

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**REBUTTAL TESTIMONY OF BRADLEY E. KUSHNER**

**ON BEHALF OF**

**FLORIDA PUBLIC UTILITIES COMPANY**

**DOCKET NO. 080411**

**JULY 30, 2009**

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

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

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

5 A. I am employed by Black & Veatch Corporation as a Manager.

6 **Q. Please describe your responsibilities in that position.**

7 A. I am responsible for the management of various projects for utility and non-utility  
8 clients. These projects include production cost modeling associated with power  
9 system expansion planning, feasibility studies, and demand-side management  
10 (DSM) evaluations. I also have involvement in the issuance and evaluation of  
11 requests for proposals (RFPs).

12 **Q. Please describe Black & Veatch Corporation.**

13 A. Black & Veatch Corporation has provided comprehensive engineering,  
14 consulting, and management services to utility, industrial, and governmental  
15 clients since 1915. Black & Veatch specializes in engineering, consulting, and  
16 construction associated with utility services including electric, gas, water,  
17 wastewater, telecommunications, and waste disposal. Service engagements

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1 consist principally of investigations and reports, design and construction,  
2 feasibility analyses, rate and financial reports, appraisals, reports on operations,  
3 management studies, and general consulting services. Present engagements  
4 include work throughout the United States and numerous foreign countries.

5 **Q. Please state your educational background and professional experience.**

6 A. I received my Bachelors of Science in Mechanical Engineering from the  
7 University of Missouri – Columbia in 2000. I have more than 9 years of  
8 experience in the engineering and consulting industry. I have experience in the  
9 development of integrated resource plans, ten-year-site plans, DSM plans, and  
10 other capacity planning studies for clients throughout the United States. Utilities  
11 in Florida for which I have worked include OUC, Florida Municipal Power  
12 Agency, JEA, Kissimmee Utility Authority, Lakeland Electric, Reedy Creek  
13 Improvement District, Tampa Electric Company, and the City of Tallahassee. I  
14 have performed production cost modeling and economic analysis, and otherwise  
15 participated in five Need for Power Applications that have been filed on behalf of  
16 Florida utilities and approved by the Florida Public Service Commission. I have  
17 also testified before the FPSC in Need for Power proceedings.

18 **Q. On whose behalf are you testifying?**

19 A. I am providing testimony on behalf of the Florida Public Utilities Company  
20 (FPUC).

21 **Q. Have you testified previously in this Docket?**

22 A. No.

1 **Q. What is the purpose of your testimony in this proceeding?**

2 A. The purpose of my testimony is to discuss the CO<sub>2</sub> emissions allowance prices  
3 used in FPUC's analyses as they compare to those suggested by witness  
4 Steinhurst and witness Spellman.

5 **Q. Are you sponsoring any exhibits to your testimony?**

6 A. Yes. Exhibit No. \_\_ [BEK-1] is a copy of my résumé.

7 **Q. What was the basis for the CO<sub>2</sub> emissions allowance prices considered in**  
8 **your analyses?**

9 A. The CO<sub>2</sub> emissions allowance price projections considered in my analyses for  
10 FPUC were based on those presented in the US Energy Information  
11 Administration's (EIA) April 2008 *Energy Market and Economic Impacts of*  
12 *S.2191, the Lieberman-Warner Climate Security Act of 2007* report.

13 **Q. Why was this report chosen as the basis for your CO<sub>2</sub> emissions allowance**  
14 **price projections?**

15 A. The *Energy Market and Economic Impacts of S.2191, the Lieberman-Warner*  
16 *Climate Security Act of 2007* report represented the most recent detailed analyses  
17 of proposed legislation to regulate emissions of CO<sub>2</sub> with corresponding annual  
18 emissions allowance price projections beyond 2019 developed by a US  
19 governmental entity at the time we began developing avoided costs for use in this  
20 Docket. Furthermore, these same CO<sub>2</sub> emissions allowance price projections  
21 were considered in the JEA Greenland Energy Center Combined Cycle Need for  
22 Power Application, which was approved by the Commission February 25, 2009  
23 (Order No. PSC-09-0111-FOF-EM).

