**THE**
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September 17, 2013

Records Access Officer and Secretary
New York State Department of Public Service
3 Empire State Plaza
Albany, New York 12223-1350

To Whom It May Concern:

***Re: Request for Proposal for an Operations Audit of New York State Utilities' Self-Reported Data, Case 13-M-0314***

The Liberty Consulting Group (Liberty) is pleased to present today an accompanying response to the *Request for Proposal for an Operations Audit of New York State Utilities' Self-Reported Data, Case 13-M-0314*. This proposal responds to the August 15, 2013, RFP issued by the State of New York Department of Public Service (NY DPS).

Per New York State's Public Officer's Law §87(2)(c), we are requesting that the attached proposal be treated in its entirety as confidential information. We request such exception from public disclosure until the Public Service Commission selects a winning proposal for this investigation. Public disclosure of this proposal prior to the selection by the Commission would impair or present imminent contract awards for this engagement.

I hereby certify that the information contained in this proposal is accurate, that Liberty is committed to and has the ability to conduct the work described in this proposal, and that it is in compliance with all RFP requirements. This proposal constitutes a firm offer to provide the services described therein. This offer is valid until March 16, 2014.

Liberty is pleased to have another opportunity to be of service to the Commission. We have performed many projects over a period of almost 20 years. Most recently, we completed comprehensive management and operations audits of the New York operations of ConEd and Iberdrola USA. We bring an unmatched level of experience in the performance of audits examining the accuracy and completeness of utility performance metrics. Such audits are uncommon for energy utilities, but have been used by regulators to assess telecommunications carrier performance for both retail and wholesale customers for many years. We have been the leading firm nationally in the conduct of those audits, conducting them for utility regulators in all three of the principal circumstances generating them: incentive rate mechanisms, retail quality initiatives, and service-quality requirements applicable to incumbents permitting competitor access to their networks. Our experience in conducting these audits extends to five different

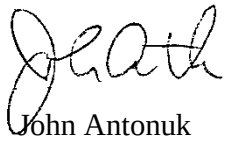
carriers, regulated by 22 different state commissions. These audits address both network and infrastructure service quality and continuity, and compliance with a wide range of customer-service metrics.

Our work has involved some of the country's largest and most complex systems and processes for measuring performance against comprehensive sets of objectively defined metrics. Our very extensive work in the energy utility industry has also given us great familiarity with metrics used across the country by electric and gas utilities to measure network, infrastructure, and customer service performance. We have been continuously engaged in the identification and use of metrics to gauge performance quality for over twenty years and in many different contexts. These contexts include general management and operations audits, design and review of rate mechanisms incorporating results measurement as a test of the effectiveness of capital and O&M expenditures, benchmarking of a broad range of service characteristics, reviews of asset and management/operating performance against public and employee safety criteria, and focused reviews of network reliability and customer service quality, to name some.

We offer a team that has long experience working together at Liberty on relevant engagements. Our team also combines: (a) expertise in the design, operation, and assessment of complex utility performance measurement systems, and (b) senior, extensive experience in both managing for utilities and examining for regulators the underlying electric, gas, and customer service activities subject to measurement. We think it fair to say that no competitor can offer a similar combination at the level of breadth and depth that we can. Our team includes very senior experience in electric, gas, and customer service and a group that has worked together successfully in many engagements that have audited utility performance metrics.

As the New York Commission has experienced, we also bring a clear, established ability to perform "big jobs" effectively, and with the candor and vigor required to make them successful in sometimes difficult circumstances. Effectively and efficiently examining nine different operations conducted by five different enterprises will take a strong approach carried out by an experienced firm.

Sincerely,



John Antonuk
President

Enclosures

# 1. Description of Understanding, Approach, and Methods

## A. Background

The New York Public State Public Service Commission (Commission) has issued a *Request for Proposal for an Operations Audit of New York State Utilities' Self-Reported Data, Case 13-M-0314* (RFP). The RFP seeks a focused operations audit of the accuracy of certain utility performance data. Specifically, the RFP requests examination of data falling into three distinct operational areas:

- Electric Service Interruptions
- Gas Safety and Reliability
- Electric and Gas Utility Customer Service.

The measurement items subject to this review vary significantly in ways beyond just the differences in the nature of the operations they gauge; for example:

- They use different types of data
- Data collection methods differ
- The complexity of selecting the data varies
- Commission rules specify some of the items
- Some arise from voluntary reporting or as a result of rate case agreements or requirements
- Most of the items provide data aggregated across time periods
- Some report individual incidents
- Some involve calculations of such quantities as percentages and time intervals
- Some require aggregation across individual events or transactions
- Some get reported occasionally – others on a regular basis (*e.g.*, monthly or annually)
- All involve some data selection and exclusion in determining what should be reported, but the complexity of the selection process varies
- Some data derives from operational systems; other data comes from customer surveys.

Commission regulations at *16 NYCCR Part 97* define the data record keeping and reporting requirements for electric utilities regarding service interruptions for the Electric Service Interruption items included in this audit. The reported and retained data relate to the frequency, duration, location, and numbers of customers served and affected by service interruptions; *i.e.*, quantities necessary for the calculation of two commonly used service metrics generally known as the System Average Interruption Frequency Index (SAIFI) and Customer Average Interruption Duration Index (CAIDI).

Regulations at *16 NYCRR Part 255* and at *16 NYCRR Part 232* define most of the gas data subject to this audit. Part 255 addresses gas safety; Part 232 addresses service interruption notices. Specifically, the safety data comprise:

- The annual reports provided to the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA)
- Incident reports
- Emergency response times

- Service interruptions (with separate reports defined in Parts 232 and 255).

The audit scope for gas data also includes:

- Other performance measures required by individual utility rate plans, including pipe replacement, leak backlog, damage prevention, and emergency response
- Voluntarily reported gas performance statistics including measurements of:
    - Leak management
    - Damage prevention
    - Emergency response timeliness.

The customer service data, which apply both to electric and gas distribution utilities, are self-reported and include the following, not all of which apply to every utility:

- Appointments (2 measurements)
    - Appointments made
    - Appointments kept
- Adjusted Bills (2 measurements)
    - Total bills issued
    - Total bills adjusted
- Telephone Answer Response (4 measurements)
    - Total incoming calls received
    - Percent of calls answered
    - Total incoming calls requesting a representative
    - Percent of calls answered by a representative within 30 seconds
- Non-Emergency Service Response Time (10 measurements)
    - Service/meter work orders received
    - Days to complete all service/meter jobs
    - Average days to complete all service/meter jobs
    - Street light work orders received
    - Days to complete all street light jobs
    - Average days to complete all street light jobs
    - Tree trimming work orders received
    - Days to complete all tree trimming jobs
    - Average days to complete all tree trimming jobs
- Estimated Readings (2 measurements)
    - Total meters scheduled to be read
    - Total estimated readings made
- Customer Satisfaction (6 measurements)
    - Percent of customers satisfied
    - Satisfaction Index

- Customer Assistance Center Survey (Callers)
- Electric Emergency Contact Survey
- Gas Emergency Contact Survey
- Service Center Survey (Visitors)

The Commission seeks a review of these measurements produced by the following utilities:

- Central Hudson Gas & Electric Corporation (CH)
- Consolidated Edison, Inc. (CEI) utilities
  - Consolidated Edison Company of New York, Inc. (CENY)
  - Orange and Rockland Utilities, Inc. (O&R)
- Iberdrola USA (IUSA) utilities:
  - Rochester Gas and Electric Corporation (RG&E)
  - New York State Electric & Gas Corporation (NYSEG)
- National Fuel Gas Distribution Corporation (NF)
- National Grid USA (NGUS) utilities:
  - Niagara Mohawk Power Corporation d/b/a National Grid (NMPC)
  - Brooklyn Union Gas d/b/a National Grid NY (BUG)
  - KeySpan East Gas Corporation d/b/a National Grid (Utilities) (KEG)

The nine utilities subject to the audit exhibit wide diversity; for example:

- Most serve both electric and gas companies
- A few (NF, BUG, and KEG) provide only gas distribution service
- All operate as subsidiaries of holding companies that have substantial non-utility operations
- Seven operate as subsidiaries of holding companies (CEI, IUSA, and NGUS) owning more than one utility in New York State
- Five also comprise subsidiaries of large international holding companies (Iberdrola S.A. and National Grid plc) owning utilities in other U.S. jurisdictions and internationally
- Most serve only customers in New York State, but two (NF and O&R) also serve customers in neighboring states.

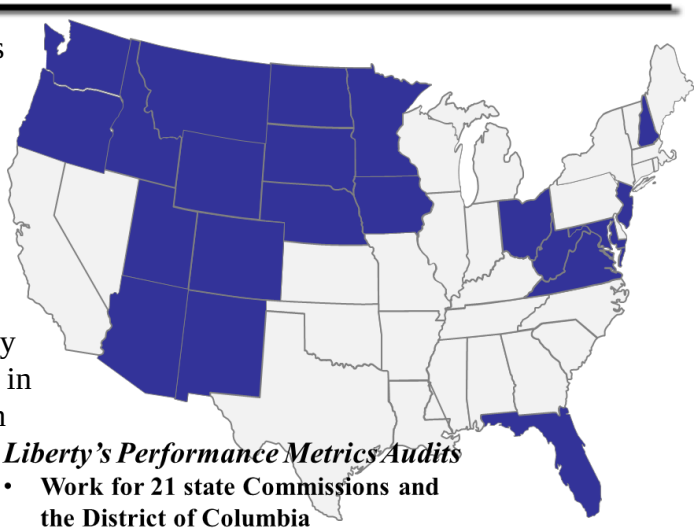
The diversity of the utilities suggests that the systems and processes used to collect performance data and report service quality measurements will likely vary significantly. Some may prove highly centralized, supporting multiple utilities. We may find others largely decentralized at the utility level. The systems and processes will also likely vary in their mix of automated and manual systems, processes, and components.

## B. Approach and Methods

### 1. General Approach

Liberty has crafted this proposal to address the requirements of the RFP and the special needs of the Commission that the RFP reflects. We have proven the effectiveness of our approach to reviewing service quality performance reporting through our numerous performance metrics

audits conducted for 22 commissions throughout the U.S. over the last 13 years. Our unmatched success in satisfying client expectations comes in significant part from recognizing the folly of blindly applying methods developed from these many audits, however tried and true they have proven in the past. We take a fresh approach to each project, assessing carefully the applicability of methods we have used in the past to the new situation, and then modifying them appropriately, as we come to understand the dimensions of the assignment at hand.



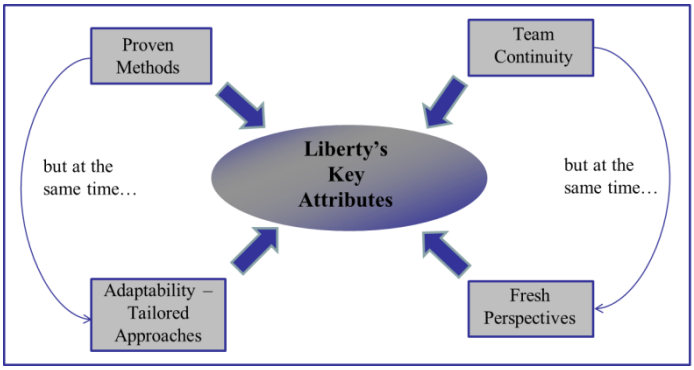
***Liberty's Performance Metrics Audits***

- **Work for 21 state Commissions and the District of Columbia Commission(blue)**

We consider it extremely important to provide a team with significant experience in the industry and with service quality measurements. Other firms more frequently offer "generalists" for audits of this nature, particularly given their "one-off" nature when compared with more traditional management and operations audit scopes. Accordingly, we offer a team with specialized skills and considerable experience that focuses very specifically on audits of performance reporting. Our team also has broad and deep familiarity with utility systems and processes, gained through past engagements for this Commission and the other regulators. It is this experience that gives us the ability to adjust approaches and methods, while retaining an appropriate level of continuity with what has proven successful on many, many prior engagements.

Four key attributes give Liberty the performance strengths it has taken to become the leader in service to utility regulators. The approach, methods, and the team that will apply them are:

- Mature, well developed, and comprehensive audit methods
- Team member continuity and familiarity with methods and with each other
- Broad experience that promotes adaptability
- Fresh perspectives from senior consultants.




Liberty has developed its ***audit methods*** and procedures through the performance of more than 200 engagements for public utility regulators conducted over a period of more than 25 years. These engagements include our telecom wholesale and retail service quality measurement and performance assurance plan audits for commissions in the Verizon and former Qwest, BellSouth, and Ameritech jurisdictions. They include many management and operations audits of electric and gas companies, which have required use of a wide array of performance data, including, but not limited to, that subject to review here. They also include benchmarking examinations; we

recently benchmarked for Arizona's utility regulatory commission the performance of the state's (and one of the country's) largest energy delivery utilities (Pinnacle West/Arizona Public Service Company) a very comprehensive set of metrics, including, but extending well beyond the types at issue here.

Our work in metrics auditing is very recent, as well. We recently completed audits of FairPoint's retail performance measurements and wholesale performance measurements and performance assurance plan for the New Hampshire Public Utilities Commission. We have also completed within the last five years work for commissions in the former Qwest operating territory, which followed up our service quality measurement audits in this region by analyzing the adequacy of the service quality measurements. Section 8 of this proposal provides references for our relevant recent work; the following hyperlink describes in more detail our extensive experience with metrics audits over the past 13 years: http://www.libertyconsultinggroup.com/nypscproposal.

Liberty has maintained ***team continuity*** by keeping together a senior core of consultants over a very long period. As a result, Liberty's teams are accustomed to working both under methods and procedures that are familiar, and with other team members who are familiar.

