

Exhibit No.:	
Issues:	Supply Side
Witness:	Brian Smith
Sponsoring Party:	Missouri Department of Natural Resources – Division of Energy
Type of Exhibit:	Rebuttal Testimony
Case No.:	EO-2011-0271

**REBUTTAL TESTIMONY  
OF  
BRIAN SMITH**

**GDS ASSOCIATES, INC.**

**On behalf of the Missouri Department of Natural Resources  
Division of Energy**

**OCTOBER 28, 2011**

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

**UNION ELECTRIC COMPANY, d/b/a AMEREN MISSOURI**

**2011 UTILITY RESOURCE FILING  
PURSUANT TO 4 CSR 240 – CHAPTER 22**

**CASE NO. EO-2011-0271**

1 **I. INTRODUCTION**

2 **Q. Please state your name, position and business address.**

3 A. My name is Brian D. Smith. I am a Senior Project Manager at GDS Associates, Inc  
4 (GDS). My business address is 1850 Parkway Place, Suite 800, Marietta, Georgia 30067.

5 **Q. Please describe GDS Associates.**

6 A. GDS Associates Inc. is a multi-service consulting and engineering firm formed in 1986  
7 that now employs a staff of over 170 in five locations across the U.S. Our consultants are  
8 recognized leaders in their respective fields, dedicated to their clients and innovative in  
9 their approach to meeting unique challenges. Our broad range of expertise focuses on  
10 clients associated with, or affected by, electric, gas, water and wastewater utilities. The  
11 services that GDS offers include:

- 12 • energy efficiency, renewable energy and demand response planning, program  
13 design, implementation and evaluation;
- 14 • integrated resource planning;
- 15 • electric transmission and distribution system planning;
- 16 • wholesale and retail rate studies;
- 17 • and other planning and implementation projects for the electric and natural  
18 gas industries.

19 In addition, we offer information technology, market research, and statistical services to a  
20 diverse client base.

21 **Q. Can you please summarize your work experience and educational background?**

22 A. I received a Bachelor of Industrial Engineering in 1981 from the Georgia Institute of  
23 Technology. I am a registered professional engineer in the state of Florida and I have

24 thirty years of experience in electric utility planning activities. This includes time spent  
25 working for municipal utility planning departments as well as my association with GDS  
26 where I have worked as a power supply and utility system simulation consultant. I have  
27 been responsible for the development and analysis of integrated resource plans and for  
28 computer simulation of utility production operations and financial operations. Particular  
29 emphasis has been on economic feasibility studies of alternative power supply resources.

30 Additional detail can be found in my resume, which is provided in Schedule A to  
31 this testimony.

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

33 A. I am testifying on behalf of the Missouri Department of Natural Resources (“MDNR”),  
34 an intervenor in these proceedings.

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

36 A. The purpose of my testimony is to reply to Ameren Missouri’s responses to GDS’s  
37 comments regarding its 2011 Integrated Resource Plan (IRP). These responses were  
38 provided by Ameren Missouri in its “Response to Comment’s of the Parties”  
39 (Response).<sup>1</sup> My testimony addresses Ameren Missouri’s responses to two comments  
40 made by GDS related to its evaluation of thermal supply-side resources in the IRP.

41 In its comments, GDS identified several deficiencies with respect to Ameren  
42 Missouri’s evaluation of thermal supply-side resources. Two of these deficiencies were:  
43 (1) Ameren Missouri did not adequately defend its dismissal of purchased power options  
44 from consideration in the IRP, and (2) Ameren Missouri did not present any discussion of

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<sup>1</sup> Ameren Missouri 2011 Integrated Resource Plan, EO-2011-0271, Response to Comments of the Parties.

the historic forecast accuracy of previous fuel price forecasts produced by Charles River Associates' MRN-NEEM model.

## **II. DISMISSAL OF PURCHASED POWER OPTIONS FROM CONSIDERATION IN THE IRP**

**Q. In its Response Ameren Missouri defends its dismissal of PPA's from consideration as appropriate.<sup>2</sup> Does the information presented in the Response related to this issue give assurance that such dismissal is appropriate?**

**A.** It is my opinion that it does not. Ameren Missouri provides a brief description of the process employed in making the decision to exclude PPA's. However, there is no real information presented to support the decision. There is no discussion of the type of research performed, data gathered, or steps taken by either the planning or trading organizations. The explanation is at a very high level and provides no assurance that, in fact, there are no reasonable opportunities available for consideration in the IRP supply-side analysis. It may be true that this conclusion is reasonable, however there is no information contained in either the IRP or in Ameren Missouri's Response that gives stakeholders such as MDNR the ability to agree with the conclusion.