1   **Q.   Witness Spellman suggests that GHG cost estimates considered by the**  
2       **Commission in this Docket be based upon the most recent CBO costs**  
3       **estimates. How do the CO<sub>2</sub> emissions allowance price projections used in**  
4       **FPUC’s analyses compare to these and other recent price projections**  
5       **developed by US governmental entities?**

6   A.   I have reviewed the projections developed by the US Environmental Protection  
7       Agency (EPA) in their report titled *EPA Analysis of the American Clean Energy*  
8       *and Security Act of 2009 H.R. 2454 in the 111<sup>th</sup> Congress* (dated 6/23/09) and the  
9       Congressional Budget Office (CBO) cost estimate of H.R. 2454 (dated 6/5/09). It  
10      is difficult to do a direct comparison between the CO<sub>2</sub> emissions allowance prices  
11      considered in my analyses to those projected by either EPA or CBO, since the  
12      basis of the projections in the EPA and CBO reports (i.e. real or nominal dollars  
13      in either the EPA or CBO analysis, metric or short tons in the EPA analysis, etc.)  
14      is not clear. However, in general the range CO<sub>2</sub> emissions allowance prices  
15      considered in my analyses encompass those presented in both the EPA and CBO  
16      reports.

17   **Q.   Did witness Steinhurst present any alternative CO<sub>2</sub> emissions allowance price**  
18       **projections?**

19   A.   Witness Steinhurst only suggests a low-case CO<sub>2</sub> emissions allowance price of  
20       \$15 per ton, a mid-case allowance price of \$30 per ton, and a high-case allowance  
21       price of \$78 per ton, all levelized over the period of 2013-2030, in 2007 dollars.

1 **Q. How do the CO<sub>2</sub> emissions allowance price projections used in your analyses**  
2 **compare to those suggested by witness Steinhurst?**

3 A. The three CO<sub>2</sub> emissions allowance price projections considered in my analyses  
4 range from approximately \$15 per ton in the low-case to approximately \$35/ton in  
5 the mid-case to approximately \$89/ton in the high case, all levelized over the  
6 period of 2012-2027, in 2007 dollars. As shown in the table below, these align  
7 well with those suggested by witness Steinhurst.

8

Comparisons of CO <sub>2</sub> Emissions Allowance Price Projections (Levelized \$/ton)			
Source	Low	Mid	High
Witness Steinhurst	15	30	78
Witness Kushner	15	35	89

9

10 **Q. Witness Steinhurst suggests that the potential for State rather than Federal**  
11 **regulation of greenhouse gases in Florida was not considered by FPUC. Is**  
12 **consideration of yet-to-be defined State regulation critical?**

13 A. No. It is irrelevant whether or not the CO<sub>2</sub> emissions allowance price projections  
14 were based on potential Federal- or State-level regulations of greenhouse gases.  
15 What is relevant is that an appropriate range of possible costs were considered.  
16 Based on the range of emissions allowance prices recommended by witness  
17 Steinhurst, and in light of my previous discussion of comparison of CO<sub>2</sub>  
18 emissions allowance price projections, it would appear that he would agree the  
19 price projections considered in my analyses were reasonable and appropriate, a  
20 conclusion that appears to be substantiated by the testimony of witness Spellman  
21 (Page 50, Lines 6-7).

1                   Witness Steinhurst's testimony acknowledges that there are numerous  
2                   different values of ranges of CO<sub>2</sub> emissions allowance price projections that have  
3                   been adopted by various state regulators across the country, which further  
4                   demonstrates the magnitude of the speculation related to yet-to-be defined  
5                   potential future regulations that do not currently exist.

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

7   **A.   Yes it does.**

**Manager**

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*Utility System Planning,  
Production Costing,  
Economic Analysis, and  
Demand-Side  
Management*

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Mr. Kushner is responsible for production costing associated with utility system expansion planning, as well as feasibility studies and economic analysis. He also provides demand-side management evaluation. Mr. Kushner has been involved in the issuance and evaluation of requests for proposals (RFPs) and portfolio evaluations. Mr. Kushner has also presented expert testimony and prepared other experts for testimony related to determination of need proceedings and has also testified under cross examination by intervening parties.

**Representative Project Experience**

**Education**

B.S., Mechanical Engineering,  
University of Missouri –  
Columbia, 2000

**Experience**

2000 – present

**Joined Black & Veatch**

2000

*Federal Loan Guarantee Application Support, Confidential Client  
2009*

Serving in the role of Study Manager, Mr. Kushner provided support to facilitate completion of Part II of the Application to the US Department of Energy's Federal Loan Guarantee Program Office. The Part II Application submittal was structured to be consistent with the requirements set forth in the US Department of Energy solicitation number DE-FOA-0000008. The Part II Application consisted of a detailed project description, technical information related to the proposed project, the proposed project's business plan, and the proposed project's financial plan. Mr. Kushner's responsibilities included interfacing directly with the client and other consultants, working to coordinate the day-to-day activities of other Black & Veatch experts providing inputs for the Application, and drafting various sections of the submittal.