Liberty's ***adaptability*** generates the ability to tailor methods and procedures to the specific project at hand, based on the great length and breadth of our work for utility regulators. Our work with utility regulators in more than two-thirds of the U.S. jurisdictions and a number in Canada has covered a wide array of engagement types, work processes, organizational units, utility types, geographic and political environments, relationships with commission staffs and utilities, and policy and technical issues. We have worked on some of the most controversial issues that regulatory commissions have faced and we have performed our share of routine engagements (both large and small). The depth and breadth of our experience gives us a hard-to-match ability to adapt our approach and methods, not based on speculative or merely hopeful notions about client expectations, but upon having lived through such an immense variety of job, client, and utility types. The following hyperlink leads to more information on Liberty's qualifications: http://www.libertyconsultinggroup.com/nypscproposal. We encourage a review of both our very recent and our long-term corporate and individual experience. Both contribute materially to our ability to perform this engagement successfully. Regulatory metrics audits are not particularly common in the industry, and have been much more prevalent in the telecommunications industry. Citing examples within the RFP's five-year window is thus challenging. While appropriately focusing on currency of experience, where a firm (such as our case) has performed many such examinations and continues to offer the same core resources, it remains important to look at the full range of relevant experience.

## 2. Focused and Comprehensive Audit Work Planning

Detailed work plans form the cornerstone of Liberty's overall approach to audits of this type. This approach has been refined and improved over the years allowing Liberty to use sound and comprehensive work plans first to assure client comfort that:

- The full Liberty team begins with a sound understanding and acceptance of project scope, goals, and objectives
- The client has a comprehensive basis for continually measuring time, cost, and content progress.

At the project working level, Liberty next uses detailed work plans to manage work at the day-to-day level, in order to assure that:

- All required scope areas and items get sufficient attention
- Conclusions and any ensuing recommendations flow from a sound set of criteria that conform to proper, explicitly stated, and comprehensive standards of good-utility practice.

Section 1.C of the proposal sets forth the guidelines, evaluation criteria and basic work activities that Liberty will use as the basis for developing the detailed work plans that will guide audit work. They are preliminary; the first weeks of audit work will undoubtedly lead to amplification, change, and substantive added detail, as we learn more about Staff's perspective on the requirements for the audit and the specifics of the utilities' performance reporting systems and processes.

## 3. Beyond a "Paper" Audit

Reviewing a company's documented data processing and calculation methods, procedures, and algorithms forms a central element of an audit of this nature, but care must be taken to get beyond what the company says it does and how its documentation describes systems, processes, procedures, controls, work flows, and algorithms. Even reviews of company data processing code can only go so far in revealing potential inadequacies and errors in performance reports.

Liberty's experience with performance metrics audits demonstrates that the best way to reveal potential gaps or inadequacies in a company's processes is to use samples of performance data to trace the data processing, and perform calculations based on independently developed algorithms in an attempt to replicate the company's reported numbers. Detailed testing of the data extraction, data processing, and calculations involved in reporting performance data, measurements, and other statistics using independently developed algorithms has been a hallmark of Liberty's approach to service quality metric and performance assurance plan audits. The ability to replicate company data processing steps and reported statistics through controlled, sample testing offers important confirmation of their validity. Alternatively, it helps to highlight areas of concern that warrant additional analysis.

These "next-level" techniques, along with our unmatched experience in metrics examinations, are what most separates our work from that of our competitors, and what makes us leaders in the field.

## 4. Work Performance Guidelines and Criteria

Liberty operates under a series of guidelines and criteria that apply to the work it performs in audits of this type:

*The Client Relationship*

- Recognize that the Staff is responsible for supervising the performance of the audit.
- Work closely with Staff in a manner that not only meets requirements, but also satisfies mutual expectations.
- Establish ongoing dialogue that will enable Liberty to take advantage of the Staff's extensive knowledge of the utilities and their performance reporting.
- Submit draft work products to Staff for review not merely in accord with established schedule, but in advance of scheduled dates wherever possible.
- Make Staff aware of tentative findings and conclusions as they emerge.
- To the extent consistent with practice and approve by Staff in advance, review key emerging findings with the companies to the extent appropriate and useful in assuring full coverage and consideration of key issues.
- Encourage frequent, informal communications between the audit team and Staff.

*Reporting to Staff*

- Discuss interview and site visit scheduling in advance with Staff, whom we expect to be, and welcome as, active audit activity participants.
- Report promptly and both informally and formally any problems encountered during the conduct of the audit.
- If requested by Staff, provide monthly written status reports to Staff, listing the schedule for planned work, work accomplished, and any preliminary findings. These reports would provide a narrative description of the progress to date and the reasons for any differences between the project schedule and actual progress. They would also include quantitative information regarding the hours recorded by consultants, costs incurred, and the relationship of those hours and costs to the audit plan. The Staff project manager would receive the report within five working days of the end of the month that is the subject of the report.
- Invoice monthly, and include reports on consultant time and expenses in a form satisfactory to Staff, showing information needed to relate costs to work done and to work plans.

*Work Standards and Procedures*

- Follow generally-accepted standards and procedures applicable to regulatory proceedings and to commission-sponsored work of this type for submitting data and interview requests, and conducting interviews.
- Include in audit reports the background necessary to give readers a clear understanding of the issues identified and any problems that may have been discovered.
- Conduct work according to standards generally applicable to evaluations of the type at issue.
- Apply, except where specified otherwise by the client, the National Association of Regulatory Utility Commissioners' *Consultant Standards and Ethics for Performance of Management Analysis*. Note that we are happy to substitute other recognized standards, where required by or consistent with client requirements or expectations.

*Reports and Work Papers*

- Present a clear discussion of those issues and problems, and conclusions and recommendations supported by appropriate analyses and work papers.

- Source findings, conclusions, and recommendations to work papers with recognition that that it may prove necessary to explain and defend audit work in proceedings before the Commission.
- Maintain a set of working papers that will allow the Staff to follow the work that Liberty performed in making findings and in reaching conclusions and recommendations.
- Make those work papers available immediately upon Staff request.
- Use a report cross-referencing system that will enable users of the report to quickly and easily trace back statements of fact, findings, conclusions, and recommendations to supporting documentation, such as interview notes and company-provided documents.
- Make the final report, where possible and consistent with client requirements and expectations, as much a stand-alone document as is practicable. Liberty's approach is to present as much supporting analyses in our report, in the text or in appendices, so that users of the analyses do not have to refer to other documents to see supporting analysis.

*Project Administration*

- Maintain a database (web-based if desired by Staff) that will track all documents requested and received.
- Encourage wherever feasible the provision of data electronically by the companies being audited.
- Maintain electronic copies of such data and of interview notes as part of working papers.
- Hold frequent (initially weekly or more frequently if necessary) project management calls involving Liberty, Staff, and the utilities' project managers and any other participants from these parties to assure mutual understanding of status and address any roadblocks or coordination problems that might have arisen.
- Use project management, scheduling, and reporting systems capable of scheduling, providing status reporting, and performing document tracking and retrieval.
- Require all Liberty personnel to use common word-processing and spreadsheet software that facilitates the creation of endnotes or footnotes, or reference notes for charts and graphs, so that sources such as responses to document requests or interview notes are clearly displayed in reports.

## 5. Work Products and Working Papers

Liberty's deliverables for this engagement will include:

- Interview Logs showing all interviews requested and conducted, updated weekly to list interviews and site visits scheduled for the ensuing following week, listing interviewee, interviewer, subjects, date, time and location. Liberty will finalize these schedules following preliminary communication with the Staff and with the companies, in order to permit Staff to schedule its attendance as requested and as required by project schedule.
- Data Request Logs showing all documents requested, due dates, date received, and overdue, updated weekly to show status and to highlight requests issued since the last log issuance.
- Interview summaries identifying interviewee, interviewer, title and organization of the interviewee, documents requested, and items discussed.
- A detailed work plan, developed in consultation with and modified after comments from Staff; these plans will detail by audit area:

  - Specific scope (issues and areas to be examined) and objectives.
  - Evaluation criteria, questions to be addressed, and work activities to be performed with specific inquiries to be posed in applying those criteria, and specific data gathering and analytical steps and activities to be undertaken.
  - Organization of the interviewee, documents requested and items discussed.
  - Identification of the companies' organizations, resources, systems, activities, controls, work flows, processes and procedures, data collection and manipulation, reporting structures and processes, and other relevant management and operations areas to be examined.
  - Liberty team members responsible for each audit work assignment.
- Detailed project schedules accompanying the work plan.
- Regular briefings to Staff on the progress of the audit, including identification of emerging issues as work progresses.
- If requested by Staff, monthly progress reports providing a narrative of work performed and status, with an explanation of any variances from plans and budgets.
- A draft report submitted to Staff for review and comments documenting Liberty's findings, conclusions, and recommendations for each element of audit scope in the RFP and as listed in the approved detailed work plan.
- A revised draft report incorporating Staff comments to be submitted to the utilities for comments and response.
- A final public report with any revisions necessary based on the utilities' comments and response.
- Access by Staff to a complete set of work papers accompanied by an annotated report presenting detailed cross-references to the supporting work papers.

Liberty's final audit report will:

- Present audit results comprehensively
- Be written for an audience consisting of interested parties, Commissioners, Staff, and company management
- Define technical terms and acronyms
- Describe and support in detail any recommendations for improvements
- Include an electronic and a camera-ready copy of the final report.

## 6. Staff Participation

Liberty fully understands that Staff's project manager or designees are its contact persons with the Commission for the audit, and that the work is being performed for the Commission, who is the client. Liberty is completely comfortable with this reporting structure, having performed literally dozens of audits using this approach. Liberty's study methods and its extensive experience in working for public service commissions make clear our firm's commitment to full Staff participation in this project. Such involvement provides an important contributor to the necessary high-quality final report that Liberty is to provide.

Beyond this clear commitment, Liberty welcomes Staff participation in any other project activity. Liberty's work methods ensure that the Staff's project manager or designee(s) knows at all times exactly where the project stands. This timely knowledge permits the client to track

results and progress from quality, cost, and schedule perspectives. It also allows Staff to design whatever level of its own participation it deems appropriate.

## 7. Work Methods

This section identifies the work steps applicable to all aspects of the audit, and describes the methods that Liberty will use to conduct the audit. The project schedule, shown in Section 6 of this proposal illustrates the logical flow of these activities.

### a. Initial Data Request

Liberty's designs its first data-gathering steps to collect basic information that addresses the subjects of this engagement's scope. This information provides essential background for generating interview plans and focused data requests. Liberty will provide the utilities with an initial request for documents that will include fundamental background information, such as the following:

- Lists and definitions of reported data and measurements within the three operational areas of this audit
- Copies of the most recent performance reports in each of these operational areas
- Descriptions of the organizations and resources used for data collection, calculation, and reporting
- Documentation of each utility's performance data, measurement, and reporting systems, processes, procedures, and controls
- Flow charts of the performance data collection, processing, and reporting processes
- Documentation of the data processing and calculation procedures for each reported performance item.

### b. Orientation

This essential early step acquaints the Liberty project manager and key team members with the Staff and company personnel who will play key roles during the study. This step will provide an opportunity to begin the interchange that will lead to common understandings of the details of Liberty's work methods, and of the full extent of the Staff's intended participation in study activities. In addition, this step provides an early opportunity to begin the interchange with the company, so that Staff and Liberty can make their expectations known.

Where Staff identifies (a) particular areas where it will actively participate, or (b) specific matters of interest, Liberty will incorporate them into its detailed work planning. Liberty's team leadership also realizes that, at a later stage of the project, Staff may identify additional areas where its active participation in the study has become appropriate.

At the initial orientation meeting Liberty will expect presentations from the utilities on their view of the audit, the basics of their performance reporting systems processes and work flows, applicable controls, and report preparation processes and structures. Liberty will describe the scope of the audit as specified in our proposal and how it will be conducted.

This study step will also establish the necessary protocols for communications between Liberty's auditors, Staff, and the company, including those for data and document exchange, advance notice of particular task steps, and other similar activities. Liberty expects that the company coordinators will advise Liberty about their preferred protocols for requesting interviews, data, and documents, the treatment of information that the utility deems proprietary, and notice requirements. The Liberty team will require support from company resources. This will include access to documents, data, facilities, and employees.

Liberty recognizes that the collection and management of information and data from the large number of independent companies subject to the audit presents substantial logistics and analytical challenges. It is important for this process to proceed as uniformly as possible to prevent delays in the audit schedule. Liberty has very effectively used a process in earlier audits of this type through which we host a secure, web-based data collection site to accept and store data from the audited companies. We would recommend that a similar approach be used in this audit, particularly given the added challenges of interfacing with so many disparate parties.

### c. Initial Document Reviews

Upon initiation of our review of company responses to the initial request for documents, Liberty's team members will begin to familiarize themselves with baseline information in their respective areas. This initial document review will be an ongoing and fundamental activity throughout the engagement. A mutually agreeable timeframe for responses (our standard is two weeks (10 business days), shorter for already existing documents and subject to negotiation if any special studies or detailed data assembly is necessary) will be set.

### d. Introductory / Planning Interviews

Liberty will use the information acquired in response to the initial data requests to determine its requests for initial interviews and more in-depth data requests. In addition to providing substantive information about the performance data, measurement, and reporting systems and processes, these initial interviews will be used to learn about the logistics and availability of data to be used in testing the companies' performance reporting systems and processes. These diagnostic interviews are designed to build on the information that comes from the initial data requests. We envision beginning these interviews soon after the orientation meeting.

### e. Detailed Work Plans

Liberty will complete as expeditiously as possible the process of establishing the detailed work plans that the audit team will use to manage, steer, and measure project work. The proposed detailed work plans presented to Staff for review and approval will:

- Summarize facts and issues learned and emerging from work to date
- List and describe the areas within each audit element that will be subjected to examination and evaluation
- Establish by area within each element the specific performance criteria to be applied in making such evaluations
- List the key questions requiring answer in order to lay a foundation for applying those criteria

- Identify the work tasks whose completion will provide the required factual and analytical basis for answering those questions
- Identify the individuals responsible, the time requirements for, and the schedule for completing those work tasks
- Specify particular interviews to be conducted, documents to be examined, and visits to be conducted in completing those tasks.

Liberty will invite Staff comment on and discussion of this draft, in order to facilitate the development of a mutual understanding of issues and areas to be examined and evaluated. Liberty will then prepare a final set of plans for Staff approval.

