parameters)

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	With TEC	Without TEC	Differential CPWC Savings with TEC
Base Case	$1,816.4	$2,072.0	$255.6
High Fuel Prices	$1,968.7	$2,252.0	$283.3
Low Fuel Prices	$1,629.6	$1,804.1	$174.5
High Load and Energy Growth	$1,899.1	$2,142.6	$243.5
Low Load and Energy Growth	$1,757.5	$2,015.0	$257.5
High Capital Cost	$1,886.5	$2,127.8	$241.3
Low Capital Cost	$1,746.4	$2,016.1	$269.8
High Emissions Allowances Costs	$1,817.1	$2,073.3	$256.3
Low Emissions Allowances Costs	$1,807.2	$2,070.6	$263.4
Regulated CO_2	$1,870.4	$2,097.0	$226.5

Table 8
Summary of RCID's Sensitivity Analyses
(Varying External Parameters)

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
3x1 Combined Cycle Joint Development	$1,940.4	$1,816.4	$124.0
Three-Train 1x1 IGCC Joint Development	$1,870.8	$1,816.4	$54.4
Second Jointly Owned Pulverized Coal Unit	$1,589.2	$1,816.4	($227.2)
Biomass Supply-Side Addition with TEC	$1,772.7	$1,816.4	($43.7)
Biomass Supply-Side Addition without TEC	$2,009.9	$1,816.4	$193.4
PRB Coal for TEC	$1,825.7	$1,816.4	$9.3

Table 9
Summary of RCID's Share of Southern's Bids

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
Southern's Pulverized Coal Unit	$1,908.9	$1,816.4	$92.5
Southern's 2x1 Combined Cycle Unit	$2,010.4	$1,816.4	$193.9

Table 10
Summary of the City's Sensitivity Analyses
(Varying Base Case Input Parameters)

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	With TEC	Without TEC	Differential CPWC Savings with TEC
Base Case	$4,379.1	$4,567.7	$188.6
High Fuel Prices	$4,954.6	$5,091.7	$137.0
Low Fuel Prices	$3,561.7	$3,670.7	$109.0
High Load and Energy Growth	$4,716.0	$4,899.0	$183.0
Low Load and Energy Growth	$4,118.2	$4,331.4	$213.1
High Capital Cost	$4,458.2	$4,683.1	$224.9
Low Capital Cost	$4,296.2	$4,448.0	$151.8
High Emissions Allowance Costs	$4,406.2	$4,611.4	$205.2
Low Emissions Allowance Costs	$4,337.7	$4,526.8	$189.1
Regulated CO_2	$4,451.8	$4,603.5	$151.6

Table 11
Summary of the City's Sensitivity Analyses
(Varying External Parameters)

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
3x1 Combined Cycle Joint Development	$4,693.1	$4,320.0	$373.1
Three-Train 1x1 IGCC Joint Development	$4,507.3	$4,320.0	$187.3
Second Jointly Owned Pulverized Coal Unit	$4,226.8	$4,320.0	($93.2)
All Natural Gas Capacity Expansion Plan	$4,641.9	$4,320.0	$321.9
Biomass Supply-Side Addition with TEC	$4,405.7	$4,320.0	$85.7
Biomass Supply-Side Addition without TEC	$4,611.0	$4,320.0	$291.0
PRB Coal for TEC	$4,393.5	$4,320.0	$73.5

Table 12
Summary of the City's Share of Southern's Bids

Sensitivity Case	Expansion Plan CPWC Cost ($ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
Southern's Pulverized Coal Unit	$4,586.7	$4,320.0	$266.7
Southern's 2x1 Combined Cycle Unit	$4,794.9	$4,320.0	$474.9