## **III. CONSIDERATION OF HISTORIC FUEL PRICE FORECAST ACCURACY**

**Q. Ameren Missouri contends that its discussion of CRA's modeling credentials adequately satisfies the requirements of the IRP rules to consider the accuracy of forecasts.<sup>3</sup> Do you agree that the discussion does in fact satisfy the requirements contained in the IRP rules?**

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<sup>2</sup> Ameren Missouri's Response to Comments of Parties, pp. 76-78.

<sup>3</sup> *Ibid.*, pp. 86-87.

66 A. I do not. Ameren Missouri's discussion of CRA's modeling credentials does not address  
67 the specific rule requirement that a utility shall consider the accuracy of previous  
68 forecasts when selecting the fuel price forecast provider<sup>4</sup>. I do not dispute the  
69 information provided by Ameren Missouri relating to CRA's reputation or to other  
70 parties' opinion of CRA. My point is that Ameren Missouri has not provided any  
71 discussion of how or if it considered the accuracy of previous forecasts as the rule  
72 requires. There is no information included in the IRP or in Ameren Missouri's Response  
73 that suggests that any such consideration was given. In fact, Ameren Missouri states that  
74 there is no single forecast that can be compared to historic prices.<sup>5</sup> I infer from this  
75 statement that historical forecast accuracy was not considered. The IRP rule does not  
76 specify that a single forecast be compared; it requires that consideration be given to  
77 historical accuracy. I believe that Ameren Missouri has not complied with this  
78 requirement of the rule.

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

80 A. Yes, it does.

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<sup>4</sup> 4 CSR 240-22.040(8)(A)(2)states that: "The utility shall consider the accuracy of previous forecasts as an important criterion in selecting providers of fuel price forecasts."

<sup>5</sup> Ameren Missouri's Response to Comments of Parties, p. 86.

**EDUCATION:** Bachelor of Industrial Engineering  
Georgia Institute of Technology, 1981

**PROFESSIONAL REGISTRATION:** Registered Professional Engineer - State of Florida

**PROFESSIONAL MEMBERSHIP:** Institute of Industrial Engineers

**EXPERIENCE:**

Mr. Smith has twenty-eight years experience in electric utility planning including time spent as a staff member of municipal utility planning departments prior to his association with GDS as a power supply and system simulation consultant. He has been responsible for the development and analysis of integrated resource plans and for computer simulation of utility production operations and financial operations. Particular emphasis has been on economic feasibility studies of alternative power supply resources and projections of wholesale supplier rates based on cost of service as well as market forecasts. Mr. Smith has also been involved in the auditing of incremental energy cost billing calculations for retail customers.

**1987 to Present – GDS Associates, Inc.**

As Senior Project Manager in GDS' Modeling department, responsibilities include data research, database preparation, and computer simulation of investor-owned and cooperative utility systems using integrated planning software (including resource expansion optimization). He is also responsible for projecting regional market prices that are used for project justification

Mr. Smith has modeled the production systems and construction programs of investor-owned and cooperative utilities using either industry standard planning software or detailed spreadsheet models. Industry standard planning software utilized for project work includes Strategist, PROMOD, and MarketPower.

**1985 to 1987 – Municipal Electric Authority of Georgia - Atlanta, Georgia**

As Generation Planning Engineer, was responsible for production costing simulation PROMOD, for operations budgeting. Was a member of team responsible for customizing and installing PROSCREEN II (now Strategist) system. Participated in joint planning activities with other regional utilities.

**1981 to 1985 – Jacksonville Electric Authority - Jacksonville, Florida**

As Generation Planning Engineer, was responsible for production costing simulation, using PROMOD, for budgeting purposes and analysis of alternative power resources. Participated in development of PC based corporate financial model. As Load Research Engineer, was responsible for sample design, coordination of data collection equipment installation and removal, and statistical analysis of electric consumption data. Analysis contributed to cost of service studies and energy management program evaluation.

**Specific Project Experience Includes:**

**East Texas Electric Cooperative, Inc.** – Participated in preparation of Request for Proposals for power supply resources. Coordinated communications with potential RFP respondents and conducted evaluation of submitted proposals.

Produced periodic projections of wholesale rates of investor-owned utility power suppliers using Strategist. Conducted economic feasibility analysis of load transfers from one electric reliability council to another. Prepared loan application for construction financing requirements.

**Kansas Electric Power Cooperative, Inc.** – Modeled production and financial systems to support financial forecast. Assisted in preparation of RFPs for power supply, evaluated responses to RFPs, participated in regulatory review and approval process. Evaluated impacts on members associated with reductions in sales.

**North Carolina Electric Membership Corporation** - Member of project team assembled to evaluate alternative uses of power resources. Responsibilities included data research, database preparation and computer simulation of investor-owned utilities, as well as cooperative utility system, using a customized PROSCREEN II integrated planning system.

Participated in audit of energy bills from wholesale supplier.