### f. Data Gathering and Analysis

This step will help to promote the assembly of a broadly based factual record from which to develop hypotheses about the engagement's task areas, and to support overall conclusions and recommendations. Data gathering will include many steps, as appropriate to the circumstances. Typical activities in this stage include:

- Detailed document reviews and analyses
- In-depth interviews of utility subject matter experts
- Analyzing the companies' compliance with requirements and expectations for the measurements and statistics
- Identifying and documenting the companies' measurement and reporting organizations, resources, systems, methods, controls, procedures, and work flows
- Transmission to Liberty of the source and performance reporting system data sets necessary for data tracing and analysis
- Site visits, if necessary
- Developing independent measurement calculation algorithms
- Tracing the performance data from the source systems to reporting
- Applying the independently developed algorithms in an attempt to replicate the reported numbers.

### g. Issues Review

During the course of the audit as Liberty encounters issues and findings and formulates tentative conclusions, Liberty will share these with Staff in regular briefings. If requested by Staff, Liberty will document these issues, findings, and tentative conclusions and will brief Department Senior Staff and Commissioners on them.

### h. Conclusion and Recommendation Development

We will develop conclusions and supporting findings for each of the project areas. We will coordinate audit work among those that cross individual focus areas, to ensure completeness and consistency. We will formulate recommendations for each conclusion that identifies a weakness or an improvement opportunity. Recommendations will take into consideration the full range of conclusions. Liberty will provide complete, accurate, and timely documentation of preliminary conclusions and recommendations for review by members of the study team and the Commission

to ensure that the rationales that underlie the recommendations are thoroughly understood by all the parties.

We will perform both qualitative and quantitative analyses in each task area. Where possible and appropriate, Liberty will quantify the expected changes that would result from each recommendation. Specifically, we will seek to undertake the work required to quantify the degree of any measurement error resulting from problems discovered. This quantification will have to respect applicable limits on accuracy. Given the nature of the error (for example, a failure to record key input data), it may not be possible to provide more than very general dimensions around the degree of error in resulting measurements. We will prepare detailed descriptions of the results of analyses, in order to enable readers immediately to understand how the conclusion was developed, and the analytical basis for the valuation of the conclusion, if appropriate.

In a project such as this, analytical activities must be performed during every stage of the work. The beginning of this step, however, is specifically devoted to formulating hypotheses that will ultimately become the basis for recommendations and conclusions. In this context, Liberty draws an important distinction between hypotheses and conclusions. Hypotheses may or may not lead to conclusions, as determined by examining the facts and subsequent analyses. Some hypotheses fall by the wayside as work progresses; others are modified; and additional hypotheses are introduced as new information surfaces. Hypothesis formulation and proposition testing are processes that assure that matters warranting further review can be aired within budget and schedule constraints.

Hypotheses that survive preliminary screening will be followed up with focused data gathering and verification. Liberty's team sessions provide a forum for further group discussion of each hypothesis. Team members review separate but interrelated areas as part of the team-wide analytical process that can involve the use of role-playing or devil's advocacy techniques in subjecting the hypotheses to scrutiny and challenge.

### i. Draft Report

Liberty will prepare a draft report for Staff review for adherence to RFP and detailed work plan requirements. The draft will contain all the sections that Liberty expects to include in the final report. This document will undergo Liberty's quality review to assure that it approaches the form, content, appearance and accuracy of the final version. This quality review will consist of critical readings of draft reports by consultants on the team who have not contributed to the writing of a chapter they review, but who understand the subject matter at hand. Their objective will be to examine what has been written to ensure that the conclusions and associated recommendations are well supported and clearly delineated.

This report will be designed as a self-contained description of the audit and its results. It will provide:

- An executive summary
- A description of the examination processes
- Summary descriptions and an overall assessment of the study areas

- A detailed list of all recommendations
- Quantification of their benefits wherever practicable.

To support the recommendations properly, the draft final report will:

- Specify audit mission and objectives
- Explicitly state the comprehensive set of evaluation criteria applied
- Describe study approach and methods
- Delineate data collection and analytical processes performed
- Succinctly state and narratively and quantitatively support conclusions
- Provide recommendations for performance improvement for each conclusion that identifies a gap or other problem.

Liberty will prepare a revised draft after receipt of Staff comments, following the completion, if necessary, of any field work closure activities and additional analysis growing out of Staff comments.

### j. Closure of Field Work

Liberty will conclude the fact finding necessary to resolve any remaining unresolved issues, finish analyses, and refine quantification calculations. By this time, the essential final report elements will have already reached an advanced stage, permitting ongoing Staff involvement in, and awareness of, study progress. It also helps to keep efforts throughout the project focused on the primary final product, a comprehensive examination. It also avoids the degradation in quality that becomes inevitable where inadequate budget remains at the end of the fieldwork to support a large writing effort. Finally, Staff's involvement provides an unmatched tool for evaluating the progress of the study on a real-time basis.

### k. Final Report

Following Staff review of the revised draft and any changes that Liberty makes in response to Staff comments, the utilities will have the opportunity to review the draft for factual content and accuracy. The utilities will also be required to identify any report contents it believes should secure confidential treatment. Liberty will provide a report copy showing the companies' proposed redactions for the report's publicly available version. This copy will allow the companies to verify that all proposed redactions have been properly made and it will allow Staff to determine whether it has any concerns about those redactions. Liberty will provide to Staff its input on any proposed redactions questioned by the Staff.

Meetings with Staff and each utility to discuss company comments and any redaction issues will be scheduled as necessary. Upon Staff approval, Liberty will prepare and issue the public final report. If requested, Liberty will also prepare a confidential version of the report with the originally redacted material retained.

# C. Preliminary Audit Work Plan

## 1. Overview

The following sections provide the study guidelines, the evaluation criteria, and the work activities that form the basis of Liberty's preliminary work, which we have designed to lead promptly to the creation of detailed work plans that take account of preliminary data gathering and meetings and reviews with Staff. Liberty has grounded the criteria and activities for this audit on our very extensive work performed since 2000 (and largely by resources proposed for this audit) on other performance measurement audits. These plans will guide initial project work leading to development of detailed work plans. The detailed plans will replace those in this proposal. We will adjust, after Staff review and concurrence the criteria, work activities, supporting details, and time allocations as needed to respond to what our team learns and shares fully with Staff in the early, critical stages of audit work.

Liberty's experience with audits and reviews of this nature and the specific requirements of the RFP to which this proposal responds indicate the likely existence of issues commonly applicable to all types of data and measurements subject to this audit, despite their diversity. Specifically, a thorough review necessarily comprises assessment of the following three elements:

- Conformance with Requirements and Expectations
- Data Collection and Measurement Systems and Processes
- Data Extraction and Processing Testing.

Liberty therefore proposes that its preliminary work group the audit work according to these three elements. We will gather initial data from the utilities, conduct interviews, and seek a broad understanding of organizations, resources, systems, methods, controls, procedures, and work flows related to data collection, housing, calculation, and reporting. We will share the results of these reviews with Staff. Liberty will then reassess the continuing applicability of the preliminary work plan set forth below. We will refine the work plans into a formal draft work plan for Staff review.

Liberty's initial data testing in similar audits has, as this proposal discusses below, found significant data extraction and processing issues. Verification that these issues are "real," and, for example, not simply artifacts of the testing process can require material time and effort. This verification need would cause the audit to extend well past what the RFP contemplates. Therefore, Liberty proposes to complete the work of the first two audit elements and the initial work of the Data Extraction and Processing Testing within a timeframe that comes reasonably close to meeting the proposed timeframe for the audit in the RFP, but extends it as minimally required to produce meaningful conclusions and recommendations. Liberty will draft a final report at the completion of this first audit phase.

If we uncover no significant data extraction and processing issues in the first phase work on Data Extraction and Processing Testing, this report will document our findings, conclusions, and recommendations for all elements of the audit. If we do uncover significant issues from this testing, the report would still be complete for the Conformance with Requirements and Expectations and Data Collection and the Measurement Systems and Processes data elements. However, we may not be able to draw firm conclusions from the Data Extraction and Processing

Testing in the absence of further work. In such a case, we have allowed for a second audit phase, whose conduct would occur only upon Staff approval. If Staff approves the second phase, Liberty would revise and supplement the final report to incorporate the conclusions and recommendations arising from the additional data testing occurring during this audit phase. In any event, our goal is to produce a first-phase report that stands alone, and, whether or not a second phases occurs, is complete in its provision of findings, conclusions, and any appropriate recommendations for change.

## 2. Conformance with Requirements and Expectations

An effective performance data and measurements reporting regime must ensure that:

- The reported data and measurements comply with Commission rules, orders, and expectations, and with other public commitments
- The set of reported data and measurements comprise a sufficiently complete but not excessive set of performance indicators.

The purpose of this audit element is to assess how well the data, reports, and measurements satisfy these criteria. Based on the dialogue at the pre-bid meeting, Liberty also proposes to compare the metrics used in New York with industry practices, using our 25 years of experience in over two dozen engagements that have involved management and operations in the three measurement areas (electricity reliability, natural gas, and customer service) subject to this audit.

### a. Study Guidelines

Some of the reported performance items (data and measurements) that this audit will examine arise from specific Commission rules. Others appear related to particular rate filings, or to result from utility-specific agreements with the Commission. Certain utilities voluntarily self-report some others. A key audit task will therefore involve determination of the specific requirements or other rationale for each data set, report, and measurement subject to review in this audit. Liberty will classify each performance item according to whether it is:

- Subject to Commission rules that explicitly specify it
- Reported through some order or agreement containing documented definitions and specifications
- Reported through some order or agreement without documented definitions and specifications
- Voluntarily reported with agreed upon definitions and specifications
- Voluntarily reported without agreed upon definitions and specifications.

Liberty then will identify and document the specific requirements and expectations for each performance item, and assess to what extent each utility's implementation of each item complies with the requirements and expectations. Our experience teaches that meeting requirements narrowly is not always sufficient. Experience and, in some cases, new conditions or circumstances have led to a common understanding that "fleshes out" what types of measurements and reporting are expected. This area may prove to be one where comparisons to industry practice may suggest moderate, or perhaps even marginal, enhancements.

Liberty will base the requirements on Commission rules, orders, or other documentation. Liberty will define the expectations by interviewing Staff members and utility managers and considering

the plain English language descriptions of the data and measurements. Of particular concern will be the definitions of what data should be included and what should be excluded in various data fields and measurements.

This audit element will also include a review of how well the set of reported data and measurements for monitoring the three operational areas considered in this audit (Electric Service Interruptions, Gas Safety and Reliability, and Electric and Gas Utility Customer Service):

- Appropriately monitor these areas in the manners required
- Provide a sufficiently complete but not excessive set of performance indicators
- Include relevant best-practice measurements used within the industry in other jurisdictions.

### b. Evaluation Criteria

1. The utility's performance reporting policies are consistent with requirements and expectations.
2. The utility defines and specifies each data item, measurement, and report subject to Commission rules consistent with those rules.
3. The utility defines and specifies each data item, measurement, and report subject to Commission orders or other agreements consistent with those orders or agreements.
4. The utility defines and specifies each data item, measurement, and report voluntarily reported or otherwise not subject to specific Commission rules, orders, or other agreements consistent with reasonable expectations for those measurements.
5. All utilities define and specify the data, measurements, and reports in reasonably consistent ways.
6. The set of reported data and measurements comprise a sufficiently complete but not excessive set of performance indicators.

Liberty will report how New York metrics compare to utility industry experience. We will not use industry experience as a formal "criterion" in the sense of judging the sufficiency of utility performance in this audit. We will take the New York rules as a given in examining compliance with them. The comparison we propose will not judge, but rather simply report, differences in order to lay a foundation for consideration by Staff of potential changes in what is reported or how.

### c. Work Activities

1. Meet with Staff and the utilities to determine what rules, orders, agreements, and understandings exist that define the requirements and expectations of the reported performance data and measurements. Include a discussion of what guidelines or understandings govern the voluntarily reported data and measurements.
2. Determine which performance items to be reported are:
    a. Subject to Commission rules that explicitly specify them
    b. Reported through some order or agreement containing documented definitions and specifications

c. Reported through some order or agreement without documented definitions and specifications
d. Voluntarily reported with agreed upon definitions and specifications
e. Voluntarily reported without agreed upon definitions and specifications.

3. Obtain and review each utility's reporting policies.
4. Obtain and review each utility's data collection policies and procedures documentation.
5. Obtain and review relevant Commission rules, orders, and agreements related to performance data and measurement reporting.
6. Obtain any available written specifications created by the utilities that document the reporting and calculation of the reported performance items.
7. Assess whether the utilities have specified the reporting of the data and measurements in accordance with the rules, requirements, and expectations.
8. Formulate recommendations, if any, to improve the data and measurement specifications so that they conform better to Commission requirements and expectations.
9. Formulate recommendations, if any, to improve the data and measurement specifications so that they provide more consistency across the New York utilities.
10. Gather data on available best practice data and measurements used in the U.S. for reporting utility service performance.
11. Assess whether the set of reported data and measurements comprise a sufficiently complete set of performance indicators.
12. Assess whether any data or measurements are no longer necessary to report.
13. Formulate recommendations, if any, on whether data or measurements should be added or removed from the utility performance reporting.

### d. Liberty Resource Assignments

Lead Consultants: Operational Area Specialist Team
Support: Utility-Specific Team, Data Analysis Team

Section 2.C of this proposal describes how Liberty's consultants will be organized into three teams. An expert in each of the operational areas reviewed in this audit (electric interruptions, gas safety and service, and customer service) will comprise the Operational Area Specialist Team. This team will be primarily responsible for this Conformance task area. A Utility-Specific Team will assist in the review of the conformance of each specific utility. This Utility-Specific Team will focus mainly on the measurement systems and processes of each specific utility subject to the audit. A Data Analysis Team, which will focus mainly on data analysis, will also provide input to the Operational Area Specialist Team based on information uncovered during the data analysis.

## 3. Data Collection and Measurement Systems and Processes

The proper design and implementation of the systems and processes the utilities use to collect and process the data, calculate the measurements, and report the data and measurements comprise another key element necessary to the accurate and reliable reporting of the performance indicators. This audit element will assess the degree to which each utility has designed systems, processes, controls, and work flows to provide accurate performance reports. It will specifically identify any gaps, failings, or weaknesses, and offer concrete solutions for addressing them.