*Siting and Capacity Expansion Planning Study, Western Farmers  
Electric Cooperative, Anadarko, Okla.  
2008-2009*

Serving in the role of Study Manager, Mr. Kushner provided production costing, economic analysis and various other support to facilitate completion of the Western Farmers Electric Cooperative (WFEC) Siting and Capacity Expansion Planning Study. The Study considered construction of three different combined cycle technologies at various sites as well as construction of coal fired capacity or purchase of nuclear power. The findings of the Study were presented to WFEC staff and will be presented to the WFEC Board of Directors in March 2009.

*Greenland Energy Center Combined Cycle Conversion Need for Power  
Application, JEA, Jacksonville, Fla.  
2008-2009*

As Study Manager, Mr. Kushner provided production costing, economic analysis and various other support to facilitate the completion and filing of the Greenland Energy Center Need for Power Application (NFP). His work also included preparation of testimony related to the project to the Florida Public Service Commission (FPSC) as well as responding to interrogatories and production of documents requests throughout the discovery process. The NFP provides a determination of the most cost-effective capacity addition to satisfy forecasted capacity requirements.

The analysis considered self-build and purchase-power alternatives, including renewable energy technologies, and demand-side management. The project received approval from the FPSC in February 2009.

*Supply-Side Technologies Characterization, Tampa Electric Company, Tampa, Fla.*

*2007-2009*

As Study Manager, Mr. Kushner provided cost and performance estimates for various renewable, conventional and other generating technologies for client consideration in support of its determination of need filing. Technologies considered included approximately 20 renewable technologies, such as biomass, biogas, waste-to-energy, wind, solar, geothermal, hydroelectric and ocean energy; numerous conventional technologies, including simple and combined cycles; and two emerging technologies, both nuclear. Mr. Kushner also considered advanced, energy storage and distributed generation technologies.

*Cane Island 4 Need for Power Application, Florida Municipal Power Agency, Orlando, Fla.*

*2007-2008*

As Study Manager, Mr. Kushner provided production costing, economic analysis and various other support to facilitate the completion and filing of the Cane Island 4 Need for Power Application (NFP). His work also included preparation of testimony related to the project to the Florida Public Service Commission (FPSC) as well as responding to interrogatories and production of documents requests throughout the discovery process. The NFP provides a determination of the most cost-effective capacity addition to satisfy forecasted capacity requirements. The analysis considered self-build and purchase-power alternatives, including renewable energy technologies, and demand-side management. The FPSC approved the Cane Island 4 NFP in August 2008.

*Valuation of Generating Unit Portfolio, Confidential Client*

*2008*

As Study Manager, Mr. Kushner provided oversight on modeling and evaluation of purchase power contracts related to the Client's portfolio of generation assets throughout North America. The purchase power contracts were modeled to assess a monetary value to be used as guidance for valuation of the overall generation portfolio.

The portfolio of assets and associated purchase power contracts includes more than 50 models. Mr. Kushner was involved in the modeling of the contracts and quality assurance/quality control related to the entire portfolio prior to delivering evaluations to the Client.



***Characterization and Selection of Nuclear Generating Technologies,  
AmerenUE, Missouri  
2007-2008***

As Project Analysis Engineer, Mr. Kushner provided assistance in the characterization and screening of various nuclear generating technologies for consideration by AmerenUE. The nuclear technology selected for further evaluation will be evaluated as part of the Client's Integrated Resource Plan (IRP) study.

The characterization included consideration of provisions of the Energy Policy Act of 2005 related to new qualifying nuclear plant capacity as well as relative comparisons of competing nuclear generating technologies. Client deliverables included two separate presentations to AmerenUE's Stakeholders.

***Power Supply Study, Western Farmers Electric Cooperative,  
Anadarko, Okla.  
2007***

Serving in the role of Study Manager, Mr. Kushner provided production costing, economic analysis and various other support to facilitate completion of the Western Farmers Electric Cooperative (WFEC) Power Supply Study. The WFEC Power Supply Study was an update to previous capacity planning studies that evaluated the economics of various supply-side alternatives to satisfy forecast capacity requirements.