**Blue Ridge Power Agency** - Projected wholesale rates of investor-owned power supplier.

**Georgia Public Service Commission** - Assisted in review of Georgia Power Company's Request for Proposal (RFP) procedure, including economic evaluation of resource proposals. Focused on proposal representation and modeling methods.

Member of team responsible for review of Georgia Power Company's 1995, 1997, and 2001 Integrated Resource Plans. Assisted Commission staff with Strategist analyses of company's filed expansion plans.

**Seminole Electric Cooperative, Inc.** - Participated in review of coop's planning procedures and modeling methods.

**Department of Public Utilities, Wallingford, CT** - Modeled utility system in order to evaluate power supply alternatives. Analyzed financial impacts of each alternative in order to rank options on basis of economics.

**Grand Island, Nebraska Electric Department** - Participated in formulation of the city's Integrated Resource Plan. Designed resource screening model and comprehensive model of city's production and financial operations.

**4-County Electric Power Association** - Evaluated proposals received in response to 4-County Request for Proposals. Analyzed impacts of switching power suppliers on other customers of current supplier.

**Lafayette, Louisiana Utilities System** - Modeled the production and financial operations of the utility system. Designed and implemented models to analyze resource options at bus-bar and on an integrated basis. Participated in preparation of Integrated Resource Plan.

**South Mississippi Electric Power Association** - Developed spreadsheet screening models for analysis of power supply options received in response to Request for Proposals.

**Air Liquide America Co.** - Modeled generating resources and load requirements of the Electric Reliability Council of Texas. Developed power market clearing prices and dispatch forecast.

**Tenaska Power Co.** - Modeled generating resources and load requirements of the Electric Reliability Council of Texas. Developed power market clearing prices and dispatch forecast.

**State of Hawaii** - Modeled investor owned utility systems. Analyzed potential impacts of market power.

Analyzed feasibility of various levels of renewable generation technology.

**Alabama Electric Cooperative, Inc.** - Modeled investor owned utility system. Developed projections of retail customer class rates. Reviewed AEC staff analysis of bids received in response to solicitation for power.

**Northeast Texas Electric Cooperative, Inc.** - Developed screening model for analysis of power supply options received in response to Request for Proposals. Modeled utility system using Strategist for detailed integrated system analysis.

**Nucor Corporation** - Audited incremental energy billing calculations and procedures of electric service provider. Reviewed and recreated hourly billing records for a multi-year service period. Prepared forecasts of expected electric service curtailments under contract provisions for service interruptions

**GST Steel Corporation** – Calculated power cost over charges due to outage of power supplier generating resource.

**Big Rivers Electric Corporation** – Produced supply-side resource evaluation for Integrated Resource Plan.

**Central Electric Power Corporation** – Conducted simulation of power supply contracts to determine impacts on members.



**Corn Belt Power Cooperative** – Compared cost of continued asset ownership to purchased power contract.

**Citizens Utility Board of Wisconsin** – Calculated impacts to ratepayers associated with sale of investor-owned generating asset.

**Kiewit Mining Group, Inc.** – Produced forecasts of ERCOT market prices to support asset fuel pricing analysis.

**American Municipal Power – Ohio, Inc.** – Produced production simulation of all PJM entities to support analysis of market restructuring.

**Co-Owners of Arkansas Coal Projects** – Produced evaluation of impacts associated with interruptions in fuel supply.

**Old Dominion Electric Cooperative** – Developed triennial Market Power Screen analytics included in FERC filings.

**PRIOR TESTIMONY OFFERED:**

Public Service Commission of the State of Missouri, Case No. EC-99-553, GST Steel Company vs. Kansas City Power & Light Company Relating to Overcharges to GST Resulting from Generating Station Explosion, November 1999

Georgia Public Service Commission, Docket No. 13305-U and Docket No. 13306-U, In the Matter of Georgia Power Company's Application for Approval of and Integrated Resource Plan and Savannah Electric and Power Company's Application for Approval of an Integrated Resource Plan Relating to Review and Evaluation of the Companies' Integrated Resource Plans on Behalf of the Commission Staff Adversary Team, May 2001

Wisconsin Public Service Commission, Docket No. 5-EI-136, In the Matter of the Application for All Approvals Necessary for the Transfer of Ownership and Operational Control of the Kewaunee Nuclear Power Plant From Wisconsin Public Service Corporation and Wisconsin Power and Light Company to Dominion Energy Kewaunee, Inc. on Behalf of Citizens Utility Board, May 2004.

Georgia Public Service Commission, Docket No. 31081, In the Matter of Georgia Power Company's 2010 Integrated Resource Plan on behalf of Georgia Public Service Commission Public Interest Advocacy Staff, May 2010.

Florida Public Service Commission, Docket No. 110009-EI, In the Matter of Florida Power & Light Company's Petition for Approval of Nuclear Power Plant Cost Recovery True-Up on behalf of the Florida Office of Public Counsel, August 2011.