response to request for proposals

LOUISIANA PUBLIC SERVICE COMMISSION

AUDIT OF PURCHASE GAS
ADJUSTMENT FILINGS
Docket No. X-34852

prepared by
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July 11, 2018

Ms. Kim Trosclair  
Louisiana Public Service Commission  
Office of the General Counsel  
602 North Fifth Street (Galvez Building) (70802)  
Baton Rouge, Louisiana 70821-9154

RE: Request for Proposals for Audit of Purchase Gas Adjustment Filings Docket No. X-34852

Dear Ms. Trosclair:
Attached is GDS Associates, Inc. (“GDS”) proposal in response to RFP 18-10 Docket No. X-34852 seeking an independent technical consultant to assist the Louisiana Public Service Commission (“Commission”) Staff in the review and analysis of the gas distribution division of Entergy Louisiana, LLC Purchase Gas Adjustment filings for the period of January 2016 through December 2017.

GDS is well positioned to fully meet the needs of the Commission as defined in the RFP. We appreciate the opportunity to bid on this project and please call me if you have any questions regarding our proposal. Thanks for your consideration.

Sincerely,

Paul J. Wielgus  
Managing Director
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GDS’ Understanding of the Scope of Representation

The Louisiana Public Service Commission (“Commission”) is seeking the services of an independent technical consultant to assist Commission Staff in the review and analysis of the gas distribution division of Entergy Louisiana, LLC Purchase Gas Adjustment (“PGA”) filings for the period of January 2016 through December 2017. GDS is familiar with public utility audits, specifically fuel and purchase gas audits. GDS has experience in reviewing fuel or purchase gas reports of similar energy providers in addition to advising clients in commercial fuel contracting and procurement efforts. GDS will assist the Commission’s Legal, Audit and Utilities Division in analyzing fuel purchases and usage by the gas distribution division of Entergy Louisiana, LLC. (“Company”) In performing this duty, GDS will:

- Review PGA filings
- Draft data requests
- Review data request responses, accompanying work papers and the Company’s financial data
- Review historical data involving prior audits
- Participate in formal status conferences, pre-trial conferences, depositions, and hearings
- Prepare for filing audit memoranda and/or pre-filed testimony in support of the Commission Staff’s ultimate recommendations, together with exhibits supporting the memoranda and/or pre-filed testimony
- Assist in the drafting of applicable motions, exceptions, briefing sheets and orders of the Commission

Additionally, GDS will be available to participate in informal conference calls, meetings and conferences with the Commission and its Staff as well as attending any Business and Executive Sessions that the Commission Staff deems necessary. GDS’ scope of work will continue through conclusion of the docket through Commission vote, regardless of whether the vote is the result of a stipulated agreement or a contested hearing recommendation. GDS’ audit procedures will include but not be limited to:

1. An investigation into the purchased gas costs incurred by the Company during the designated review period for compliance with the requirements of the general order.
2. A review and analysis of the Company’s monthly comprehensive PGA schedules filed with the Commission.
3. If applicable, the development and improvement of internal staff procedures to effectively monitor and evaluate the Company’s performance in areas impacting the gas costs which are reflected in the Company’s monthly PGA filings with the Commission.
4. A review of the Company’s price risk management guidelines pertaining to purchased gas (including policies, regarding physical hedging, fixed price transactions, index transactions, fixed for floating price swaps, options to purchase, and other arrangements) to determine their propriety and a recommendation of modifications if appropriate.
5. A quantification of the adverse impact on ratepayers, if any.

GDS will assist the Commission Staff in reporting Staff’s findings in writing to the Commission, identifying irregularities in the monthly PGA calculations assessed and applied to Louisiana consumer billing statements or which allowed for the recovery of unauthorized expenses by the utility. The report will also include a written summary which identifies any cost included in the audit found to be non-compliant with the Commission’s applicable rules and regulations, a statement of appropriate disallowances, the reasons therefore, and a recommendation as to the appropriate methodology to be utilized by the Commission to provide for recovery and/or refund those costs.

GDS understands that the time period estimated to complete this docket is estimated at approximately 12-18 months but may vary depending upon whether the matter is contested.

GDS is experienced in analyzing the operations, books, and records of utility companies for the purpose of fuel audits and familiar with costing methodologies utilized by the Commission. GDS is qualified to provide expert assistance with respect to the following:
1 Meet the requirements *in addition to those provided in* this Commission’s General Order dated November 10, 2014.

2 GDS is qualified and prepared to assist in drafting and issuance audit memoranda and expert testimony and assist in preparation for cross-examination of Company and intervenor witnesses with respect to all of the issues addressed in the RFP and which are likely to arise in the proceeding. GDS has a full understanding and ability to analyze the proper application of the Commission’s PGA Order.

3 GDS is experienced in public utility regulations and has knowledge of: Commission ratemaking, PGA and jurisdictional issues; and knowledge of appropriate accounting standards and practices for gas utilities.

GDS proposes to assist Commission Staff counsel and outside counsel (if applicable) in the following tasks:

- Reviewing natural gas procurement plans
- Preparing data requests and providing data responses as part of the discovery process
- Drafting a report based on plan review and data responses from all parties
- Participating in status conferences as required
- Participating in hearings as required
- Filing testimony as required
- Assisting Staff in its ultimate recommendations and certification

GDS will work closely with the Commission and its Staff and counsel to identify how the above tasks will be effectively carried out. GDS will also contribute its insights based on its previous work in similar state regulatory proceedings including its work in Utah, Texas, Georgia, and Nevada.
2 Overview of The GDS Team

2.1 INTRODUCTION OF GDS ASSOCIATES, INC.

Headquartered in Marietta, Georgia, with offices in Austin, Texas; Auburn, Alabama; Manchester, New Hampshire; Madison, Wisconsin; Orlando, Florida; and Augusta, Maine, GDS serves clients throughout the United States and Canada. Our broad range of expertise focuses on clients associated with natural gas, electric, water, and wastewater utilities.

Drawing upon many years of experience in problem-solving for both utility and non-utility clients, we have developed a keen insight into the causes of and resolutions for our clients’ challenges in the energy markets. Our consultants are recognized leaders in their respective fields, dedicated to their clients, innovative in their approach to meeting unique challenges, and known for consistently being available and responsive when needed. Our broad range of expertise focuses on end-users, municipal utility and consumer-owned utility clients associated with, or affected by natural gas, electric, water, and wastewater utilities. In addition, we offer market research, statistical services, and information technology services to a diverse client base. The consulting areas in which GDS has specialized skills are listed in FIGURE 2-1. For more information regarding the services listed below, please visit our website at gdsassociates.com.

2.1.1 Corporate Core Values & Philosophy of GDS Associates, Inc.

The size and depth of our firm permits us to offer clients multiple sources of assistance, ensuring complete and timely service. GDS’ long history of meeting client needs has established our reputation within the industry. In fact, most of our project assignments are derived from repeat work for existing clients or from client referrals. GDS recognizes that no two clients or problems are exactly alike, so we strive to deliver “right-fit” solutions for each client’s situation. Our firm conducts its business in accordance with the stated core values, which we follow steadfastly in providing services to our clients:

1. We endeavor to identify, then meet or exceed our clients’ needs
2. We gauge our overall success in terms of our clients’ success, by promoting a partnership perspective
3. We will conduct our practice always with honesty and integrity
Our consulting staff will possess the requisite knowledge and experience to solve our clients’ problems. Our service will be competently performed, and our work product will be presented in a professional, understandable manner. Our financial success is founded on long-term client relationships, proficient project management, and efficient infrastructure.