***Integrated Resource Plan, Village of Rockville Centre, N.Y.  
2007***

As Study Manager, Mr. Kushner provided analysis and preparation related to the Village of Rockville Centre (RVC) Integrated Resource Plan (IRP). The IRP included consideration of RVC's existing generating system and strategic planning to satisfy forecasted system requirements. The strategic planning process included consideration of conventional supply-side options, interaction with the purchase power market, demand-side management measures, renewable supply-side alternatives and possible future environmental impacts.

***Taylor Energy Center Need for Power Application, Various Clients,  
Florida  
2005-2006***

As Study Manager, Mr. Kushner provided production costing, economic analysis and various other support to facilitate the completion and filing of the Taylor Energy Center (TEC) Need for Power Application (NFP). His work also included preparation of testimony related to the project to the Florida Public Service Commission (FPSC). The NFP provides a determination of the most cost-effective capacity addition to satisfy forecasted capacity requirements for the four separate utilities participating in the project. The analysis considered self-build and purchase-power alternatives.

***Integrated Resource Plan, City of Tallahassee, Tallahassee, Fla.  
2005-2008***

Serving as Study Manager, Mr. Kushner provided analysis and preparation related to the City of Tallahassee's (the City's) Integrated Resource Plan (IRP). The IRP included consideration of the City's existing generating system and strategic planning to satisfy forecasted system requirements. The strategic planning process included consideration of conventional supply-side options, demand-side management measures, renewable supply-side alternatives and possible future environmental impacts.

***Integrated Resource Plan, Brazos Electric Power Cooperative, Texas  
2006***

Mr. Kushner, Project Analysis Engineer, provided assistance to Brazos Electric Power Cooperative (Brazos) in developing its Integrated Resource Plan (IRP). His work on this project included drafting a request for power supply proposals (RFP), analysis of responses to the RFP, review of Brazos production costing analysis and documentation of the final report. The IRP will provide strategic direction to Brazos, which is currently experiencing and is forecasted to continue to experience robust system growth.

***Stanton Energy Center Unit B Need for Power Application, Orlando  
Utilities Commission, Orlando, Fla.  
2005***

As Study Manager, Mr. Kushner provided production costing, economic analysis and various other support to facilitate completion and filing of the Stanton Energy Center Unit B (Stanton B) Need for Power Application (NFP). His work also included preparation of testimony related to the project to the Florida Public Service Commission (FPSC).

The NFP provided a determination of the most cost-effective capacity addition to satisfy forecasted capacity requirements for the Orlando Utilities Commission. The FPSC approved the Stanton B NFP Application in May 2006, which represents the first coal-fired power plant approved in the State of Florida since 1991.

***RFP Issuance and Evaluation, Western Farmers Electric Cooperative,  
Anadarko, Okla.  
2005***

As Project Analysis Engineer, Mr. Kushner coordinated with Western Farmers Electric Cooperative (WFEC) to draft, issue and evaluate a capacity solicitation (RFP) to secure forecast capacity requirements in the most cost-effective and reliable manner. The RFP process was undertaken through coordination with Rural Utilities Services (RUS) in an effort to obtain low-cost RUS project financing. This involved evaluation of numerous conventional as well as renewable technology proposals and culminated in the issuance of a short list and presentation to the WFEC Board of Directors.

***Saint Johns River Power Park Annual Review, JEA, Jacksonville, Fla.  
Annually 2003 - Present***

As Engineering Manager, Mr. Kushner was responsible for the preparation of the annual report, which documented the previous year's operations of the St. Johns River Power Park. This included a summary of the findings of field activities, staff interviews, observations and document review associated with the Power Park.

***10-Year Site Plan, FRCC Forms, EIA-860 and Annual Conservation Report Filings, Orlando Utilities Commission, Orlando, Fla.  
Annually 2000 - Present***

As Engineering Manager, Mr. Kushner was responsible for production costing and the economic analysis necessary to complete the Orlando Utilities Commission's 2006 10-Year Site Plan, which was submitted to the Florida Public Service Commission (FPSC).

Related to the 10-Year Site Plan were the Florida Reliability Coordinating Council (FRCC) filings, which were submitted to the FRCC via electronic database and forwarded to the Energy Information Administration (EIA) by the FRCC. The EIA-860 collects data related to the specific utility's existing and planned generating units. The Annual Conservation Report was prepared and submitted to the FPSC in order to summarize the utility's conservation and demand-side management efforts.

***RFP Issuance and Evaluation, City of Columbia, Water & Light Department, Columbia, Mo.  
2005***

Serving as Study Manager, Mr. Kushner coordinated with the City of Columbia, Water & Light Department (the City) to draft, issue and evaluate a capacity solicitation (RFP) to secure forecast capacity requirements in the most cost-effective and reliable manner. This involved evaluation of numerous conventional capacity options under consideration by the City, as well as options proposed by respondents to the RFP. Mr. Kushner provided continuous communication with City staff as well as presentations to the City's planning committee.