## a. Study Guidelines

Given the diversity of the performance items and utilities subject to this audit, the processes and systems used will likely vary significantly, not only among the performance items but also among the utilities for the same performance item. Some will likely prove largely manual. Others may be largely automated.

It is important that a utility collect and extract data from source systems and processes in a way that fully supports the need to identify and transfer to its performance reporting systems and processes a complete and comprehensive set of data. The extracted data must contain all transactions associated with the processes measured by the metrics during the reporting period.

For many performance items, the data extracted from the source systems must be processed in various ways before reporting. Required utility activities may include:

- Reformatting of data elements
- Potential corrections to certain data elements for which there is evidence of errors in the source data (such as incorrect state identifiers)
- Calculation and storage of such derived quantities as time intervals
- Setting of "flags" that aid in identifying relevant subsets for calculations
- Selection of the subset of transactions and products relevant to each metric reporting dimension
- Proper selection of the subset of transactions that are to be used for the reporting month.

Liberty will identify the systems and other means each utility uses to process the source data and report the in-scope performance items. For each of the relevant systems and processes, Liberty will examine the processing steps to assess whether they are appropriate and that nothing is added or changed that corrupts the performance report.

Key objectives of this audit element will include:

- Identifying the processes, systems, controls, resources, and work flows used for each reported performance item for each utility
- Obtaining from the utility or, if not available, creating a step-by-step mapping of the processes used to produce and report each performance item for each utility
- Assessing whether each utility uses processes, systems, controls, resources, and work flows to ensure that it captures accurate and reliable data at the source systems and processes
- Assessing whether each utility has designed the processes, systems, controls, resources, and work flows in a manner that gives sufficient confidence in the accuracy and completeness of performance reports.

It is also important that the processes, systems, controls, resources, and work flows remain sufficiently robust to accommodate changes and support auditability fully. Accordingly, we will examine whether each utility:

- Has developed complete and accurate documentation of the processes, systems, controls, resources, and work flows

- Retains not only the final reported data, but also the source data and, in some cases, the data at intermediate processing stages
- Has implemented sufficiently rigorous change control processes.

### b. Evaluation Criteria

1. Each utility's processes, systems, controls, resources, and work flows for data extraction and processing completely and accurately documented.
2. Each utility's processes, systems, controls, resources, and work flows for measurement calculations are completely and accurately documented.
3. Each utility's processes, systems, controls, resources, and work flows for creating the performance reports are completely and accurately documented.
4. Each utility has adequately documented and justified conventions used for its data processing.
5. Each utility has implemented adequate change control procedures to ensure changes, corrections, and upgrades to the processes, systems, controls, resources, and work flows preserve the accuracy and completeness of the performance reporting.
6. Each utility employs processes, systems, controls, resources, and work flows sufficient to ensure that the primary source performance data is reasonably accurate and reliable.
7. The source data and downstream datasets used for performance reporting are retained consistent with Commission data retention requirements and the need to ensure auditability.
8. Each utility has designed the systems and processes so that if implemented correctly they should produce accurate performance reports.

### c. Work Activities

1. Obtain and review the documentation of each utility's performance data, measurement, and reporting processes, systems, controls, resources, and work flows.
2. Obtain any available written specifications created by each utility that document what performance data should be included and excluded; how the data should be collected, aggregated, processed, and reported; what, if any, transformations and calculations must be performed with the data; and how the data should be reported.
3. Interview utility employees involved in collecting and reporting performance data and statistics to identify the source systems containing the data necessary for the performance reports.
4. Interview utility employees involved in collecting and reporting performance data and statistics and review documentation to identify the systems and processes used for the in-scope performance items.
5. Interview utility employees involved in collecting and reporting performance data and review system and process logic to determine whether the logic should allow systems and processes to select the correct data subsets required to satisfy the definitions of the in-scope performance items if implemented properly.
6. If not already adequately prepared by the utility, create a step-by-step mapping of the processes and system steps used to produce and report each performance item.
7. Examine and evaluate the processes, systems, controls, resources, and work flows used to capture the source performance data.

8. Evaluate the processes, systems, controls, resources, and work flows used to ensure accuracy and reliability of the source performance data.
9. Examine and validate the accuracy of the logic used to create derived data fields.
10. Examine and validate the accuracy of the logic used for data transformations.
11. Assess whether the documented performance reporting processes, systems, controls, resources, and work flows are consistent with requirements and expectations.
12. Determine the utility's data retention policies and practices and verify that they are in conformance with regulatory requirements for data retention and the need to ensure auditability.
13. Determine the utility's change control processes to determine if they are adequate to preserve accurate and complete performance reports.
14. Identify and recommend performance reporting processes, systems, controls, resources, and work flows improvements.

### d. Liberty Resource Assignments

Lead Consultants: Utility-Specific Team
Support: Data Analysis Team, Operational Area Specialist Team

The Utility-Specific Team will have primary responsibility for identifying and documenting each utility's measurement and reporting processes, systems, controls, resources, and work flows. The Data Analysis Team will provide the primary support in this audit area, particularly in the analysis of the logic of the utility's calculations and data processing. The Operational Area Specialist Team will provide support in interpreting the measurement and statistic requirements and through their understanding of the appropriate data sources to use. They will also be responsible for examining the controls and procedures used for collecting the performance data in the source systems and processes.

## 4. Data Extraction and Processing Testing

Use of accurate and complete performance data comprises a fundamental requirement for accurate performance reports. The objective of this audit element is to assess the integrity and accuracy of each utility's process for extracting data from source operation support systems and processing that data through the systems and processes to produce accurate performance reports. Liberty will as part of this audit element seek to replicate, when feasible, the utilities' metric calculations and reported statistics through independently developed algorithms. We will also seek where practicable to determine the magnitude of any material errors in measurements.

### a. Study Guidelines

Liberty will identify and assess performance reporting processes, systems, controls, resources, and work flows at each utility. We will then assess their operation in practice by tracing actual performance data from source to reporting. The performance data, statistics, and measurements subject to this audit draw data from a wide range of source systems and processes. Some data will take electronic form; other data will result from at least partially manual processes.

Liberty proposes to select a sample of transactions to trace from the source system to the performance reporting systems and processes, and then within those systems and processes to the ultimate report. Liberty plans to sample data from the source systems for one reporting period for each performance item, using input from Staff to determine the appropriate reporting period. As appropriate and if available, Liberty may also sample data at various stages of the data transformation and reporting process to assess the intermediate processing.

Liberty will apply our understanding of the data selection and calculations that should be used to conform to the rules and expectations of each performance reporting item to independently process the sample data. Liberty's Operational Area Specialist Team will also examine the sampled data for any evidence of data errors and disordered or inaccurate data recording processes. Liberty will then compare the results to the processed data used by each utility in its performance reports. Many of the performance items designated for this audit report aggregate events (*e.g.*, outages and gas accidents or leaks, or transactions, such as customer service calls, meter readings, or bills). In such cases, Liberty will request from each utility a complete list of all the events or transactions aggregated to produce the reported statistic.

Liberty recognizes that this approach depends on the extent to which each utility has retained the necessary data at the individual event or transaction level for each of the reported performance items subject to this audit. Liberty will assess whether there are any significant gaps in data availability early in the audit. If they exist, Liberty will develop and propose alternative approaches to testing data extraction and processing accuracy.

Liberty believes that it is possible to come reasonably close to meeting the Commission's desired audit end date provided in the RFP if no significant issues are uncovered during an initial review of the sampled data. In such a case, we will complete our findings, conclusions and recommendations for the Data Extraction and Processing Testing, and then will document them in the final report along with those from the other two audit elements.

If the analysis reveals significant discrepancies, however, there would be no time to identify the source of the discrepancy, even with the utilities fully complying with the required short time frames for responding to provide the required data and resolve any data transfer and documentation issues. Furthermore, any quantification of the impact of the discrepancies would be necessarily crude and potentially misleading.

Liberty's experience with this type of audit has demonstrated that apparent discrepancies revealed through a single analysis "pass" can often result from a misunderstanding of the data provided rather than errors on the part of the utility. In such a case, after the initial data testing analysis is complete, Liberty would still draft the final report, which will be complete for the Conformance with Requirements and Expectations and Data Collection and the Measurement Systems and Processes data elements but may not be able to reach all the final conclusions or make recommendations resulting from Data Extraction and Processing Testing. For this audit element, the report would document those findings, conclusions, and recommendations that we can make, and will identify the remaining discrepancies warranting resolution through further, second-phase work. We will identify what we consider to be the additional data testing required to form conclusions and make recommendations following such additional testing. If Staff elects

to approve an audit extension, Liberty would revise and supplement the final report to incorporate the conclusions and recommendations arising from the additional data testing, after completion of second-phase work.

### b. Evaluation Criteria

1. The specific data selected for use for performance reporting are consistent with the documented rules and requirements for each in-scope performance report item.
2. Any corrections to source system data fields as part of the data processing are appropriate and accurate.
3. The values in all calculated and other derived data fields, such as system flags, are correctly developed and appropriately used in the performance reporting.
4. Any other data transformations to the source data are appropriate.
5. Manual processes are necessary, accurate, and make appropriate use of the source data.
6. The source data shows no evidence of data inaccuracy or data collection and recording problems.
7. Source data and downstream datasets used for the performance reports are retained according to Commission data retention requirements.
8. The data processing and calculation steps are completely and accurately documented.
9. The process for aggregating data for reporting purposes is complete, accurate, and consistent with requirements and expectations.
10. The process for selecting and excluding data is complete, accurate, and consistent with requirements and expectations.
11. The algorithms and conventions used for calculations are complete, accurate, and consistent with requirements and expectations.
12. Independently processed sampled data agree with those used by the utility to report performance.
13. Individual events and transactions were accurately and completely aggregated for those reported performance statistics requiring aggregation.
14. Independently calculated measurements and statistics agree with those reported by the utility.
15. The reported data and calculations are in a format consistent with requirements and expectations.

### c. Work Activities

1. Determine in consultation with Staff which reporting periods to use for the analysis.
2. Obtain reports from each utility for the reporting periods to be analyzed.
3. Determine whether data should be sampled only from the source system or whether sample of data at intermediate stages of processing should be included.
4. Develop a sampling scheme to create a statistically adequate sample of data to examine.
5. Request and obtain the data from each utility from which the sample will be drawn or work with the utility to sample the data according to Liberty's specifications.
6. Examine the sampled source data to determine whether there is any evidence of errors in capturing and recording the data.
7. Determine whether the methods the utility used to aggregate the source data provide a complete and accurate dataset for calculating the intended performance item.

8. Review rules, requirements, and expected outcomes to develop independent algorithms for data processing and calculations.
9. Trace a representative sample of data through the systems from source to reporting to test the data collection and transformation process.
10. Independently process the sampled data to compare with utility-processed data used to report performance.
11. Identify missing elements or flaws in the data processing that may cause the reported results to be inaccurate.
12. Determine whether the utility properly selected and excluded data items in the sample for each reported performance item.
13. Determine whether the utility correctly performs required calculations.
14. Determine whether the individual events and transactions were properly aggregated to for those reported performance statistics requiring aggregation.
15. Determine whether the data were reported in a format consistent with requirements and expectations.
16. Apply the independently developed algorithms to the base data to attempt to replicate the reported measurements and statistics.
17. Compare the independent calculations with each utility's reported measurements and statistics.
18. If Phase 2 is necessary and approved by Staff, work with each utility to determine the source of any discrepancies identified.
19. If Phase 2 is necessary and approved by Staff, identify and recommend performance reporting process and system improvements from the work with the utility to determine the source of discrepancies.

### d. Liberty Resource Assignments

Lead Consultants: Data Analysis Team
Support: Utility-Specific Team, Operational Area Specialist Team

The Data Analysis Team will have primary responsibility for testing the data extraction and processing and for the replications of the calculations and reports. The Utility-Specific Team will provide support in understanding the specific systems and processes used by each utility. The Operational Area Specialist Team will provide support in interpreting the measurement and statistic requirements and through their understanding of the appropriate data sources to use. They will also be responsible for checking the source data for any evidence of errors or poor data collection procedures.

# 2. Audit Areas and Issues

## A. Background

This audit will review reported data and statistics related to areas that are particularly crucial to safe, reliable, and effective utility operations: electric service interruptions, gas safety and reliability, and customer service. Liberty's long experience with auditing these aspects of utility operations and the expertise of our team in these areas makes us particularly aware of the importance of these areas and the particular challenges involved in reviewing the data used to monitor them. This experience brings exceptional skills and capabilities in management and operation of electricity and natural gas delivery systems and customer service operations in both industries. Combining that experience with our nationally recognized expertise in auditing performance metrics for accuracy and completeness gives us a broad range of perspectives from which to conduct this important engagement. The next sub-sections of this proposal highlight some of the areas and issues that our experience tells us will be important to consider.

### 1. Energy Service Interruption

The data, measurements, and statistics encompassed by this audit include reports and measurements of both electric and gas service interruptions and outages. The recent major storms in the Northeast have particularly highlighted the impact of electric service outages, emphasizing the importance of effective, accurate, and consistent outage monitoring.

The metrics to be reviewed in this study relating to electric reliability provide data on company reliability and responsiveness, both including and excluding major storms:

- Numbers of customers served
- Numbers of customers affected by service interruptions
- Number of service interruptions
- Number of customer-hours of interruption
- Interruptions per 1,000 customer served
- Average duration per customer served
- Availability (SAIDI) – average time a customer is out-of-service during the year
- Number of Customers affected per customer served - System Average Interruption Frequency Index (SAIFI)
- Average duration per customer affected - Customer Average Interruption Duration Index (CAIDI).

Each electric and gas system of the nine utilities subject to this audit has its unique vulnerabilities. These vulnerabilities are typically a function of the robustness of the facilities and the likelihood of a failure. Reliable outage data comprises the foundation of any attempt to identify and address the causes.