### 2.2 INTRODUCTION OF EMPOWERED ENERGY

Empowered Energy is an independent, woman-owned, small business consulting firm specializing in economic analysis and risk management in natural gas, renewables, and power markets. Empowered Energy is a sole proprietorship that has been in existence for over 15 years. During those years, Empowered Energy has provided consulting services to a wide variety of clients, including:

- University of California-Irvine
- University of Colorado-Boulder
- University of Maryland-College Park
- Utah Office of Consumer Services
- Public Utility Commission of Nevada, Regulatory Operations Staff
- The City of Calgary, Alberta
- La Plata Electric Association, Inc.
- Chesapeake Appalachia, LLC
- NiSource, Inc.
- U.S. Borax, Inc.
- Kiesel, Boucher & Larson LLP
- Robinson & McElwee PLLC
- PB (Parson Brinkerhoff) Power, Inc.
- National Fuel Cell Research Center
- Fuel Cell Energy, Inc.
- California Solar Energy Industries Association
- Americans for Solar Power
- Center for Energy Efficiency and Renewable Technologies
- Cotchett, Petrie & McCarthy, LLP
- Vista Energy Group, LLC
- Global Change Associates, LLC
- GDS Associates, Inc.

Empowered Energy’s scope of services for these clients have ranged from providing testimony in regulatory rate case proceedings; advising on risk management strategies; writing, issuing, and evaluating natural gas and electricity RFPs; providing expert witness support for natural gas royalty and contract disputes; and providing in-depth economic analysis on project economics, particularly for renewable generation technologies.

Dr. Lori Schell, Empowered Energy’s founder, is a Senior Fellow and Past President of the 1000 member United States Association for Energy Economics. Dr. Schell has made presentations and spoken at many energy conferences in the United States, Canada, Mexico, South Africa, Spain, and Germany, including at the World Gas Conference and the World Petroleum Congress. Dr. Schell is an Energy Risk Professional certified by the Global Association of Risk Professionals.
Personnel Qualifications & Roles

As part of our firm of over 170 personnel, the GDS Team possesses the consulting and engineering expertise and staff support to successfully execute the scope of services outlined in the Commission’s RFP, on time and within budget. The tasks to be addressed by GDS’ Overall Project Manager and dedicated project staff are briefly summarized in TABLE 3-1. Detailed biographies for each team member, highlighting industry certifications, professional training and relevant experience can be found in Section 3.1.1. Resumes detailing germane responsibilities from other projects, relevant experience, education, and skills for each consultant have been provided in APPENDIX A. An organization chart depicting the leadership structure can be found in FIGURE 3-1.

<table>
<thead>
<tr>
<th>Name</th>
<th>Years of Energy-Related Experience</th>
<th>Education &amp; Professional Certifications</th>
<th>Related Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Wielgus</td>
<td>30+</td>
<td>B.S., M.S., J.D. Member of State Bar of Texas</td>
<td>Hedging Transactions, Risk Management Programs, Natural Gas Procurement &amp; Contracting Fuel Audits, Expert Testimony</td>
</tr>
<tr>
<td>Matt King</td>
<td>9</td>
<td>B.S., M.S.</td>
<td>Natural Gas Contracting, Pricing, &amp; Hedging, Fuel Audits</td>
</tr>
</tbody>
</table>

3.1.1 Biographies of the GDS Team

Paul Wielgus, Managing Director • Mr. Paul Wielgus will be the Project Manager and Principal Contact for the Commission and its Staff. Mr. Wielgus’ role is to provide overall project management and to guide the policy procurement analysis required for term natural gas procurement. Mr. Wielgus specializes in industry best practices and has more than 30 years of commercial experience in energy markets, with emphasis on fuels and fuels transportation planning markets and contracting, energy transaction contracting, energy risk management, regulatory due diligence, rates, audits, and expert witness testimony.

Mr. Wielgus’ experience includes working in the industrial end use, in power generation (with both regulated utilities and independent power producers), and in the LDC supply sectors, along with energy consulting for entities on fuels, energy projects, and energy hedging and risk management transactions. Mr. Wielgus provided expert witness testimony in the areas of fuels, energy assets, risk management and hedging, pricing, and IRP and related matters. Mr. Wielgus has experience working directly with corporate boards of directors and public utility boards, public utility commissions, and public agencies.

Mr. Wielgus has specific commercial, electric and gas utility, and regulatory experience in Louisiana. Before joining GDS, Mr. Wielgus held senior commercial management positions with the electric utility affiliates of AEP and Entergy, and with NRG. Mr. Wielgus began his career in the fuels department of Gulf States Utilities and has commercial experience in the fuels area as a seller, buyer, advisor, and expert witness. Mr. Wielgus was Board member for a large Louisiana intrastate pipeline. He holds a B.S. degree in Economics, an M.S. degree in Mineral Economics, an MBA, and a JD. He is a licensed attorney in Texas.

Mr. Wielgus has SPECIFIC commercial, electric & gas utility, and regulatory EXPERIENCE IN LOUISIANA.
Dr. Schell, Ph.D., ERP, President  ● Lori Smith Schell, Ph.D., is the founder and President of Colorado-based Empowered Energy, an independent WOSB consulting firm providing economic, market, and regulatory analysis for natural gas, electricity, renewable energy, and emissions. Empowered Energy is a woman-owned, small business enterprise, self-certified in the federal System for Award Management (SAM) and independently certified by the City of Philadelphia (Pennsylvania). Dr. Schell is a Certified Energy Risk Professional (ERP) with 30 years of experience in the energy industry.

Dr. Schell provides ongoing natural gas advisory and risk management services to the University of Colorado - Boulder. Dr. Schell was the Director of Energy Risk Management for Trigen Energy Corporation, a CHP company focused on maximizing the efficiency of distributed energy resources. A number of Trigen’s CHP facilities were located on university campuses, including the University of Maryland – College Park where Dr. Schell directed natural gas procurement. Dr. Schell represented Trigen on the board of the Independent Power Producers of New York (IPPNY). Dr. Schell earlier served as the Manager of Regulatory Affairs & Energy Market Analysis for Air Products and Chemicals, Inc., providing natural gas pipeline-related expert witness testimony at the Federal Energy Regulatory Commission and due diligence support for natural gas cogeneration projects. Prior to that, Dr. Schell was a Project Manager at the boutique natural gas consulting firm of Benjamin Schlesinger and Associates, Inc.

Dr. Schell holds a Ph.D. in Mineral Economics and Operations Research and a B.A. in Economics (Honors). Dr. Schell has served as the Vice President-Communications of the International Association for Energy Economics (IAEE) and is Past President and Senior Fellow of the U.S. Association for Energy Economics (USAEE).

Matt King, Project Manager  ● Mr. King has been working in the electric utility consulting industry for over nine years. His work experience includes regulatory review and development of client testimony, technical modeling analytics, review of key strategic electric market issues. Specific experience includes participation in regulatory / judicial proceedings, participation in RFP processes including evaluation of proposals in RTO & non-RTO environments throughout the United States, short & long-term power supply planning, and asset valuation & economic feasibility of existing and proposed coal, natural gas, hydroelectric, solar, and biomass projects. Mr. King holds a B.S. in Industrial and Systems Engineering from the Georgia Institute of Technology and a M.S. in Management Science & Engineering from Stanford University.