***Treasure Coast Energy Center Need for Power Application, Florida Municipal Power Agency, Orlando, Fla.  
2005***

In the capacity of Project Analysis Engineer, Mr. Kushner provided production costing, economic analysis and various other support to facilitate completion and filing of the Florida Municipal Power Agency's (FMPA) Need for Power Application (NFP). He also provided testimony related to the project to the Florida Public Service Commission (FPSC).

The NFP provided a determination of the most cost-effective capacity addition to satisfy forecasted capacity requirements. The analysis

performed for FMPA considered self-build and purchase-power alternatives. The NFP Application was approved by the FPSC in July 2005, representing a critical step in the permitting and licensing process in the state of Florida.

***Stock Island Combustion Turbine Evaluation, Florida Municipal Power Agency, Orlando, Fla.***

***2004***

Serving in the role of Project Analysis Engineer, Mr. Kushner performed production costing and economic analysis to determine the most cost-effective capacity additions to be located at the Stock Island site. The analysis considered two different generating units from specific manufacturers who responded to FMPA's request for bids.

***Generation Expansion Study, Oman***

***2004***

As Project Analysis Engineer, Mr. Kushner performed production costing and economic analysis to determine the most cost-effective capacity additions to satisfy forecast capacity requirements in the country of Oman. The analysis considered seven different generating technologies.

***Integrated Resource Plan, Golden Valley Electric Association, Fairbanks, Alaska***

***2004***

As Project Analysis Engineer, Mr. Kushner provided economic analysis in support of the Golden Valley Electric Association's (GVEA) Integrated Resource Plan (IRP). The IRP provided GVEA with recommendations of capacity additions that would satisfy forecasted capacity requirements in the most cost-effective manner.

***10-Year Site Plan and FRCC Forms, Florida Municipal Power Agency, Orlando, Fla.***

***2005***

Serving as Engineering Manager, Mr. Kushner provided assistance and support to the Florida Municipal Power Agency (FMPA) related to its 2005 10-Year Site Plan and subsequent submission to the Florida Public Service Commission (FPSC). Related to the 10-Year Site Plan were the Florida Reliability Coordinating Council (FRCC) filings, which were submitted to the FRCC via electronic database and forwarded to the Energy Information Administration (EIA) by the FRCC.

***Due Diligence and Economic Analysis, Dairyland Power Cooperative, La Crosse, Wis.***

***2003***

Serving as the Project Analysis Engineer, Mr. Kushner performed a due diligence review of the power supply planning efforts undertaken by Dairyland Power Cooperative (DPC). His work included development of

numerous capacity expansion plans and associated system production costing.

The analysis was done in compliance with the requirements of the Rural Utilities Services (RUS) to potentially obtain low-cost RUS project financing. This project also included a presentation of the study's findings to the DPC Board of Directors. Following the issuance of a request for proposals (RFP) for capacity supplies, Black & Veatch was released to perform additional production costing and evaluations of the bids and self-build options were completed. The results were then presented to DPC project personnel as well as RUS staff.

*Numeric Conservation Goals Filing, JEA, Jacksonville, Fla.  
2004*

Serving in the role of Project Analysis Engineer, Mr. Kushner provided analysis related to and preparation of the JEA 2004 Petition for Approval of Numeric Conservation Goals, as required by the Florida Public Service Commission (FPSC).

The submittal included analysis of numerous demand-side management (DSM) measures to be considered by JEA in order to determine their cost-effectiveness. The process was required to be completed by JEA every five years, culminating in the eventual determination by the FPSC of the conservation goals JEA must satisfy each year.

*Numeric Conservation Goals Filing, Orlando Utilities Commission,  
Orlando, Fla.  
2004*

As Project Analysis Engineer, Mr. Kushner was responsible for analysis related to and preparation of the Orlando Utilities Commission's (OUC) 2004 Petition for Approval of Numeric Conservation Goals, as required by the Florida Public Service Commission (FPSC).

The submittal included analysis of numerous demand-side management (DSM) measures to be considered by OUC in order to determine their cost-effectiveness. The process was required to be completed by OUC every five years, culminating in the eventual determination by the FPSC of the conservation goals OUC must satisfy each year.