The U.S. electricity industry uses a number of indices to measure electricity system safety, reliability, and power quality. At least 37 state public utility commissions require some level of reliability reporting. Metrics, however, vary from state to state. Some states focus exclusively on SAIDI and SAIFI, which can lead to an increase in the number of momentary outages. Others

have begun requiring utilities to report MAIFI (momentary average interruption frequency index). MAIFI is more difficult to measure, but adds more robustness to system reliability measurement. Several state reliability policies require the reporting of the worst performing circuits. This measure can help utilities better leverage resources to improve service for a greater number of their customers.

There exists no national comparison or rating system that would hold utilities accountable for their performance on a consistent basis. Some utilities report reliability without major outages, while others include them. Additionally, utilities and commissions have varying definitions for what constitutes an outage or major outage.

In most cases, reliability reporting occurs at a high level, by utility. Reporting average reliability for a utility can be misleading, especially if the utility has a varied service territory. For instance, a utility may have a company-wide average SAIFI of 2, while 25 percent of its customers are in an urban area with a SAIFI of .2. Urban areas tend to have more underground networks, which are more reliable than overhead networks, but produce longer outages, when they do occur. Averages can hide pockets of poor reliability.

The primary metrics used to measure electric system reliability are SAIFI, the System Average Interruption Frequency Index, and CAIDI, the Customer Average Interruption Duration Index. To monitor service levels and develop the indices, the utilities are required to submit detailed monthly interruption data to the PSC. That data is submitted in two broad categories, with major storms included and major storms excluded, and includes:

- Causes of outages by cause code (*e.g.*, accident, prearranged, customer equipment, lightning, tree, overload, error, equipment, unknown)
- Numbers of interruptions
- Numbers of customer hours of interruptions
- Numbers of customers affected
- Numbers of customers served.

Utilities must also provide formal reliability reports by March 31 of each year, providing detailed assessments of their performance, including outage trends by geographic areas served, reliability improvement projects, and analyses of worst performing feeders.

Liberty also understands that the electric utilities have Reliability Performance Mechanism (RPM) Targets established in rate orders, which typically include company-wide targets of outage frequency and duration, and sometimes utility-specific concerns. The data inputs to the RPM processes and calculations will also be examined to ensure consistency between reported data and inputs to the Mechanisms.

The Liberty team is well qualified to deal with the expected problems and issues with gathering and using the data and metrics. Some of these are the lack of conformity among the different utilities in the type data gathered and used, the process for gathering and using the data, and the specific reporting processes, lack of accuracy and thoroughness in gathering and reporting, and the extent to which this data is used by the utility to improve service reliability. In identifying

these problem areas, Liberty will recommend improvements that will offer a material potential for cost savings, remediation of operating problems, and improvement in customer satisfaction.

The consultants Liberty has assigned to lead the effort in reviewing the service interruptions data and measurements – John Sherrod for electricity and Steven Vitale for gas – have extensive experience in these areas. Their background and experience will also help provide insight into what other states and regulators are doing in this area, and best practices to ensure that this reporting effort optimizes the benefits received.

Mr. Sherrod has over 40 years' experience working in the electric utility industry, including years of experience working with utility regulators in five different regulatory jurisdictions in the area of electric service reliability, interruption reporting and performance monitoring. In this role, he was instrumental in helping develop a reporting process, including data to be measured and processes to be followed, that the regulators adopted. In the last ten years, he has worked as a consultant for regulators in Nova Scotia, Illinois, Maryland, and Connecticut, in addition to other work for utilities and utility organizations.

Dr. Vitale is the former Vice President and Chief Engineer for National Grid. He was in charge of engineering and production across three states, and was responsible for risk and integrity management of a 22,000 mile gas system with 14 LNG plants and 14 propane-air plants. After leaving that position he worked both domestically and internationally on gas consulting addressing issues such as system reliability, leak data, asset integrity, main replacement programs, and the adequacy of gas system safety and reliability.

## 2. Gas Safety

Accurate and reliable data on gas system integrity, incidents, and leaks comprise key inputs to evaluating the safety of a gas system. Risks need to be evaluated based on the likelihood and consequence of events. Many of the statistics to be examined in this audit directly relate to gas safety, including:

- The data on the composition and integrity of the utilities' gas system provided in the DOT/PHMSA Gas Distribution System annual reports, including:
    - Miles of main by type (material) and diameter
    - Numbers of services by type and diameter
    - Age of pipe
    - Numbers of leaks by cause and type classification
- Leak and incident reports
    - Leak classification by type of leak
    - Leak history by main and service material type and diameter
    - Action taken
    - Leak backlog
- Emergency response reports
    - Response times
    - Reporting time periods (e.g., normal business hours, weekday non-business hours, weekend, holiday)

- Measurements of such maintenance activities as pipe replacement, damage prevention, and leak backlogs
- Third Party Damage reports and causes
    - Mismarks
    - Company error
    - Contractor error
    - Third party Excavator Damage error
    - No-call to the responsible Underground Facilities Protection Organization (UFPO)
- One-call system reports (which add a level of complexity, because they originate outside the utility)
    - Numbers of excavation tickets
    - Classification of call-in (emergency vs. non-emergency).

Audits, such as this, across multiple companies ensure that the data collection and reporting in each of the companies, including their quality control components, are consistent, standardized, and use comparable data. This assurance enables the Commission to make informed decisions and evaluations. Comparability is particularly important in this context. For example, in Liberty's experience, utilities are not always consistent, both internally and in comparison with others, in categorizing causes of leaks as attributable to causes such *as Materials or Welds, Equipment Incorrect Operations,* and particularly "*Other,*" which are among the causes listed on the DOT/PHMSA report. In other cases, there may be an incentive for a utility to code a damage as a *Mismark* when it may have been due to a company error. Such inconsistent or incorrect information might prompt the utilities and the Commission to draw incorrect conclusions about the relative safety and reliability of the two companies' gas systems.

When performing the audit, it will be important to understand all definitions and policies and procedures across utilities. Some of the companies operating in New York State are combinations of smaller companies with merged legacy definitions. For example, NGUS is a parent company (with subsidiaries) that has assets and management that crosses several states, resulting from mergers and acquisitions. This company also has an international influence, forming part of a much larger energy enterprise. Thus, it is not surprising that there may be differences between the definitions not only within NGUS but between NGUS and other utilities subject to this audit. One of our contributions will be to highlight differences among such definitions, and recommend ways to improve consistency across the state.

Liberty is uniquely qualified to audit utilities' gas safety data. Our staff has hundreds of cumulative years of experience in utility engineering, integrity management, and code compliance. Because we have studied so many utility infrastructures, we know well the best practices across the United States. Our staff is also well founded in technologies from the international community. We are uniquely qualified to audit utilities on such data. We have cumulatively hundreds of years of experience in utility engineering, integrity management, and code compliance. In addition to Dr. Steven Vitale, whose qualifications are described above, our team includes John Gawronski. A professional engineer with over 35 years of experience, Mr. Gawronski is expert in all matters affecting public safety due to the operation of natural gas, petroleum, and steam pipeline systems. He specializes in pipeline safety inspection processes,

enforcement policies for inspections, corrosion assessment plans, and evaluating risks associated with gas distribution systems. For over 25 years, he was the Chief of Gas & Petroleum Safety, for the New York Public Service Commission, addressing all matters affecting public safety due to operation of the state's natural gas, petroleum, and steam pipeline systems. Prior to joining the Commission, John served Brooklyn Union Gas Company as a Field Engineer, Senior Engineer, and Section Manager.

## 3. Customer Service

Effective customer service is critical to the success of any organization. Within the utility industry, customer service functions represent the majority of the customer-facing interactions that a customer will have with its utility.

The Customer Service metrics to be reviewed in this study include typical functional performance metrics, many of which are benchmarked frequently within the industry:

- Bills Issued / Bills Adjusted
- Appointments Made/Kept
- Percent Calls Answered
- Calls Requesting Agents
- Percent of Calls Answered within 30 seconds
- Days to Complete Service Orders/Meter Orders/Street Light Orders/Tree Trimming Orders
- Percent Meters read
- Percent Estimated meters.

Approximately half of the U.S. states have some form of quality of service (QOS) performance-based ratemaking that incorporates customer service metrics with established targets, penalties, reporting requirements, or a combination of these elements. Typically a performance-based regulatory (PBR) model expands the conventional cost of service methodology with reliability targets imposed by a public utility commission with penalties and/or rewards based on performance. Customer service performance standards that are often built into QOS ratemaking include:

- Complaints received by the commission
- Service restoration statistics
- Call response times
- Bill accuracy
- Missed appointments
- Estimated meter reads
- Outage notification
- Commission-led customer satisfaction surveys.

Typical challenges and issues regarding customer service performance measurement include:

- Averaging performance over too long a time period—Many centers focus on service level consistency, setting goals for staying within a service level band, say 75 percent to 85 percent in 20 seconds. This reduces the incentive to bank service level: depositing

high service levels during the slow season, withdrawing (or providing low) service levels during the busy times.

- Inconsistent measurement & definition—For instance, service level performance is frequently measured to gauge accessibility; however, some companies measure the percentage of calls answered within 60 seconds starting from the moment the call is answered, including automation (IVR) while some start measuring as soon as the call is place in queue for a representative.
- Performance metrics that are not actionable—Customer service cost per customer does not provide any information of specific customer service delivery functions, such as the customer contact center, business offices, field service or meter reading groups. Nor does it tell you how billing, collection or new service installation processes stack up. The items measured should be detailed and process-specific.

Our approach to this project is built on the experiences gained in over 30 years of providing similar services to other regulatory agencies and utilities. We bring a strong "hands-on" element to the project, along with a preference for working closely with our clients. We have conducted many best practice discovery and benchmarking assignments over the years—competitive benchmarking, functional benchmarking, internal benchmarking, multi-company group benchmarking studies, and topical or issue-based benchmarking.

We have assigned Chris Kozlosky to lead our work in the customer service operation area. Ms. Kozlosky has been providing customer service performance benchmarking and performance improvement consulting since the early 90s, specializing in billing operations, call centers, credit and collection, field services, payment processing, business office operations, customer satisfaction measurement, and emergency response/outage communications. Ms. Kozlosky has conducted significant research into customer care best practices, process improvement, and performance benchmarking and maintains an extensive database of customer service metrics from companies in all industries. Additionally, Ms. Kozlosky offers an online benchmarking service to assist companies in ongoing performance measurement and best practice discovery.

## 4. Performance Metric Audits

Liberty has extensive experience with audits of reported utility performance measurements, giving us a thorough and deep understanding of the unique challenges such audits require. We are the leading firm in performing audits of telecommunication company metrics for regulators throughout the U.S. Although those audits were of telecommunications industry metrics, they measure processes that are very similar to the electric and gas metrics that are the subject of this audit, including such process areas as network operations, maintenance and repair, customer service, and billing.

Our experience indicates the importance of the three focus areas we propose for this audit:

- Determining whether the company's report metrics comply with the Commission's requirements and expectations
- Reviewing the methods, procedures, and systems the company uses for calculating and reporting metrics

- Testing the data extraction and processing, and the metric calculation and reporting using independently developed algorithms.

These focus areas apply in various degrees to metrics in all operational areas. We therefore propose to apply them to all three of the operational areas in this audit's scope.

Assessing metric compliance generally proves less straightforward than one not experienced in doing it might anticipate. Identifying which metrics are subject to explicit Commission rules or other regulatory requirements comprises a critical initial step in compliance assessment. This activity has particular importance for this audit because many of the metrics involved do not result from Commission rules but are required by individual rate plans, or are voluntarily reported. In such cases the following questions must be resolved:

- How explicitly has the Commission defined the metrics and statistics required by individual rate plans?
- What agreements exist between the Commission and the company as to the definition or expectations regarding voluntarily reported metrics and statistics?
- Have such metrics and statistics been explicitly defined in some public document or memorandum of understanding between the Commission and the company?

Absent no explicit documentation describing Commission and company agreements as to precisely what should be reported, the auditor must determine from discussions with Staff and the company what the general expectations were. Even with explicit documentation of agreed-upon metric definitions, ambiguities often arise. The preceding portions of this proposal discuss some examples of this situation. Identification of ambiguities and the extent to which there exists consistent agreement on how to address them comprises a key aspect of judging compliance.

Clear and complete documentation also has great importance in assessing metrics systems and processes. Some common questions such documentation should address include:

- Has the company defined the conventions ("business rules") it uses for calculating and reporting the metrics?
- Are there clear and consistent rules for including and excluding data for reported metrics?

Using the measurement of service restoration response time as an example, the company must define, among other things:

- What constitutes the beginning of the outage time? Is it the time customer reported the outage or some other start time?
- What determines the completion of the interval?
- What outages are included in the metric? Are major regional storms included? How are mistakenly reported outages treated?

Liberty has often found documented processes and calculations not precisely followed by the company or erroneously implemented, resulting in misreported measurements and statistics. Our standard practice therefore includes subjecting the processes and calculations to rigorous testing by obtaining data from the company to trace through the processes and systems, seeking to reproduce the results the company has used for performance reporting. Such testing generally involves the most complex and time-consuming portion of a metrics audit. Some preliminary

questions that must be answered in the process of the developing a detailed design for such tests include:

- Have the companies retained data at a sufficiently detailed level for reporting periods subject to the audit?
- Have the companies retained the results of intermediate data processing and calculations that allow tracking down reporting discrepancies?
- What data samples should be chosen?
- Can each company and the auditor agree on a straightforward but secure process for rapid transfer of large metrics datasets needed for testing data processing and calculations?

In past audits, Liberty has hosted a secure, web-based data collection site to accept and store data from the audited companies as means to accomplish these data transfers. We propose considering this approach in this case, where in the flow of data from multiple companies enhances the need for a common approach.

The auditor must also determine to whether it is feasible to attempt a complete replication of all the reported metrics or only some. The answer to this question hinges on the size of the data set required for the each metric involved and the complexity of the data processing and calculations. In some of Liberty's telecommunications metrics audits, for example, many of the metrics have required very large data sets and complex processing and calculations requiring the company to construct elaborate systems to accomplish the metrics reporting. It is not feasible in such cases for the auditor to try to reproduce calculations fully. Instead, we have often used data sampling and testing of separate stages in the data processing and calculations, examining all stages in the process chain in this manner from source data extraction to final calculation. We believe it is likely that most of the measurements and statistics subject to this audit will be less complex than this, but we are prepared to apply the staged approach described above when it appears applicable after we have made our initial assessment as part of developing the detailed audit work plan.