3.1.2 Organizational Structure

FIGURE 3-1 on the next page represents our firm’s organizational structure as it relates to this project.
OVERALL PROJECT EXECUTIVE
Paul Wielgus

KEY
● EMPOWERED ENERGY

Lori Smith Schell
Project Consultant

Matt King
Analyst

FIGURE 3-1 GDS TEAM ORGANIZATIONAL CHART
Relevant Experience

Utah Office of Consumer Services, Natural Gas Procurement and Hedging Review Proceedings

GDS, represented by Mr. Wielgus and Dr. Schell, has worked closely with the Utah Office of Consumer Services (“OCS”) since August 2009 on a variety of proceedings related to natural gas procurement and hedging. GDS’ contract with the OCS has been extended for another year and all its services have been provided on schedule and under budget. As part of its work with OCS, GDS played a lead role in an all-party, multi-year collaborative effort to modify PacifiCorp Energy’s Risk Management Policy (“RMP”) guidelines with regard to long-term natural gas procurement. PacifiCorp Energy is a multi-state electric utility that has an active natural gas (and power) risk management program with highly structured processes, dedicated management resources, and state-of-the-art risk management tools. As result of the collaborative effort GDS helped spearhead, PacifiCorp Energy made several important modifications to its hedging program, including a mandate to enter into two extended, long-term natural gas supply contracts covering a material percentage of PacifiCorp Energy’s projected natural gas requirements.

GDS’ involvement with OCS with respect to PacifiCorp Energy’s natural gas procurement efforts includes:

- Comparing PacifiCorp Energy’s risk management practices to other jurisdictions
- Comparing PacifiCorp Energy’s risk management practices to industry best practices
- Undertaking extensive discovery through detailed data requests and data responses
- Providing written testimony at all stages (initial, rebuttal, surrebuttal)
- Defending written testimony at oral hearing
- Analyzing the impact of price hedges on ratepayers
- Assessing the regulatory compliance of PacifiCorp Energy’s RMP
- Spearheading collaborative on-site meeting with all interested stakeholders
- Reviewing PacifiCorp Energy’s RMP and related procedures
- Checking for risk management noncompliance
- Reviewing risk management models at a highly detailed level
- Reviewing the trading and hedging books
- Reviewing front and back office procedures and interactions
- Reviewing on-site trading floor practices
- Reviewing forward price curves at various points in time
- Assessing price volatility calculations
- Pre-reviewing and commenting on certain PacifiCorp Energy hedging decisions
- Meeting one-on-one with PacifiCorp Energy’s risk management senior representatives
- Reviewing PacifiCorp Energy’s semi-annual hedging reports
- Performing a risk management audit review and providing a written report on findings
- Providing OCS timely written and conference call reports

The respect that GDS has earned throughout its years of working on behalf of OCS is reflected in the fact that PacifiCorp Energy has in the past approached OCS with proposed changes to its RMP to ensure that GDS finds the potential changes acceptable and will not challenge them once filed.

City of Alexandria Louisiana, Natural Gas Contracting and Hedging

GDS worked closely with the City of Alexandria (“City”) to transform the City’s natural gas supply away from a centralized agency to a direct purchase contract with a creditworthy world-class producer under a firm supply, long-term base load and swing contract supported with Gulf Coast production. The contract supplies both the City’s electric generation and its LDC natural gas supply needs. The contract permits physical gas supply at index, fixed price gas bundled with physical supply, and financial hedges of varying types. The transformation was achieved through a RFP process and bilateral contract negotiations.

Northeast Texas Electric Cooperative Long-Term, In-Kind Natural Gas Hedging Review

GDS worked closely with the Northeast Texas Electric Cooperative (“NTEC”) to survey, analyze, and decide the merit of entering into long-term, in-kind natural gas hedges. This hedging could have included NTEC taking upstream positions in natural gas reserves, participating in drilling programs, and other highly structured in-kind
hedges through long-term arrangements with natural gas producers, operators, natural gas reserve interest holders, or related investment and financial institutions with natural gas interest in the Gulf Coast region. Joint venture and other structured upstream arrangements were explored.

CenterPoint Energy Long-Term Natural Gas Hedging Review and Related Filed Testimony
GDS conducted an extensive review of CenterPoint’s fuel risk management program including natural gas supply, processes, hedges, compliance, and results in a regulatory proceeding conducted by the Texas Public Utilities Commission. Discovery was performed, expert witness written testimony was prepared with findings and recommendations, and a deposition was taken.

OG&E and PSO Utility Regulatory Proceedings in Oklahoma
GDS was hired by the Oklahoma Attorney General’s Office (“OAG”) to advise the OAG in regulatory recent filings buy OG&E and PSO, two IOUs in the state of Oklahoma under the jurisdiction of the Corporation Commission of Oklahoma. GDS’ scope of work included reviewing, analyzing, and making recommendations related to fuel issues including natural gas.

Georgia Power Regulatory Filings at the Georgia Public Service Commission
GDS has been selected by the Georgia Public Service Commission (“GPSC”) to provide consulting services to the GPSC to be filed as part of Georgia Power’s Integrated Resource Plans (“IRPs”). GDS provides comprehensive reviews of each IRP filing and also provides both written and oral testimony. A key area in the IRPs’ filings is fuel supply, especially natural gas. This includes forward natural gas pricing, pricing curves, and related going-forward options available to Georgia Power. GDS also serves as the GPSC monitor for Georgia Power’s going-forward long-term natural supply and delivery plans associated with Georgia Power’s coal-to-natural gas generation plant conversions.

University of Colorado-Boulder, Natural Gas Hedging and Procurement Review
Dr. Schell has worked closely with the University of Colorado-Boulder (“CU-B”) for the past six years providing guidance on natural gas hedging strategies for both direct use and in support of CU-B’s cogeneration facility. Dr. Schell provides monthly natural gas market updates; natural gas transportation tariff review as needed; and, on-demand educational sessions for Facilities Management personnel on the mechanics of natural gas procurement, nominations, and imbalance management.

The work done for CU-B is similar to work that Dr. Schell had done previously for the University of Maryland-College Park (“UMCP”). Dr. Schell designed, issued, and assessed the results of an RFP for natural gas and power supplies for UMCP to support its cogeneration facility.

Trigen Energy Corporation, Energy Risk Management and Fuels Management
Dr. Schell oversaw the natural gas and power procurement and hedging activities of Trigen Energy Corporation’s largest combined heat and power and district heating systems for three years. In her role as Director, Energy Risk Manager, she worked closely with the general managers at each of Trigen’s major operating facilities to ensure that energy procurement and risk management procedures were in line with corporate objectives. Major facilities were located within the NYISO, PJM, and the Cinergy/Entergy markets.

4.1 PREVIOUS PUBLIC UTILITY REGULATORY EXPERIENCE OF KEY
Mr. Wielgus and Dr. Schell have been actively involved in numerous regulatory jurisdictions in the United States and Canada for three decades. Specific public utility regulatory experience of each of the key personnel is summarized below, with additional detail provided in the individual resumes provided in APPENDIX A.