*Site Selection Study, Florida Municipal Power Agency, Orlando, Fla.  
2003*

As Project Analysis Engineer, Mr. Kushner coordinated and prepared a site selection study related to the potential construction of a new combined-cycle unit to be installed by the Florida Municipal Power Agency.

*10-Year Site Plan, Florida Municipal Power Agency, Orlando, Fla.  
2004*

Serving as Engineering Manager, Mr. Kushner provided assistance and support to the Florida Municipal Power Agency (FMPA) related to its 2004 10-Year Site Plan and subsequent submission to the Florida Public Service Commission (FPSC).

*Due Diligence, City Utilities, Springfield, Mo.*  
2003

As Project Analysis Engineer, Mr. Kushner provided due diligence and economic analysis to determine the most cost-effective capacity additions to satisfy forecasted system requirements for City Utilities – Springfield. Two options were considered, which consisted of constructing a second unit at an existing site and an independent developer’s proposed construction of a unit at a new site.

*Participation Agreement, Kissimmee Utility Authority, Orlando, Fla.*  
2002

In the role of Engineering Manager, Mr. Kushner led the development of a Participation Agreement between client (KUA) and another Florida utility governing ownership, construction and operation of a new generating unit at a KUA site. Mr. Kushner was active in meetings, coordinated with clients and incorporated various requirements to sufficiently complete the Agreement.

*Capacity Planning Study, Western Farmers Electric Cooperative, Anadarko, Okla.*  
2002

Serving as the Project Analysis Engineer, Mr. Kushner handled the production costing and economic analysis to determine WFEC’s most cost-effective expansion options to meet forecast capacity requirements. The capacity planning study was performed in support of the RFP issuance described above.

*Feasibility Study, Kissimmee Utility Authority, Kissimmee, Fla.*  
2002

In the role of Engineering Manager, Mr. Kushner assisted in the coordination and preparation of a preliminary study to evaluate the feasibility of constructing a new generating unit at an existing Kissimmee Utility Authority site.

*Capacity Planning Study, Braintree Electric Light Department, Braintree, Mass.*  
2002

Serving as the Project Analysis Engineer, Mr. Kushner provided the production costing and economic analysis to determine Braintree Electric Light Department’s most cost-effective expansion options to meet forecast capacity requirements.

*Integrated Resource Plan, City of Tallahassee, Tallahassee, Fla.*

*2001*

As Project Analysis Engineer, Mr. Kushner assisted in the completion of the City of Tallahassee's Integrated Resource Plan (IRP), including evaluation of the City's demand-side management program alternatives.

*Capacity Planning Study, Basin Electric Power Cooperative, Bismarck, N.D.*

*2001*

Serving in the role of Project Analysis Engineer, Mr. Kushner managed the production costing and economic analysis necessary to provide Basin Electric Power Cooperative with recommendations as to which capacity additions would be most cost-effective to satisfy system requirements.

*10-Year Site Plan, Lakeland Electric, Lakeland, Fla.*

*2001*

As Project Analysis Engineer, Mr. Kushner assisted in the completion of Lakeland Electric's 2001 10-Year Site Plan, including consideration of Lakeland's capacity addition options.

*Stanton Energy Center A Need for Power Application, Various Clients, Florida*

*2000*

As Project Analysis Engineer, Mr. Kushner provided the production costing and economic analysis required in support of the determination of the most cost-effective expansion options to meet the individual needs of the Orlando Utilities Commission, Kissimmee Utility Authority and Florida Municipal Power Agency. His work also included preparation of a corresponding application to be presented to the Florida Public Service Commission, as well as written testimony in support of the commission.

CO <sub>2</sub> Emissions Allowance Price (per EIA's Analysis of S.2191)			
Calendar Year	Nominal \$/Ton		
	S.1766 Update	S.2191 Core	S.2191 Limited Alternatives/No International
2010	N/A	N/A	N/A
2011	N/A	N/A	N/A
2012	7.72	17.76	53.26
2013	8.50	19.55	50.95
2014	9.35	21.52	55.09
2015	10.30	23.69	60.65
2016	11.33	26.08	66.77
2017	12.48	28.71	73.50
2018	13.74	31.60	80.91
2019	15.12	34.79	89.07
2020	16.65	38.30	98.06
2021	18.32	42.16	107.94
2022	20.17	46.41	118.83
2023	22.21	51.09	130.81
2024	24.45	56.24	144.01
2025	26.91	61.92	158.53
2026	29.63	68.16	174.52
2027	32.61	75.03	192.12
2028	35.90	82.60	211.49
2029	39.52	90.93	232.82