Liberty has found that it is common in the testing process to discover discrepancies between the consultant's expected result and that of the company whose source is unrelated to any error in company-reported numbers. Such discrepancies include those that indicate true errors in performance reporting; however, the auditor may also observe apparent discrepancies in the initial analysis that are simply artifacts of the testing process, arising from such sources as:

- Misunderstandings or confusion about the data elements provided
- Different but equally valid interpretations as to how the data should be processed
- Different but equally valid interpretations as to what data should be excluded and what included in the performance reports.

Discrepancies may arise because of issues that suggest areas for potential improvement, but do not in themselves indicate errors in reported numbers. Examples include:

- Incomplete or erroneous documentation of the data
- Incomplete or erroneous documentation of the processes and systems.

An important step in the testing process is therefore to track down the source of the discrepancies, in order to avoid drawing spurious findings and conclusions regarding the reporting accuracy. In some cases, it may be possible to resolve the discrepancies quickly. This is

particularly true where the reported measurements and statistics are relatively simple and straightforward, when the number of observed discrepancies is relatively small, and when company documentation is complete and accurate. However, Liberty has found that identifying such spurious "findings" typically requires close cooperation between Liberty's data analysts and the utility performance reporting specialists for a number of weeks to track down the source of the discrepancies. Liberty has also found that even for those discrepancies that prove to result from actual errors on the part of the utility the cooperative work between Liberty and the utility in tracking down the source of the discrepancy helps the utility more quickly identify and correct the error.

Several of the consultants Liberty has assigned to the audit team have been managers and core analytical team members of most of Liberty's past metrics audits. Dr. Charles King, who will be project manager, has also project managed many other metrics audits, including audits of the Verizon, BellSouth, Qwest, and FairPoint metrics in 17 different jurisdictions. He also has extensive experience with testing processes. Before joining Liberty, Dr. King project managed, led sub-teams, or otherwise supported most of the KPMG Consulting and BearingPoint 271 tests of the operational support systems (OSS) and metrics of Verizon, BellSouth, Qwest, and Ameritech. Mr. Robert Falcone, who will lead the data analysis team, is an experienced leader of sub-teams in metrics audits and third-party testing. He has served in this capacity on Liberty's metrics audits and in the past on the KMPG Consulting and BearingPoint OSS testing engagements.

Our statistician, Dr. Alan Salzberg, will lead our statistical and data processing effort. Dr. Salzberg has more than 15 years of broad experience in statistical sampling, design, and analysis, including several years and multiple projects involving the development and execution of statistical aspects of tests of operations support systems and performance assurance plans in telecommunications. Mr. Jonathan Scott has extensive skills and experience in database management, data analysis, and software proficiency, to support the data tracing and metric replication. Dr. Salzberg and Mr. Scott have been members of Liberty's team on most of our telecommunication metrics audits, and also worked on the KPMG Consulting and BearingPoint OSS Tests.

## B. Some Unique Issues and Challenges of this Audit

### 1. Audit Scope and Complexity

Examining disparate sets of performance data and measurements in three separate operational areas across nine utilities comprises a key challenge in managing this audit. Liberty is committed to meeting this challenge by structuring and managing the project team in such a way as to ensure:

- Consistency in approach and methods across the three operational areas and for all nine utilities
- Consistency in criteria for evaluating the data and statistics in all three operational areas and for all nine utilities
- Coordination of all these areas and maintenance of the project schedule.

The common methods and evaluation criteria described in Section 1 and the team structure described in Section 2.C comprise our primary means of accomplishing this. Furthermore, Liberty's team consists of consultants most of whom have worked with each other on many similar engagements.

## 2. Identifying the Source of Discrepancies

The additional time needed to track down the source of discrepancies in the data testing, which this proposal discusses above, affects the proposed schedule for the audit. Liberty therefore proposes two phases to the audit. The first phase would include completion of: (a) the Conformance with Requirements and Expectations audit element, (b) the Data Collection and Measurement Systems and Processes audit element, and (c) a first "pass" through the analysis involved in the Data Extraction and Processing Testing to determine whether there are any discrepancies. If we find no discrepancies in the initial data analysis of this audit element, the analysis work for the audit will be complete and no more field work will be required. The audit can also complete in a time frame closer to that originally contemplated in the RFP. If there are discrepancies, Liberty has provided for a potential second audit phase devoted to tracking down the sources of and quantifying the impact of these discrepancies. Because this will require several more months in the audit, Liberty will not proceed with this second phase without Staff approval. The details of this proposed schedule are described in Section 6 of this proposal.

Whether or not circumstances warrant a second audit phase and Staff approves it, Liberty will draft at the end of the Phase I work steps a final report that will document:

- The findings, conclusions, and recommendations from the Conformance with Requirements and Expectations audit element
- The findings, conclusions, and recommendations from the Data Collection and Measurement Systems and Processes audit element
- Those findings, conclusions, and recommendations that can be fully completed for the Data Collection and Measurement Systems and Processes audit element
- A listing of any significant discrepancies from the Data Collection and Measurement Systems and Processes audit element that could not be resolved at the end of Phase I.
- A plan, schedule, and budget for addressing those discrepancies, and completing a second final report addressing them.

If there is a Phase II, Liberty will update and revise to report at the end of this phase to include any additional findings, conclusions, and recommendations from the additional data testing.

## 3. Quantifying the Benefit of Audit Recommendations

Liberty will quantify the expected changes in the reported performance measurements and statistics resulting from audit findings indicating reporting errors. We will also quantify the financial impacts of the recommendations, where this is meaningful and appropriate.

Some findings and recommendations are less amenable to quantification. For example, improved completeness and accuracy of documentation can certainly help make the performance reporting systems and processes more robust to changing reporting requirements or updates to the global utility systems and processes in which the reporting systems are embedded. However,

this impact will not prove readily quantifiable. The financial impacts of recommendations are also often difficult to quantify. Liberty understands, however, that there are some performance measurements that have financial consequences. For such measurements, improved reporting accuracy would provide direct and quantifiable financial benefits. We will attempt to quantify the impacts of audit recommendations, but in cases where this proves to be impossible or overly uncertain, we will document the reasons.

## C. Team Structure and Organization

Examining the disparate sets of performance data and measurements in three separate operational areas subject to the audit across nine utilities comprises a key challenge in managing this audit. Liberty plans to address this challenge by using an audit team structure designed to maintain a focus on each utility and each operational area subject to the audit, while at the same time coordinating and ensuring the consistency of the audit work across all the utilities. To address the challenge of examining the performance data and measurements in three separate operational areas across nine utilities, Liberty's consultants will be organized into three teams, operating under the overall leadership of the project manager:

- A team of specialists to advise and participate in the analysis specific to each of the three operational areas of the audit: (1) electric interruptions, (2) gas safety and reliability, (3) and utility customer service
- A team of consultants assigned to manage the interactions and participate in the analysis specific to each utility.
- A central data analysis team that will manage the data collection, processing, and analysis across all utilities and operational areas in coordination with the other two teams.

This structure provides a team of specialists who will provide a consistent examination of the characteristics of all the data, measurements, and statistics within their area of expertise across all the utilities, focusing on how well they address the needs for each operational area. It provides for another team the members of which will concentrate in depth on the measurements, data, processes, and systems of on individual utilities to ensure in depth understanding of the status of each utility. Finally, the data analysis team will concentrate on the detailed analysis of data across all the utilities, which will ensure that the data testing is consistently applied for all.

The operational area specialist team will be primarily responsible for identifying the Commission rules and expectations within their operational areas and analyzing the utilities' overall compliance of the Commission rules and expectations within each of the operational areas involved in the Conformance with Requirements and Expectations audit element. They will also act as general advisors to the other two teams when questions specific to each operational area arise.

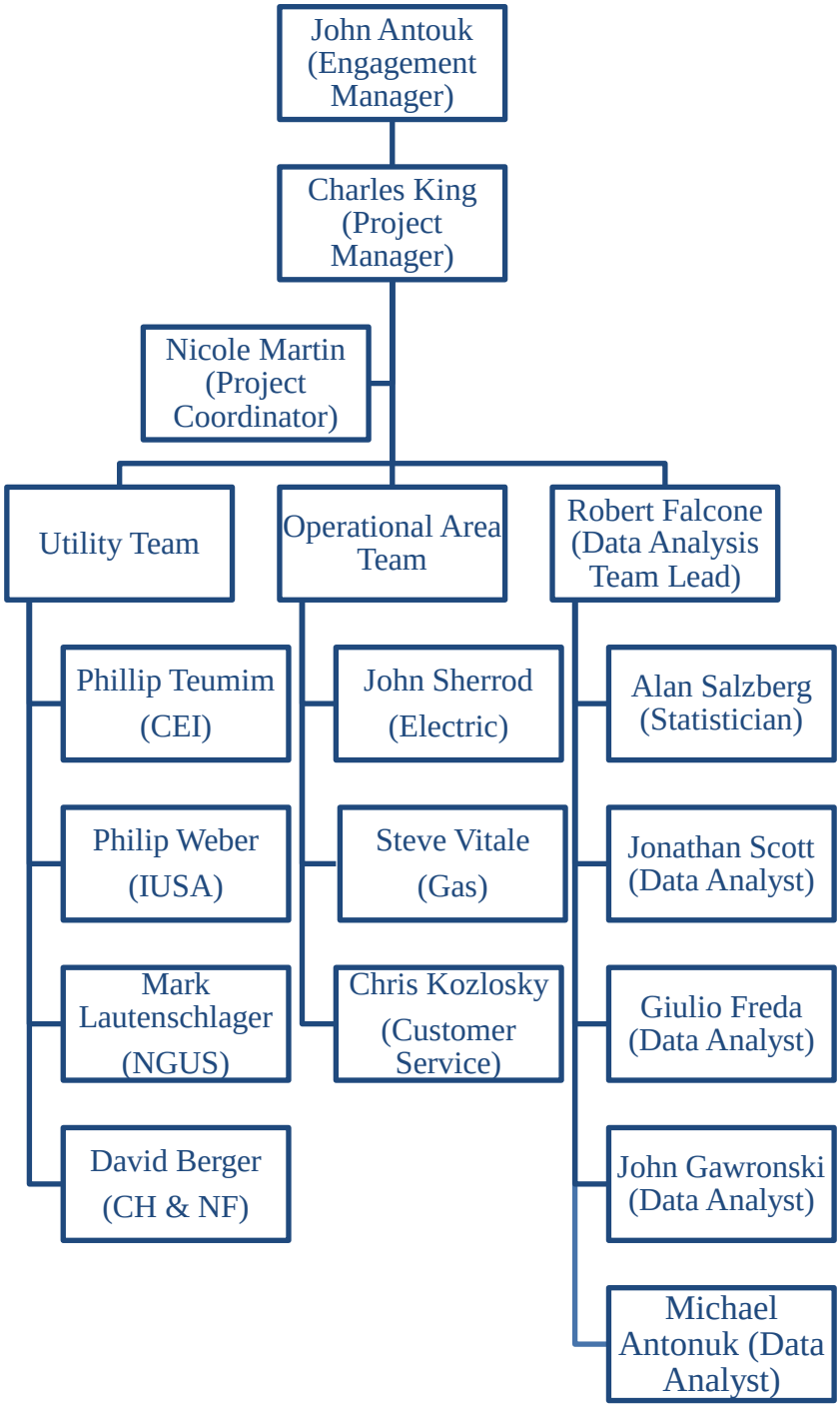
The utility-specific team will establish and manage the interactions with each utility. This team will also be primarily responsible for identifying the processes and systems unique to each utility and documenting the procedures the utility uses to process the data and report each performance item in the Data Collection and Measurement Systems and Processes audit element. All but two of the utilities are subsidiaries of one of three holding companies (CEI, IUSA, and NGUS). In such cases, the centralized support from the service companies typically causes that the processes and systems used to be relatively common across the affiliated utilities. Liberty therefore plans to

have a member of the utility-specific team assigned to one each of the three holding companies, with a fourth team member responsible for the remaining two utilities (CH and NF).

The central data analysis team will take the lead in managing the more complex and detailed data analysis issues, particularly in the data sampling and tracing involved in the Data Extraction and Processing Testing audit element. They will have primary responsibility for completing this audit element. The team members will also provide assistance to the other two teams in completing the audit elements for which those teams have primary responsibility, helping to provide technical advice about the data, systems, and processes and to ensure consistency across the utilities.

The project manager will ensure that all three teams work closely together to effectively and expeditiously complete all the tasks of the audit. He will also act as team lead for the utility-specific and operational area specialist teams. The project manager will ensure that the teams maintain the necessary level of coordination, by holding frequent team conference calls, communicating frequently with the team members to assess status, and carefully tracking project milestones. He will also be assisted by a project coordinator with considerable experience in coordinating and documenting the flow of data and interview requests and ensuring that company responses are timely. This will be particularly important for this audit, where the complexity of maintaining the flow of requests and responses across nine utilities and three operational areas will require particular attention to audit data and logistics management.

The following diagram illustrates this team structure and identifies the specific consultants assigned to each team.




### John Antonuk: Engagement Director

John has had overall responsibility for nearly all of Liberty's management examinations for public service commissions, including many for NY PSC involving the utilities subject to this audit. His recent work includes overall direction and the lead role on a number of substantive task areas in Liberty's management and operations audits of Con Edison and of Iberdrola SA/Iberdrola USA/NYSEG/RG&E. Work on all three of the utilities involved gas and electric

operations. John also has overall responsibility for a long-term engagement with the D.C. Public Service Commission, assessing and then monitoring progress under a major Washington Gas Light program to accelerate replacements and repairs associated with widespread gas leaks in the District.

John just completed work as project manager of Liberty's evaluation of PG&E's use of risk assessments in the formation of capital and O&M expenditure requests in a major rate filing for the California Public Utilities Commission. Liberty's work seeks to determine how PG&E has examined the probability and consequences of potential failures of physical assets and systems, and related metrics. He has served as Liberty's project manager or engagement director on more than 20 management and operations audits of public utilities (all relying on the use of performance metrics), and has had overall responsibility for Liberty's performance metrics audits for commissions.