4.1.1 On-Point Examples of the GDS Team Experience with Public Utility Regulatory Experience
The key personnel on the GDS Team assigned to this project have been actively involved in the regulatory process in jurisdictions in both the United States and Canada. The specific public utility regulatory experience of each of the key personnel is summarized below, with additional detail provided in the individual resumes provided in APPENDIX A.
4.1.1.1 Previous Public Utility Regulatory Experience for Paul Wielgus

Mr. Wielgus and Dr. Schell have worked closely together on behalf of the Utah Office of Consumer Services, as described more fully in the preceding section. In addition, Mr. Wielgus spent a large portion of his career working regulatory issues in various state jurisdictions. Mr. Wielgus’ regulatory activities included utility rate filing support in Louisiana (Gulf States Utilities) and Texas, natural gas LDC rate and service issues in numerous states while a natural gas buyer for Frito-Lay’s plants nationwide, as a developer of merchant power plants along the Gulf Coast including Louisiana (RS Cogen Project at PPG in Lake Charles) and Texas, and as a consultant for GDS. Some relevant cases as a consultant with GDS are:

1. Oklahoma Corporation Commission Docket No. 201500208–PSO. Mr. Wielgus is examining the natural gas costs and issues under PSO’s filing.
2. Oklahoma Corporation Commission Docket No. 201400229 – OG&E IRP. Mr. Wielgus examined the natural gas plans and pricing under OG&E’s IRP.
3. Oklahoma Corporation Commission Docket No. 200300226 – OG&E. Mr. Wielgus examined the natural gas competitive bidding issues in OG&E’s filing and testified.
4. Texas PUC Docket No. 26195 – CenterPoint Reconciliation of Fuel Costs. Mr. Wielgus examined CenterPoint’s natural gas hedging activities and filed testimony on his findings.
5. Texas PUC Docket No. 29526 – CenterPoint Cost Recovery. Mr. Wielgus examined the cost associated with Company’s long term energy contracts and filed testimony on his findings.
6. Georgia PSC Docket No. 36498 – Georgia Power IRP. Mr. Wielgus examined the natural gas plans and pricing under Georgia Power’s IRP. Mr. Wielgus examined the Company’s natural gas plans and forward pricing and filed testimony on his findings.
7. Georgia PSC Docket No. 36498 – Georgia Power IRP – natural gas follow-up monitoring. As a result of the Georgia PSC IRP Order, Mr. Wielgus was appointed by the Georgia PSC to serve as the Staff’s monitor of the Company’s long term natural gas supply planning for the Company’s coal to natural gas plant conversions.

4.1.1.2 Previous Public Utility Regulatory Experience for Lori Schell

Dr. Schell spent six years employed as an in-house an expert witness working on interstate natural gas pipeline proceeding at the Federal Energy Regulatory Commission (“FERC”) on behalf of Air Products and Chemicals, Inc., a large chemical and industrial gases manufacturer. Air Products had two flagship chemicals facilities located on the Gulf Coast, including one in New Orleans, Louisiana, and one near Pensacola, Florida. In additional, Air Products had a cogeneration facility located in Orlando, Florida.

Dr. Schell provided written testimony in rate cases involving Tennessee Gas Pipeline Company, Koch Gateway Pipeline Company, and Florida Gas Transmission. Dr. Schell worked closely with Air Products’ Washington D.C.-based outside counsel in each of these FERC proceedings.

1. Docket RP 95-362: Dr. Schell was one of the main witnesses against Koch Gateway’s attempt to impose market-based rates on its pipeline system. Dr. Schell represented both Air Products and Sterling Fibers by providing several rounds of written testimony and defending her findings on oral cross-examination. The FERC denied Koch Gateway’s attempt to impose market-based rates.
2. Docket RP97-373: Dr. Schell was also a critical witness against Koch Gateway in successfully opposing Koch Gateway’s attempt to switch from a postage stamp rate to zone-gate rates. Dr. Schell represented Air Products and eight other industrial natural gas users in this FERC proceeding.
3. Dr. Schell served as an expert witness for the City of Calgary, Alberta, in Proceeding #2002-02 opposing the Regulated Rate Option (“RRO”) application of ENMAX Power Corporation. Dr. Schell provided written evidence showing that the RRO did not properly reflect market conditions and defended those findings on oral cross-examination. The RRO application was denied by the regulator.
4. Dr. Schell and Mr. Wielgus worked together in Docket No. 03-11019 before the Public Utilities Commission of the State of Nevada (“PUCN”) on behalf of the PUCN Regulatory Operations Staff. Dr. Schell provided the analytical support for testimony filed by Mr. Wielgus and another witness, with both witnesses recommending the disallowance of several natural gas and electricity hedges. The hedges were ultimately denied.
Dr. Schell served as an expert witness before the California Public Utilities Commission (“CPUC”) on behalf of the American for Solar Power (“ASPv”) in Docket No. R. 04-03-017. This docket had numerous phases, the most important of which was the development of a cost-benefit framework for distributed generation (e.g., rooftop solar photovoltaics). Dr. Schell provided and analysis and testified on the quantification of numerous attributes of solar photovoltaics (“PV”) in support of the CPUC providing ratepayer-funded incentives to move the PV market forward in California. This analysis is widely considered to have contributed to the subsequent approval by the CPUC of the highly successful $2.3 billion California Solar Initiative incentive program for residential and commercial PV installations.

*Dr. Schell and Mr. Wielgus have worked closely together on behalf of the Utah Office of Consumer Services,* as described more fully above.
Estimate of Costs

GDS will provide all the consulting services required to complete this project at a fixed rate not to exceed $250/hour over the term of this project. GDS understands that it will only be allowed to charge for actual hours of work performed and expenses incurred. GDS’ total budget for this project will not exceed $49,500. All bills will be rendered in strict accordance with the Commission’s guidelines. All budgets will be agreed to and preapproved by Staff.

GDS will use its best efforts to commit to an earlier delivery of the scope of work project deliverables that will be based on initial discussions with the Commission.
Conflict of Interest

None of the key personnel, either individually or as representatives of their respective companies, have any current conflicts of interests that would prevent them from representing the Commission in an unbiased manner.

None of the key personnel, either individually or as representatives of their respective companies, have any past employment that could possibly result in a conflict of interest in representing the Commission.

None of the key personnel, either individually or as representative of their respective companies, currently represent any clients before the Commission.
7 Why GDS?

7.1 CURRENT ON-POINT EXPERIENCE

1. Gulf Coast, including Louisiana, natural gas supply and pricing experience
2. Hands-on commercial experience and expertise with term natural gas contracting and pricing
3. Wide range of regulatory and jurisdictional expertise in natural gas regulatory issues
4. Extensive and comprehensive natural gas risk management experience

GDS has comprehensive experience evaluating natural gas procurement programs for clients and hands-on experience on advising clients when these clients make decisions related to the commercial implementation of the client’s risk supply and management program. GDS has performed work in this area that includes municipals, cooperatives, and IOUs in the utility sector. The GDS Team’s fuel management review experience includes review of policies, procedures, and reporting. The GDS Team has advised clients on related commercial activities, performed audits, served as regulatory agency monitor on natural gas issues, and also provided expert witness testimony in various jurisdictions.

7.2 BEST PRACTICES

The GDS Team is familiar with current best practices for supply and risk management programs including those for utilities. Each Electric IOU has its own unique set of conditions and issues. Risk management programs should address these unique conditions and issues appropriately, but underlying that are across-the-board best practices that should be applied to the energy risk management programs for all Electric IOUs.

7.3 FINANCIAL ANALYSIS EXPERIENCE

The GDS Team has the quantitative analysis capabilities to work thru the complexities of transactions and the books and systems where those transactions are housed. The GDS Team has worked through different systems and, in one case, advised the utility as it underwent a transition from one system to another. Through the GDS Team’s energy management work and energy supply procurement services, the GDS Team has extensive commercial experience, including modeling and presenting energy supply pro forma financial analyses.

7.4 PROJECT MANAGEMENT PRACTICES

1. Paul Wielgus, GDS Managing Director, will serve as the individual responsible for reviewing overall work assignments and project activities and he will serve as the executive Principal Contact for the Commission and its Staff for this project.
2. The GDS Team will communicate with the Commission’s project manager(s) on a regular basis as to the progress of the work, the results to date, and any problems or issues encountered. GDS suggests that a regular weekly conference call be held between GDS and the Commission Staff to discuss project progress and issues.
3. GDS will provide Commission Staff with drafts of all major deliverables for review, comment, and approval.
4. GDS will seek prior approval before undertaking any significant planning or development tasks. During the course of the GDS regulatory consulting project with the Commission, the GDS Team will seek ways to continuously improve our work and communications with the Commission, its counsel, and its Staff.
5. At the beginning of the project, the key GDS consultants will attend the kick-off teleconference with Staff to review the work plan and schedule. The GDS Team will communicate regularly by phone and e-mail with Commission Staff throughout this project.
6. The GDS Team will hold internal project staff meetings on a weekly basis to discuss work assignments and status, and any changes in the work plan, schedule, or individual assignments that may be necessary. Mr. Wielgus, as Principal Contact, will immediately report any delays or unforeseen difficulties to the Commission’s project manager(s) if and when they develop.
7 The GDS Team will provide written project status reports to the Commission’s project manager(s) per the schedule, summarizing but detailing project status by activity and identifying any difficulties or delays, and recommending corrective action, as needed.

8 Notes will be taken for all major meetings or teleconferences of the GDS Team and Commission Staff. Any work assignments or action items distributed at such meetings will be highlighted in meeting minutes. GDS Team members and appropriate Commission Staff will receive copies of these minutes.

9 GDS Team consultants will maintain copies of all time and expense records required by the Commission and will keep an accurate log of all hours worked on this project, as well as accurate records of travel and other expenses. GDS requires that its employees and consultants turn in receipts for all travel expenses and all non-labor expenses.

10 The GDS Team will make use of total quality management tools such as time lines, work schedules, budget reports, and percent work task completed reports to increase the efficiency and effectiveness of project management.

11 All deliverables will be subject to the GDS Team’s internal quality review, before being submitted to the Commission Staff.

12 The GDS Team will work very closely with the Commission’s project manager(s) to arrange meetings that are planned in the work plan.

13 All project presentations will be made available to the Commission’s project manager(s) for review before presentation.

14 The GDS Team will make it a high priority to respond to the needs of the Commission, its counsel, and its Staff as rapidly as possible.
APPENDIX A • Resumes of Key Staff
EDUCATION ●
Doctor of Jurisprudence, 1996, licensed in Texas, South Texas College of Law, Houston, Texas
MBA, 1985, graduated with Honors, presented thesis on electric utility marketing to the IAEE North American Conference. Lamar University, Beaumont, Texas
MS, College of Mineral and Energy Resources, 1979, awarded Federal Mining Fellowship. Thesis analyzed long haul fuel transportation pricing and structures. West Virginia University, Morgantown, West Virginia
BS, Economics, 1977, energy economics concentration. West Virginia University, Morgantown, West Virginia

EXECUTIVE PROFILE ●
As Senior Executive in the energy industry was engaged in the development and implementation of strategic business plans focused on obtaining commercial commitments to plan for and achieve project closings. Directed the start-up of multiple business units for top-tier industry players. Provided the commercial experience required to formulate the direction needed for the planning origination, approval, and closure of large transactions and capital projects. This senior level commercial experience includes M&A, asset management, and funding initiatives. Currently utilizing business development and asset experience to provide energy advisory and planning services to multiple clients. Skill set experiences include:
- Developed and implemented commercial plans for business units
- Recruited, formed, mentored, and led commercial teams to implement the plans
- Facilitated plan approval with senior managements and Boards of Directors
- Leveraged industry network to advance business units’ goals and objectives
- Formed stakeholder relationships to help champion project initiatives and outreach
- Negotiated successful commercial resolutions to overcome project setbacks
- Provided seasoned judgment to successfully move forward beyond critical path points
- Originated and closed large capital projects and long term structured transactions
- Managed operating assets and associated budgets
- Maneuvered successfully through the required regulatory processes

PROFESSIONAL EXPERIENCE ●
GDS Associates, Inc., Atlanta, Georgia, 2008 - Present
Managing Director
Report to Vice President. Practice areas include energy project development and management, asset evaluation, fuels, power supply and pricing, utility rates, system planning, due diligence, and energy and risk management.
- Led development of $200 million greenfield renewable project from feasibility, through Board approval, funding, construction, and into start-up
- Negotiated full suite of OEM performance based arrangements, fixed price turnkey EPC contract, balance of plant equipment and installation contracts, lender approved long term fuel contract, site purchase arrangement, power interconnects, water supply contracts, and agencies’ approvals including permitting settlement
- Negotiated fast track settlement for project owner with the project’s generation OEM
- Provided natural gas delivery and supply market feasibility analysis of adding natural gas for co-firing and full firing of operating power project
- Secured natural gas interconnects, transport, and supply contracts for two greenfield projects
- Led transition and sourcing for two projects away from legacy interruptible natural gas arrangement to separate long term firm direct supply contracts
- Arranged multi-party natural gas deliveries and billings thru plant’s single revenue meter
- Led LDC out of captive natural gas agency supply arrangement to new direct long term arrangement with major producer
- Negotiated additional long term firm fixed price transport for existing power plant
- Served as state agency monitor of one of the largest utility natural gas hedging book
- Served as state agency monitor for natural gas planning and contracting of large utility’s plant conversions to natural gas
- Served as state agency natural gas expert in a large utility’s IRP process
- Natural gas and project structuring expert team member in proposed public private partnership CHP project
- Provided fatal flaw analysis of converting waste to energy plant to natural gas
- Provided expert witness services for natural gas industrial customer in contractual dispute with serving pipeline
- Provided expert witness services in petroleum products pipeline dispute

**NRG Energy, New Roads, Louisiana, 2006-2008**

**Vice President – Development**

Reported to Regional President. Developed and implemented project development and marketing plans for two large generating plants.

- Led regional project development team with focus on Louisiana
- Acquired multi-fuel signed permit for an estimated $100 million repowering project
- Received project contingent offtake BoD approvals and included equity arrangements and long term offtake arrangements to support funding of repowering project
- Team member in OEM vendor sourcing and contract negotiations, EPC sourcing and contract negotiations, and fuel sourcing initiatives
- High school mentor program participant

**GDS Associates, Inc., Atlanta, Georgia, 2002-2006**

**Managing Director**

Reported to founding partner. Developed and implemented a comprehensive energy asset risk management service targeted for cooperatives and municipals. Practice areas included energy assets and fuel and supply.

- Provided analysis and assessment of clients’ plant capacity options and valuations including risk management,
- Provided long term fuel and energy procurement advisory services including contract negotiations,
- Replaced consultant to secure pipeline interconnect, pipeline lateral installation, and long term firm supply arrangement for project under construction,
- Provided expert witness testimony in utility rate proceedings in various states with emphasis on natural gas, plant valuations, fuel strategy, planning, and risk management, and
- Conducted management audit of large utility on behalf of state utility commission with emphasis on affiliate transactions to support affiliate’s credit and funding.

**Entergy Wholesale Operations, Houston, Texas, 1999-2002**

**Senior Vice President - Business Development**

Reported to COO. Selected to head up newly created and expanded Business Management function responsible for the P&L and operations of a $1.5 billion asset fleet.