He directed Liberty's project for NorthWestern Energy to formulate long-range integrated infrastructure plans for its multi-state natural gas and electricity distribution utilities and to establish metrics for monitoring progress and results. He managed Liberty's audit of the quality and completeness of a series of metrics established by the Ohio commission for the state's largest telecommunications carrier. Reaching service levels measured by those metrics had substantial ratemaking consequence for customers and the company, making their accuracy of high importance. John also directed Liberty's comprehensive benchmarking (for the Arizona commission) of a very broad range of performance metrics at the state's (and one of the country's) largest energy utilities. He also directed Liberty's customer service review at Kentucky's two major electric utilities for the Commission. That review entailed extensive examinations of customer service performance metrics.

John received a bachelor's degree from Dickinson College and a juris doctor degree from the Dickinson School of Law (both with honors). He has spoken on a variety of utility issues before a number of panels sponsored by NARUC's committees and regional associations, state bar associations, and as an invited panelist before the U.S. FERC commissioners on utility financial matters.

### Dr. Charles King: Project Manager

Dr. King has worked with Liberty for ten years, during which time he has been a lead consultant or project manager for a number of different projects involving utilities. Chuck has 31 years of broad experience expertise in systems and operations, public policy and regulatory affairs, data analysis, and project management. He has managed a large number of engagements designed to test the completeness and accuracy of large, new customer information systems. Chuck was project manager for Liberty's recent audits of FairPoint's retail and wholesale service quality measurements and wholesale performance assurance plans. He also participated in or managed audits of Verizon's service quality measurements and performance assurance plans in the District of Columbia, Maryland, Virginia, and West Virginia. He managed similar projects for the service quality measurements and performance assurance plans of BellSouth for the Florida commission and of Qwest for the fourteen state utility commissions in Qwest's territory. He also served as the project manager for a thorough review of the Qwest performance assurance plans (which rely heavily on performance metrics and their accuracy) for eleven state commissions.

Chuck has also been a key member and sub-team leader of Liberty's recent management and affiliate audits of electric and gas utilities, with particular focus on affiliate transactions, financial transaction testing, and support system operations.

Chuck served as lead consultant and day-to-day project manager for a Liberty review involving detailed examinations of major, new customer information systems. This review came in the context of Liberty's review of the FairPoint purchase of Verizon's northern New England land line business for the New Hampshire PUC Staff. That work involved new systems designed to support customer service operations across three states and more than a million land lines. He provided expert testimony on operations issues and helping with the settlement negotiations. He also project managed the Liberty team that performed monitoring for all three northern New England states the transition of FairPoint's systems and operations and the impact of that transition on customers, for which he also testified as an expert witness before the Maine, New Hampshire, and Vermont commissions.

Chuck was the project manager for Liberty's audit involving extensive field reviews of customer installations by Verizon for the New York Public Service Commission. He also managed a review, for the Pennsylvania PUC, of customer-affecting field work. He examined Verizon's reported progress in implementing its Network Modernization Plan including extensive site visits to inspect Verizon facilities.

Prior to joining Liberty, Chuck was employed by BearingPoint (formerly KPMG Consulting) and was heavily involved with BearingPoint's third-party evaluations of various Bell Operating Companies' capability to provide access to Operation Support Systems (OSS) for CLECs as part of these companies' applications for Section 271 authorization to provide interexchange service. This work included engagement or project management of many of these evaluations. Prior to joining BearingPoint, Chuck was employed by AT&T, where he had extensive experience with telecommunications pricing, price cap regulation, regulated financial matters, and access issues.

Dr. King holds a Ph. D. in physics from Yale University, a M. Phil. in Physics from Yale University, and a B.A., Physics from Northwestern University. Dr. King is a member of Phi Beta Kappa.

### Dr. Steve Vitale: Operations Area Team – Natural Gas

Dr. Vitale has more than 35 years of natural gas industry experience in system engineering and development, R&D, and production, culminating in service as the vice president and chief engineer of KeySpan. This LDC (with origins in the former Brooklyn Union Gas) serves over 2.5 million customers in urban and rural areas in the Northeast. He has a Ph.D. in mechanical engineering, holds a number of patents, and has taught extensively at the university level. He has managed an engineering organization that crosses four states and a 21,000 mile distribution system. He has been consulting to the natural gas industry for the past four years, providing technical evaluations to utility regulators, industry, and the community to assure safe, reliable and environmentally friendly infrastructure. The subjects on which he has consulted include design, supply options, system reliability and reinforcement, leak and other performance data, asset integrity, and comparative analyses of infrastructure adequacy.

Steve holds a Ph.D. in Mechanical Engineering, an M.S. in Civil Engineering, and a B.S. in Mechanical Engineering, all from Polytechnic University. He has engineering licenses in New York, Pennsylvania, Massachusetts, New Hampshire, and Rhode Island. He has served as technical liaison for R&D with an impressive international group of gas distributors (including Tokyo and Osaka Gas, Gaz de France, and the former British Gas).

### Christine Kozlosky: Operations Area Team – Customer Service

Christine Kozlosky, a nationally recognized utility customer service expert, has worked with Liberty on many projects over a period of 17 years. Chris led nearly all of Liberty's very many reviews of utility customer service for regulatory authorities over this long period, including the audit customer service at KU and LG&E. Chris also led the review of gas system management and operations programs on Liberty's recent management and operations audit for the New York Commission of Iberdrola SA/Iberdrola USA/NYSEG and RG&E. Chris also examined gas operations on Liberty audits of ETG, NJNG, and SJG for the NJ BPU. She has reviewed markout, damage prevention, government liaison, and community and customer communications programs at a number of gas and electric utilities for Liberty, using performance metrics data as a source of information.

Chris recently led the communications area in Liberty's review of CL&P and UI for the PURA. This review examined CL&P's storm response and communications during two major storms in 2011. She reviewed call center and telephony capacities and performance, web and IVR self-service response, social media and proactive customer communications, public relations and communications, Outage Management System performance, and Estimated Restoration Times effectiveness. This work included detailed review and assessment of the company's performance metrics in these areas.

Ms. Kozlosky conducted a review of outage communication at Ameren-Illinois for the Commission. Numerous recommendations were made to improve call center performance and overall outage communications. Ameren-Illinois redesigned its telephony, enhanced its information support systems, upgraded its Outage Management System, and conducted stress testing of all telephony and supporting technology to further fine tune the system responsiveness. Ms. Kozlosky assisted the implementation of these recommendations.

Chris has been providing customer service performance benchmarking and performance improvement consulting since the early 1990s, specializing in billing operations, call centers, credit and collection, field services, payment processing, business office operations, customer satisfaction measurement, and emergency response. Ms. Kozlosky has conducted significant research into customer care best practices, process improvement, and performance benchmarking, and maintains an extensive database of customer service metrics from companies in all industries.

Chris has also led best-practice surveys addressing customer services for multi-company groups, she has published newsletters addressing utility customer-service practices, and she is a recognized national expert in this field. Chris also has extensive experience in competitive, functional, and process-based benchmarking, both inter-company and multi-company performance comparisons.

Chris has a B.S. in Information & Computer Science from Georgia Institute of Technology.

### John Sherrod: Operations Area Team – Electric

John is a specialist in electric utility emergency preparedness and emergency response. He became a registered professional engineer in the state of Mississippi in 1967, maintaining that status until he moved into senior management positions with Entergy.

He served as Liberty's lead in the areas of planning and response in the engagement we recently performed for the PURA regarding storm planning and response by CL&P and UI. He also has served for Liberty as a task area leader in an investigation of wind and ice storm preparedness and restoration of the three Ameren Illinois companies. John led the review areas of emergency planning and restoration performance. He has continued to lead Liberty's verification of recommendation implementation in those areas in a follow-on engagement. Prior to his consulting work, John had over 30 years of service with Entergy, the last six of which he served as Director, System Outage Response. This position gave him overall responsibility for Entergy's emergency preparedness and disaster recovery. John personally directed Entergy's emergency response activities for all major storms from 1998 through 2003.

John performed a review of Nova Scotia Power, Inc.'s response to Hurricane Juan for the Nova Scotia Utility and Review Board. He also assisted the Board in its review of the utility's response to the major outage event caused by a winter storm in November 2004. He performed an audit for an investor-owned utility in Louisiana, assessing its response to hurricanes Katrina and Rita and assisted the Edison Electric Institute (EEI) with a review and modification of its mutual assistance process for aid between utilities following major storms. In addition, he was engaged by the National Rural Electric Cooperative Association to assist in the design of a generic emergency plan to be used by all rural electric cooperatives. He also participated in an audit for the Maryland Public Service Commission addressing the Potomac Electric Power Company (Pepco) response to three major outage events in 2010.

John has a B.S. in Electrical Engineering from Mississippi State University.

### David Berger: Utility Team

Dave Berger specializes in gas-infrastructure asset management, gas system operation, pipeline and system integrity management and security corrosion control. His work includes detailed examinations and extensive use of performance metrics information. Dave is currently assisting the CPUC in reviewing and providing expert advice on two open investigations of PG&E. One investigation consists of the integrity management of the pipeline that ruptured in San Bruno while the other is the records keeping practices of PG&E. Mr. Berger has assisted both staff members of the CPUC and the legal team in both of these investigations. Dave is also serving a lead role in Liberty's project on behalf the Connecticut Public Utility Regulatory Authority examining proposals for an expansion of the gas distribution system in the state.

Dave has been a key part of many Liberty projects, including serving as task area leader for the areas of corrosion control and emergency plans in Liberty's investigation of operational safety of Peoples Gas for the Illinois Commerce Commission. The audit reviewed and evaluated an LDC's

overall operations and maintenance activities and its gas safety programs to determine the degree to which they are in compliance with federal and state regulations and conformance of those activities and program with industry best practices and the best practices determined by the ICC Staff in consultation with the LDC. He was the task area leader for gas operations including operational safety and management practices of Elizabethtown Gas in Liberty's audit for the New Jersey Board of Public Utilities. Dave also provided expert review regarding a safety issue on mechanical couplings for the District of Columbia Public Service Commission. Dave has also served as task area leader for the gas operations in reviews of three combination New York utilities that Liberty has performed for the New York Public Service Commission.

Mr. Berger is under contract to United States Department of Transportation (U.S. DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) to assist in developing and implementing a gas and liquid pipeline integrity management program and to assist in inspecting operators of pipelines through a prime contractor. He is the author and instructor at PHMSA's Training and Qualifications Section (T&Q) on direct assessment training modules for External Corrosion Direct Assessment (ECDA) (including a course on ECDA indirect inspection techniques) Internal Corrosion Direct Assessment (ICDA), Stress Corrosion Cracking Direct Assessment (SCCDA), and Confirmatory Direct Assessment (CDA). In addition, he is a consultant to PHMSA on integrity management notifications, special permits (such as alternate MAOP and class location changes) and corrosion control issues for both gas and liquid pipelines.

Until July 2004, Mr. Berger was the Division Manager, Asset Management, for KeySpan Energy (now part of National Grid). In this capacity, he managed a group of engineers, clerks, technician assistants, supervisors, and field labor to assess, maintain and improve the assets of the gas infrastructure (both distribution and transmission facilities) and the cathodic protection systems on all KeySpan Energy gas and electric facilities (Long Island, New York City, New England). He was the process owner of KeySpan Energy's gas transmission system and directed the overall integrity management program for all KeySpan Energy's assets (gas, electric, electric generation).

David received a B.S. Ch.E. in Chemical Engineering from New York University.

### Mark Lautenschlager: Utility Team

Mark is a nationally recognized expert in electricity transmission and distribution equipment and systems. His particular areas of expertise include electrical testing and maintenance, substation design and construction, forensic investigations of failed equipment, and technical training of electrical testing and maintenance technicians. He is a registered professional engineer in three states and has served as president of the International Electrical Testing Association (NETA). (See http://www.netaworld.org/about-neta.)

Mark has been conducting T&D reliability evaluations for Liberty for more than ten years. He is leading Liberty's review of System Operations in our current management and operations audit of Pepco. He led the review of substations and assisted in several others, focusing on maintenance, construction, and root cause analysis including Liberty's investigation of Commonwealth Edison and Ameren-Illinois for the Illinois Commerce Commission. He was also a lead consultant in Liberty's evaluation of T&D reliability at Georgia Power, Alabama Power,

NorthWestern Energy–Montana, and a group of four electric utilities in Maine. He was employed by I&M Electric, an AEP company, as substation maintenance and relay engineer and at Harza Engineering as substation engineer in Iran. In 1999, he formed a company specializing in training of electrical maintenance technicians and engineers, developing RCM-based substation maintenance programs, and performing forensic investigations of electrical equipment failures.

Mr. Lautenschlager is a registered professional engineer in Indiana, Ohio, and Pennsylvania, and holds a B.S.E.E. degree. He is a past president of the International Electrical Testing Association, and is active in developing ANSI electrical equipment maintenance specifications.

### Phillip Teumim: Utility Team

Phillip S. Teumim is an expert in operations, utility strategic planning, corporate governance, and marketing, and has extensive and varied experience in several areas as a regulator and a consultant. For the period 1992 to 2002, he was Director of the Office of Gas & Water for the New York Public Service Commission, the senior staff member charged with regulatory oversight of all New York regulated gas and water companies. In that position, he had overall responsibility for the Commission's gas safety program, including the LDC safety programs as well as acting as agents for the federal DOT Office of Pipeline Safety. In that role he instituted the Commission's program to aggressively pursue and fine those responsible of third-party damages to underground facilities, and the system of comparative performance reporting by the New York gas utilities. As Director at the New York PSC, he reviewed the strategic direction and planning of all New York LDCs, both for stand-alone companies and gas departments of combination companies. This included a continuing series of meetings and discussions with executives from all the LDCs.