- Reorganized 50 staff member organization which included a redesigned structure, re-staffing to upgrade talent, and new group and individual responsibilities and accountabilities
- Initiated a new management strategy for the asset team by adding the plants’ commercial responsibilities to existing operational responsibilities achieving alignment of P&L and operational goals
- Led development and implementation of comprehensive corporate model to value, report and analyze business unit results, and formulated risk management policies and procedures

**Senior Vice President - Business Development**

Developed and implemented a strategic business plan for the start-up of a regional asset development program targeted at the Gulf Coast market.

- Recruited and hired senior commercial development professionals to staff the development teams and implement plan
- Directed teams that managed an on-going deal flow of 10 to 12 major projects in various stages of active development
- Led teams that closed three diverse, world scale power projects in a two-year period, two of which included joint venture partners, one fast tracked
- Projects completed included originating multiple natural gas interconnects, laterals, and transportation arrangements and off balance sheet funding
- Company rep in all state PUC regulatory approval processes required for projects
- Collaborated effectively with company’s trading joint venture to assist in projects’ energy risk management activities
- Led commercial and operations efforts of company’s thermal division
- Company campus MBA recruiting rep

**American Electric Power (AEP), Columbus, Ohio and Houston, Texas, 1997-1999**

*Vice President - Project Development - North America*

Reported to Executive Vice President. Developed and implemented a strategic business plan for the North American market.

- Recruited and hired commercial development professionals to staff the development team and implement plan
- Relocated and opened Houston, TX business development office, led Toronto, Canada office, collaborated with corporate office
- Member of team that led and closed company’s first acquisition of a large natural gas pipeline asset in Louisiana
- Member of acquired natural gas asset’s Board of Directors and responsible for asset budget, operations, and expansions
- Developed acquired asset’s first year operating and capital budget
- Exceeded the natural gas asset’s acquisition proforma operating results during first year of ownership
- Led team that developed company’s first domestic natural gas fired cogeneration project (project off of acquired pipeline)
- Member of unregulated business development team for AEP’s acquisition of CSW pre-announcement
- Company campus MBA recruiting rep

**Enron Capital and Trade, Houston, Texas, 1991-1997**

*Director*

Reported to Vice President. Developed and implemented a wide range of commercial business strategies focused on growth opportunities.

- Recruited and hired commercial professionals to staff teams,
- Led the long-term contract origination team responsible for marketing and selling to some of the company’s largest electric utility natural gas customers,
- Closed multiple structured transactions,
- Led business development team in the approval, start-up, and recruiting of coal supply trading business unit,
- Member of LRC Pipeline acquisition and integration team,
- Member of Portland General Electric acquisition and integration team,
- Led start-up of electric drive natural gas pipeline compressor services business unit,
- Led company’s state utility commissions’ regulatory affairs efforts including NARUC,
- Started-up and led company’s marketing services function,
- Company campus MBA recruiting rep, and
- Junior Achievement volunteer at city high school.

**PepsiCo (Frito-Lay), Plano, Texas, 1987-1991**

*Manager*

Reported to Senior Director. Developed and implemented the initial national business plan that transitioned the company’s 40+ manufacturing facilities from regulated utility service to the then emerging unregulated direct purchase energy market including cogeneration.

- Leveraged purchasing power through consolidated contracting with targeted group of major energy producers to replace one-off regulated purchases from utilities,
- Negotiated all supply contracts, including pre-NYMEX fixed prices, and pipeline and LDC transport contracts,
- Developed initial transport tariffs with some LDCs to implement transport to plant from pipeline,
- Lobbied state PUCs to drive initiation and implementation of LDCs’ transport service,
- Facilitated, with senior management and plant personnel, the approval to fund numerous individual capital projects to support direct purchase program,
- Drove and implemented LDC bypass when necessary or as leverage in negotiating transport rates,
- Responsible for development, including performance and variance, of annual corporate fuel price budget,
- Trained in and implemented company’s Future State business planning process, and
- Company campus MBA recruiting rep.

*Continuous record of prior professional experience provided upon request, 1979-1987*
SUMMARY


EXPERIENCE

EMPOWERED ENERGY www.EmpoweredEnergy.com, 2002-Present
A Colorado-based energy consulting firm focused on natural gas, renewables, power & emissions.

- Prepared, delivered, and facilitated a two-day energy markets/policy training session to a predominantly Korean audience in support of fuel cell technology commercialization efforts.
- Multi-year support for Utah Office of Consumer Services analyzing PacifiCorp price hedging strategy for natural gas and electricity; filed related testimony and defended same at hearing.
- Energy consultant to University of Colorado-Boulder for natural gas purchases, appropriate natural gas and electric rate schedules, and economic feasibility of existing cogen operations.
- Directed fuels procurement and hedging strategy and negotiated fuels supply and transportation contracts for University of Maryland-College Park cogeneration project.
- Provided analytical support in Nevada Public Utility Commission prudency review of natural gas and purchased power procurement practices of two western U.S. electric utilities.
- Quantified benefits and costs of stationary fuel cells in distributed generation (DG) and backup power applications in support of DG tariff and ratepayer funding proceedings in California.
- Expert witness in California distributed generation cost-benefit analysis proceeding, focusing on solar photovoltaic potential for peak shaving; related effort to determine value proposition and emissions savings for fuel cells in baseload, backup, and specialty vehicle markets completed.
- Provided economic analysis for University of California-Irvine on cost impacts of maximizing renewable energy and cogeneration integration into existing university micro grid.
- Economic analysis for industrial customers in support of feed-in tariffs for combined heat and power and renewable energy in proceedings before the California Public Utilities Commission.
- Economic analysis of value proposition of large-scale solar power and solar water heating in support of ratepayer-funded incentives for same in California.
- Expert witness for Appalachian natural gas producer in three royalty cases; responsible for analyzing Plaintiffs’ damages claims and for providing independent calculations of same.
- Attorney’s consultant for natural gas price manipulation litigation in California; analysis provided basis for settlement agreement between proponents of several competing damages claims.
- Attorney’s consultant for industrial end-user plaintiff in natural gas supplier performance contract dispute in the Midwestern U.S.; settlement agreement reached prior to arbitration.
● Provided MATLAB-based economic modeling and analysis to assess the economics of potential utilization scenarios for use of available biogas from landfills and wastewater treatment plants in California, including various electrical generation, direct use, and transportation fuel alternatives.

● Created levelized cost of energy economic model for University of California-Irvine project as part of technical and economic impact assessment of increased levels of renewables; included several demand response strategies (e.g., building precooling, lighting and fan turndown).

● Analyzed potential benefits of Clean Air Act opt-in program for energy-intensive industrial client.

● Provided analysis and damages calculations for two natural gas contract disputes involving sale of customer accounts and appropriateness of projected load profiles based on historical usage.

● Expert witness in Alberta electric rate case dealing with appropriate hedging mechanisms and cost allocation between regulated and retail rates; instrumental in $14.8 million rate reduction. Participated in two subsequent, related rate cases, one of which went to negotiated settlement.

Trigen Energy Corporation, 1999-2002
A New York-based Combined Heat & Power Company with 37 North American operating units specializing in energy efficiency, on-site cogeneration, trigeneration, and district energy systems.

Director, Energy Risk Management, Project Advisory Group, 2000-2002
● Served on Board of Directors of Independent Power Producers of New York (IPPNY).

● Provided contractual support and oversight for electricity and primary energy purchases and sales for all Trigen operating units, including assessment of fuel arbitrage opportunities; major cogen facilities supported were located within the NYISO, PJM, and Cinergy/Entergy markets.

● Attempted QF contract restructuring for Trigen’s flagship cogen facility (in PJM) to monetize the dispatch capabilities of the facility and maximize spark-spread arbitrage; lacked partner buy-in.

● Redesigned and negotiated changes to a contractual benchmark for a smaller cogen facility in PJM, avoiding immediate out-of-pocket fuel price exposure in excess of $1 million.

● As head of Risk Management Committee, helped develop and implement corporate-wide risk management policy for electricity, fuels, and emissions allowances; responsible for related hedging and controls, mark-to-market determinations, and FAS 133 effectiveness tests.

● Directed commodity market analyses and issued electricity and primary energy forecasts for budgeting and hedging; provided final assurance to Risk Management Committee that proposed hedges were properly reflected in operating unit financial models and provided targeted returns.

● Set peak sales price in vintage 2003/04 NOx emissions allowances market as a result of optimization of corporate portfolio of Ozone Transport Commission-affected operating units.

● Directed timely statistical determination of and regulatory justification for replacement contract indices necessitated by unanticipated local distribution company (LDC) tariff changes.

Director, Fuels Management, Division of Operating Assets, 1999-2000
● Supported business development and existing operating assets with commodity and basis market analyses, forecasts, and in-depth natural gas pipeline and LDC tariff rate assessment.

A Pennsylvania-based Fortune 300 producer of industrial gases and chemicals around the globe, with production costs for all major products dominated by volatile electricity and natural gas prices.

Manager, Regulatory Affairs & Market Analysis, Corporate Energy, 1995-1999
● Assessed potential benefits of renegotiating long-term natural gas supply agreement for a 120-MW Florida QF; managed natural gas supply and transportation (including capacity release).

● Developed and defended primary energy price forecasts as critical input to regional electricity price forecasts and corporate macroeconomic models.
Responsible for intervening, testifying, and being cross-examined at the Federal Energy Regulatory Commission (FERC) in proceedings directly impacting natural gas pipeline transportation costs to flagship Air Products facilities. Major cases addressed (i) market power and market-based rates, and (ii) appropriate pricing of pipeline expansions.

Demonstrated inappropriate cost-shifting impact of zone-gate rates on a network natural gas pipeline system for a nine-member industrial coalition. Maintained coalition’s direction and consensus while negotiating a 20 percent discount to settle the case.

Cross-examined to defend several rounds of written testimony that analyzed and critiqued the market power analysis of Koch Gateway in the first major market power case brought before the FERC. Favorable decision for intervenors was ultimately upheld by the D.C. Circuit Court.

Advocated interruptible transportation rate design changes and opposed incremental AFUDC calculations for natural gas pipeline expansion capacity in written testimony at the FERC.

Senior Principal Energy Analyst, Corporate Energy, 1993-1994
- Supported development efforts for QF facilities through fuel supply market analyses.
- Directed FERC interventions in four natural gas pipeline restructuring proceedings.

A Maryland-based boutique natural gas consulting firm providing project due diligence and natural gas market analysis, from exploration and production all the way downstream to the burnertip.

Project Manager/Senior Economist, 1988-1993
- Provided contractual, regulatory, and deliverability risk evaluation (wellhead-to-burnertip) for a dozen project-financed natural gas-fired QF cogeneration units developed under PURPA.
- Assessed competitive market entry analyses for new gas supplies, including LNG.
- Performed market valuation to support buy-out of a major international gas supply contract.
- Optimized seasonal fuel supply pricing for two Florida municipalities using linear programming.
- Performed numerous multi-client analyses on hedging energy commodity price risk, relating existing natural gas spot markets to the (then-developing) natural gas futures market.
- Developed and presented a competitive natural gas pricing seminar in Bulgaria.

U.S. Department of Energy (DOE), 1985-1986
Office of Policy, Planning, and Analysis, Division of Oil and Gas Analysis, Washington, D.C.
- Managed modeling input in support of Administration oil and gas policy initiatives; analyzed market impact of those initiatives and wrote associated position papers and briefings.

Los Alamos National Laboratory, Summers 1984/85
Economics Group, Los Alamos, New Mexico
- Oil & gas leasing program analysis; conservation assessment of Soviet steel making industry.

EDUCATION
Pennsylvania State University, Ph.D., Operations Research and Mineral Economics, 1988
University of Washington, B.A., Economics (Honors); elected to Phi Beta Kappa, 1979
Highly analytic; proficient in MATLAB, Microsoft Excel and Microsoft ACCESS.

PROFESSIONAL ORGANIZATIONS
- American Association of Petroleum Geologists (AAPG)
- Colorado Renewable Energy Society (CRES)
- Four Corners Geological Society (FCGS)
- Global Association of Risk Professionals (GARP)
● International Association for Energy Economics (IAEE)
● Leadership La Plata.

PUBLICLY AVAILABLE ANALYSES ●


REFERRED PAPERS ●


TESTIMONY ●

Before the Public Service Commission of Utah:
Docket No. 10-035-124: In the Manner of the Application of Rocky Mountain Power for Authority to Increase Its Retail Electric Utility Service Rates in Utah and for Approval of Its Proposed Electric Service Schedules and Electric Service Regulations, on behalf of the Utah Office of Consumer Services (OCS).


● Rebuttal Testimony on the natural gas and electricity hedging practices of PacifiCorp Energy in connection with Rocky Mountain Power’s General Rate Case, June 30, 2011.

**Docket No. 09-035-15:** In the Manner of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism, on behalf of the Utah Office of Consumer Services (OCS).
- Oral Cross-Examination in defense of testimony and related calculations, August 17, 2010.
- Phase I: Direct Testimony on the natural gas and electricity hedging practices of PacifiCorp Energy, November 16, 2009.

**Before the Circuit Court of Roane County, West Virginia:**
*Estate of Garrison G. Tawney, etc., et al. v. Columbia Natural Resources, LLC:* On behalf of Columbia Natural Resources, LLC.

**Before the California Public Utilities Commission:**
*Docket R.04-03-017:* On behalf of Americans for Solar Power (ASPv), funded in part by the National Renewable Energy Laboratory.
- Oral Cross-Examination in defense of cost-benefit framework proposed in written testimony, May 12, 2005.
- Reply Prepared Testimony supporting proposed cost-benefit framework and the inclusion of variables representing distributed value elements, April 28, 2005.
- Opening Testimony on proposed cost-benefit framework for distributed generation, in support of distributed solar photovoltaic generation projects, October 4, 2004.

**Before the Public Utilities Commission of the State of Nevada (“PUCN”):**
*Docket No. 03-11019:* On behalf of the PUCN Regulatory Operations Staff.
- Provided analytical support for two witnesses filing Direct Testimony as part of a prudency review of Nevada Power Company for October 2002-September 2003; disallowance of several natural gas and electricity hedges was recommended.

**Before the Electrical Utility Regulation Committee, City of Calgary, Alberta:**
*Proceeding #2002-02:* On behalf of the General Manager, Corporate Strategy and Economics, City of Calgary:
- Written Evidence opposing the Regulated Rate Option (“RRO”) Application of ENMAX Power Corporation as not properly reflecting market conditions, March 7, 2003.
Before the New York State Energy Planning Board:

Before the U.S. Federal Energy Regulatory Commission:
- Prepared Direct Testimony arguing against the applicability of zone-gate rates proposed by Koch Gateway Pipeline Company, December 11, 1997.

Docket RP95-362: On behalf of Air Products and Chemicals, Inc., and Sterling Fibers, Inc. (successor to Cytec Industries, Inc.)
- Oral Cross-Examination in defense of Prepared Direct Testimony and Prepared Surrebuttal Testimony, October 18, 1996
- Prepared Surrebuttal Testimony calculating extent of the downward bias in the market power analysis of Koch Gateway Pipeline Company, August 12, 1996.
- Prepared Direct Testimony analyzing and critiquing the market power analysis of Koch Gateway Pipeline Company, April 11, 1996.

Docket RP95-112: Prepared Direct Testimony advocating interruptible transportation rate design changes applicable to Tennessee Gas Pipeline Company, on behalf of Air Products and Chemicals, Inc., September 26, 1995.


DEPOSITIONS


TRAINING


SPEECHES


“Natural Gas and Renewables: Bridge to the Future or Death Knell?,” BiT’s 1st Frontier Industrial Forum-2013, Qingdao, China, October 2013.


“Renewables and LPEA: The State of the Notion,” La Plata Electric Association Board Meeting, Durango, Colorado, April 2011.

“The Importance of Being Earnest (or How to Inform the Policy Debate),” ICEPAG 2011, Costa Mesa, California, February 2011.


PAPERS ●


POSTERS


ARTICLES

EDUCATION ●
Master of Science, Management Science & Engineering, Stanford University, 2018
Bachelor of Science, Industrial and Systems Engineering, Georgia Institute of Technology, 2012

PROFESSIONAL MEMBERSHIPS ●
Institute of Industrial Engineers

PROFESSIONAL EXPERIENCE ●
GDS Associates, Inc., Marietta, GA, 2009 to Present
Mr. King started work as a coop 2009 and began full-time employment in 2013. In 2016, Mr. King worked part-time while pursuing his MS from Stanford. Upon completion, Mr. King returned to full-time employment in 2018. Currently employed as a Project Manager, responsibilities involve regulatory review and development of client testimony, technical modeling analytics, review of key strategic electric market issues as well as supporting principles in the Power Supply Services department. Specific experience includes RTO market integration & ongoing RTO market operations, economic feasibility analyses of long-term and short-term power supply alternatives, operating budget preparation and projections, production cost dispatch modeling, and risk management and hedging strategies.

Specific Project Experience Includes:

REGULATORY / JUDICIAL PROCEEDING
Provided expertise in regulatory proceedings before the Federal Energy Regulatory Commission on Regional Transmission Operator market issues and before state commissions on revenue requirement and rate design issues. Specific experience includes drafting testimony and providing expertise to client and legal staff on capacity market complaint that resulted in a favorable ruling, residential rate design review with focus on impacts on electric vehicle charging, and power supply review and analysis in a judicial review of a power project.

GENERATION EVALUATION AND ACQUISITION
Performed extensive economic modeling analyses of power supply alternatives, including coal, natural gas (combined-cycle and combustion turbine), nuclear, wind, solar, hydro-fueled facilities. For new generation projects, work has included negotiations of project agreements, acquiring transmission and gas pipeline interconnections, and securing financing arrangements. For all projects, detailed power cost evaluations were conducted including projected development costs, alternative fuel price and financing scenarios, and the expected costs of purchasing power requirements from the market.

RTO MARKET EVOLUTION
Follow and participate in ongoing evolution of RTO markets including energy, capacity, ancillary service, and congestion management markets and related impacts from transmission changes. Experience includes participating in RTO stakeholder forums and research of industry trends as well as RTO efforts to react to those trends.

RTO MARKET OPERATIONS
Assisted numerous clients with managing all facets of RTO market operations and technical requirements, including interaction and optimization of capacity, energy, ancillary service, and congestion management market participation. Also developed processes and systems to enable clients to comply with market operations and requirements for load-serving entities as well as generation entities in ERCOT, MISO, New England ISO, PJM, and SPP organized markets. Created systems to allow for review of load, generation, and congestion management performance on weekly, monthly, and fiscal year basis in addition to overall market settlement and financial impact.
PROCUREMENT STRATEGIES AND RISK MANAGEMENT
Performed economic analyses of power supply alternatives, long-term strategic planning for optimum portfolio diversification, and implementing appropriate hedging and risk mitigation strategies. Experience identifying utility client’s short-term and long-term power supply needs and developing short-term and long-term procurement strategies to reasonably meet those requirements, as well as appropriate risk management plans to manage the procurement process.

POWER SUPPLY PROCUREMENT
Prepared and managed numerous solicitation / Requests for Proposals (RFPs) processes, including issuing RFPs for acquiring or divesting of power supply resources and alternatives, managing solicitation process with potential respondents and addressing questions and issues with potential proposals, evaluating economic viability and financial creditworthiness of potential respondents, conducting economic feasibility analysis of proposals, negotiating terms and conditions of contracts with the successful respondents, assisting with obtaining financing for new generation, and assisting with procurement of transmission service. Also have extensive experience working with utilities that have purchase power agreements with investor owned utilities that are based on formulary rate agreements, so understand key accounting issues, reviewing formulary rates for accuracy, and identifying ways to reduce cost under agreements.

RTO MARKET INTEGRATION
Assisted with the integration-related activities of several utilities from unstructured markets to RTO markets, including transition of load, generation, transmission into energy, capacity, congestion management, and ancillary services markets. Conducted cost benefit analyses of such transitions prior to integration.
APPENDIX B ● GDS Relevant Services

Provided in APPENDIX B is an overview of GDS’ Natural Gas Services experience.
The natural gas market fundamentally changed with the maturing of shale gas development, pipeline infrastructure build outs, growing demand from the power sector, LNG exports, and competition for deliverability. End users, retailers, regulatory agencies, and utilities are all having to deal with these issues and others. Combine these with the competition at the point of use and the impacts of DSM, market and regulatory challenges merge into challenges that can require additional expertise.

The GDS team of professionals work to address these regulatory and procurement issues clients face. We work with industrials, cooperatives, municipals, agencies, consumer groups, regulatory authorities, and military and government agencies assisting with the full range of natural gas regulatory and supply issues. Our range of expertise allows us to help our clients achieve their desired results in the most cost effective and time efficient manner. Our team not only possess the commercial skills to source and close market transactions but the analytical and regulatory savvy to provide the required supporting expert testimony.

**OVERALL CAPABILITIES**
- We have the regulatory, commercial, and analytical staff to assist clients with their market and rate challenges
- Our rate team is second to none and our expert witness experience is well documented
- Our proven commercial experience includes negotiating pipeline installations, acquiring firm delivered supplies, and price hedging

**SUPPLY STRATEGIES**
GDS offers specialized consulting to guide our clients through every stage of the supply planning and implementation cycle. We use our expertise to identify issues and develop commercial strategies that result in solutions to the challenges created by today’s constantly changing market. Our commercial services include the following areas:
- Supply chain procurement strategies and contract negotiations
- RFQs and RFPs
- Transportation agreements
- Risk management including price hedging and risk policy development and administration
- Energy and asset management arrangements

**GAS UTILITY RATES**
GDS conducts rate analyses and studies to determine the fairness and financial foundation of rate structures. We can evaluate, establish, and revise natural gas rates to meet increased costs of providing service and implementing regulatory initiatives, while balancing the requirements of the company and its customers. We have professionals that are skilled witnesses and who have provided expert testimony on a wide range of rate case topics and issues. Our rate services include:
- Cost of service studies
- Rate design evaluation
- Cost of capital analyses
- Rules and regulations
- Transportation rates
- Prudency reviews and expert testimony
- Cost of gas

For more information, contact GDS at 770.425.8100 or naturalgas@gdsassociates.com