Phil began working with Liberty shortly after leaving the New York PSC. He has led a number of Liberty reviews on various gas utility projects. He had a lead role in Liberty's safety practices assessment of Peoples Gas, and had a lead role in Liberty's management audit of ConEd in New York. The Peoples Gas work included an investigation of the areas of corrosion control and emergency plans. The audit reviewed and evaluated an LDC's overall operations and maintenance activities and its gas safety programs to determine the degree to which they are in compliance with federal and state regulations and conformance of those activities and program with industry best practices and the best practices determined by the ICC Staff in consultation with the LDC. He had a lead role in Liberty management audits of NUI/Elizabethtown Gas, SJI/South Jersey Gas, AGLR/Virginia Natural Gas, and NJR/New Jersey Natural Gas.

As Director of the Office of Gas & Water for the New York PSC, he has reviewed the strategic direction and planning of New York's energy utilities in a number of areas. For example, after FERC Order 636 was issued, the NY PSC instituted a proceeding to determine whether and to what extent changes were necessary at the state level to accommodate FERC's changes and to determine the strategic direction of the natural gas industry in New York. Mr. Teumim was personally involved in assessing the LDCs' strategic direction at the time, the extent to which changes in LDC behavior and regulatory policy were required, and in negotiating with LDC executives to institute such changes.

Phil holds M.B.A. and B.S. degrees (Electrical Engineering) from Rensselaer Polytechnic Institute, Troy NY, and is a Registered Professional Engineer in New York.

### Philip Weber: Utility Team

Philip Weber has over 35 years of professional experience in the electric utility industry specializing in reliability and maintenance of electric distribution systems, planning, and construction and project management. Phil assisted on Liberty's recent effort on behalf of NorthWestern Energy. He managed the reliability and maintenance of the transmission and distribution system of major Northeast electricity supplier PPL, where he produced major improvements in SAIFI and SAIDI performance.

During a long career at PPL, Phil served as Project Manager in the Systems Operations Department, overseeing consolidation of the transmission operations function (69 kV and above) to a single office, while simultaneously managing the separation of the transmission operations function from the distribution operations (12 kV) function, and consolidation of regional offices. He also served as the System Maintenance Engineer, where he managed the reliability and maintenance of the transmission and distribution system, including the inspection and maintenance of 27,600 miles of overhead and 6,000 miles of underground circuits and related devices, managed the vegetation management program, administering an annual budget in excess of $50 million. He also has extensive experience in planning and managing storm response for the utility.

Phil holds a B.S. in Industrial Engineering and a M.S. in Management Science from Lehigh University. He is a Registered Professional Engineer in Pennsylvania.

### Robert Falcone: Data Analysis Team Lead

Mr. Falcone has extensive experience leading consultant teams and intimate knowledge of the challenges of analyzing performance metrics, with particular expertise in carefully examining and assessing the detailed business rules and identifying discrepancies in metric calculations. He was a lead consultant or sub-team leader on Liberty's recent audits of FairPoint's retail and wholesale service quality measurements and wholesale performance assurance plans, and of the performance measure and incentive plan audits of Verizon-New Jersey, of BellSouth for the Florida commission, and of Qwest for the 14 state utility commissions in Qwest's territory. He also was part of Liberty's recent review of the Qwest performance assurance plans for eleven state commissions.

Mr. Falcone has been a member of Liberty's team in recent audits or reviews of Iberdrola USA, National Grid, and Duke Energy, specializing in analyzing affiliate transactions and transaction testing. He was also a major contributor to Liberty's work analyzing the transfer of assets from Verizon to FairPoint for the New Hampshire Commission and was a lead in monitoring FairPoint's OSS cutover for Maine, New Hampshire, and Vermont commissions. Mr. Falcone served as Liberty's field inspection team leader for an audit of Verizon's compliance with the Pennsylvania PUC's network modernization plan requirements and for an audit of Verizon's compliance with the New York PUC's FiOS installation grounding requirements.

Mr. Falcone has also worked as a sub-contractor to BearingPoint on various occasions. While with BearingPoint, Mr. Falcone played a key role in its OSS testing in the Qwest operation territory and in the five former Ameritech states and was a member of the teams that conducted the OSS tests in New York, Pennsylvania, New Jersey, Virginia and Florida. Mr. Falcone also worked with BearingPoint on the transition of Hawaiian Telecom from Verizon's operations support systems to its own systems. In this role, Bob led a team of developers on the system and code that would be used by Hawaiian Telecom for its state and federal regulatory performance reporting.

Bob has a B.S. in Business Administration from Adelphi University.

### Dr. Alan Salzberg: Data Analysis Team

Dr. Alan J. Salzberg will lead all audit activities involving statistical methods audit sampling, and audit statistical inference testing. In this work, Alan will draw upon his considerable statistical consulting experience and extensive work in metric and performance assurance plan auditing.

Dr. Salzberg has more than 15 years of broad experience in statistical sampling, design, and analysis, including several years and multiple projects involving the development and execution of statistical aspects of tests of operations support systems and performance assurance plans in telecommunications. He was principal consultant in performance measure result and penalty payment replication in Liberty's reviews of Liberty's recent audits of FairPoint's retail and wholesale service quality measurements and wholesale performance assurance plans, and of Liberty's recent review of the Qwest performance assurance plans for eleven state commissions. He performed the same role in Liberty's audits of Verizon's performance measures in the District of Columbia, Maryland, New Jersey, Virginia, and West Virginia; Qwest's metrics in the 14 states of Qwest's operating territory; and BellSouth's metrics in Florida. Dr. Salzberg was the principal statistical consultant and large-scale data analyst for Liberty's recent audits of Verizon New York's compliance with broadband installation grounding requirements and of Verizon Pennsylvania's reporting compliance for its network modernization plan. He was also a key member of BearingPoint's OSS testing team, particularly concerned with statistical test design and analysis for performance measure standards.

In a project with the Pennsylvania Public Utilities Commission Dr. Salzberg was lead developer of a statistical software tool that calculates the Pennsylvania Performance Assurance Plan (PAP) scores and penalties on behalf of the Pennsylvania Public Utility Commission. In order to develop this tool, Dr. Salzberg began with the PAP document, and wrote the statistical testing software based on the PAP specifications, but without reference to Verizon's source code. Such independently developed software has been a hallmark part of Liberty's strong testing process and has been used by Dr. Salzberg and others at Liberty in several projects in telecommunications.

Dr. Salzberg received his Ph.D. in Statistics from the Wharton School of the University of Pennsylvania, where he also holds an undergraduate degree in Economics. He has several publications in peer-reviewed journals related to his work in statistics.

### John Gawronski: Data Analysis Team

A professional engineer with over 35 years of experience, Mr. Gawronski is expert in matters affecting public safety due to the operation of natural gas, petroleum, and steam pipeline systems. He specializes in pipeline safety inspection processes, enforcement policies for inspections, corrosion assessment plans, and evaluating risks associated with gas distribution systems. For over 25 years, he was the Chief of Gas & Petroleum Safety, for the New York Public Service Commission, addressing all matters affecting public safety due to operation of the state's natural gas, petroleum, and steam pipeline systems. Prior to joining the Commission, John served a major Northeast LDC in various engineering capacities.

In Liberty's review and evaluation for the Illinois Commerce Commission of the overall operations and maintenance activities and pipeline safety program of People Gas (serving the metropolitan Chicago area) John served as a Lead Consultant. This engagement included an examination of the Company's compliance with federal and state regulations and conformance with industry best practices. John also served as a lead consultant on Liberty's management and operations audit of Consolidated Edison. He has provided consulting services to the Department of Transportation's Pipeline Hazardous Materials Safety Administration (PHMSA) Office of Pipeline Safety in its implementation of natural gas and hazardous liquid pipeline safety codes' regulatory inspection processes dealing with Operator Qualification and Pipeline Safety Integrity Management requirements.

John holds B.S. and M.S. degrees in Mechanical Engineering from The City College (CUNY). He has served as Chair of PHMSA's Technical Pipeline Safety Standards Committee, and is a Registered Professional Engineer in New York.

### Jonathan Scott: Data Analysis Team

Mr. Jonathan Scott will be responsible for large-scale data analysis and replications of metric data transformations, calculations, and reported statistics. Mr. Scott will use his extensive skills and experience in database management, data analysis, and software proficiency, including experience with SQL, to support the data tracing and replication FairPoint metric and PAP results. Mr. Scott has worked with Liberty on its recent audits of FairPoint's retail and wholesale service quality measurements and wholesale performance assurance plans, and on Liberty's evaluation of the Qwest performance measure and incentive plan for eleven state utility commissions in Qwest's territory. He also worked in the evaluation of metrics accuracy as part of the BearingPoint teams conducting third-party OSS tests.

Mr. Scott has an M.B.A degree from the University of Pittsburgh, an M.A in Public & International Affairs from the University of Pittsburgh, a B.A in Political Science and Spanish, summa cum laude, from the University of Pittsburgh. He is a member of Phi Beta Kappa.

### Giulio Freda, CPA: Data Analysis Team

Giulio Freda is a Certified Public Accountant with over 25 years of experience in a number of utility accounting and auditing areas, including senior level accounting and finance positions, management auditing, and the testing of company processes. He has expertise in accounting and

finance, regulatory affairs, analysis and project management. His experience with transaction testing will be particularly valuable in his role on this audit.

Giulio has led and served key roles in several Liberty examinations of affiliates and costs, cost allocation methods, time reporting, and transaction testing issues. These projects include audits for the DC Public Service Commission (Pepco), Iowa Utilities Board (Alliant/Interstate Power and Light), New Jersey (AGLR/Elizabethtown Gas of Public Utilities), New York Public Service Commission (Iberdrola), National Grid, and the North Carolina Utilities Commission (Duke Energy).

He also was a member of Liberty's team specializing in accounting and accounting systems in support of the New Hampshire Public Utilities Commission Staff in its review of the sale of Verizon's business in northern New England to FairPoint Communications. Subsequently he was part of the Liberty team monitoring for the Maine, New Hampshire, and Vermont regulators the cutover of operations from Verizon to FairPoint; responsible for monitoring financial, supply chain, and human resources systems. Mr. Freda was also the lead team member responsible for financial records and accounting methods in Liberty's audit of Verizon's reported progress in implementing its network modernization plan in Pennsylvania.

Prior to his work with Liberty, Mr. Freda held a number of financial management positions with telecommunications carriers. He participated in a major project to develop financial and regulatory support systems for a new carrier, and has held senior finance positions in a number of major carriers throughout the United States. He served as controller for a multi-state provider. He served as accounting lead in several rate case filings, managing the rate case staff, preparing and filing the accounting schedules, and reviewing and responding to data requests. He also filed testimony and was expert witness in separations and cost allocation methods.

Giulio holds a B.B.A. in Accounting from Cleveland State University and a M.S. in Business Ed. from University of Central Arkansas.

### Michael Antonuk: Data Analysis Team

Michael Antonuk specializes in energy and telecommunications data system analysis and research and project management. Michael served as Project Coordinator and Senior Analyst on Liberty's audits of AGLR, NJR, SJI, and NUI, and its EDECA audits of four New Jersey electric utilities. On Liberty's audit of Con Edison, Michael served as Project Coordinator and Senior Analyst. Michael served on the Liberty team that performed for the Illinois Commerce Commission a massive, detailed, multi-year evaluation of the T&D capital and O&M planning, budgeting, and expenditures of the electric utility serving the Chicago metropolitan region (Commonwealth Edison, a part of Exelon). Michael Antonuk provided analytical support in Liberty's examination of National Grid U.S. affiliate relationships and transactions.

Michael has served as Senior Analyst on the following additional Liberty audits:

- Pepco Management and Operations Audit
- Arizona Public Service Benchmarking Study
- Duke Energy Affiliates Audits

- Delmarva Affiliates Audit
- Arizona Electric Power Cooperative
- Southwestern Transmission Cooperative
- Southwestern Public Service Company
- EKPC Governance, Planning, Finance, and Budgeting
- Potomac Edison Distribution System Transfer.

He has also served as Project Coordinator and Senior Analyst for Liberty's review of procurement activities at Arizona Public Service, Nova Scotia Power, People's Energy, and Virginia Natural Gas. Michael has participated in over 50 Liberty engagements in the gas, electric, water, and telecommunications sectors, assisting in reviews of affiliate relationships, fuel procurement, EDECA, executive compensation, and utility finance issues.

Michael holds a B.A. in finance from Lehigh University.

### Nicole Martin: Project Coordinator

Ms. Nicole Martin will serve as project coordinator reporting directly to Dr. King. Ms. Martin will be responsible for the management and tracking of all interview requests and data requests. She will also assist with the development of the draft and final reports. Ms. Martin served as project coordinator on the Liberty performance metrics audit team auditing the performance metrics for FairPoint, Verizon, BellSouth and Qwest and on a number of other Liberty engagements. Prior to working with Liberty, Nicole was a member BearingPoint's team conducting third-party OSS tests.

Ms. Martin has a B.S. from the Georgetown University School of Foreign Service.

# 3. Primary Bidder Contacts

| | |
|---|---|
| Contact Name: | **John Antonuk** |
| Contact Title: | **PRESIDENT** |
| Contact Role: | **ENGAGEMENT DIRECTOR** |
| Street Address: | **279 NORTH ZINNS MILL ROAD – SUITE H** |
| City: | **LEBANON** |
| State: | **PENNSYLVANIA** |
| Zip: | **17042-9576** |
| Telephone Number: | **717 270-4500** |
| Fax Number: | **717 270-0555** |
| Email Address: | **ADMIN@LIBERTYCONSULTINGGROUP.COM** |
| Company Website: | **WWW.LIBERTYCONSULTINGGROUP.COM** |

# 4. Bidder Description

| | |
|---|---|
| Company Name: | **The Liberty Consulting Group** |
| Subsidiary or holding Company info: | **N/A** |
| Business established (year): | **1987** |
| Years offering this material/service: | **26 years** |
| Federal EIN Number: | **23-2470302** |
| DUNS ID Number: | **N/A** |
| Total employees: | **9** |
| Headquarters location: | **LEBANON, PA** |
| Number of offices: | **1** |
| Office, manufacturing and distribution/ warehousing locations related to this scope of work (please describe): | **279 NORTH ZINNS MILL ROAD – SUITE H**<br>**LEBANON, PA 17042-9576** |
| M/WBE Status | ***N/A*** |

# 5. Subcontractors

| Name | Address (and Website, if Known) | Services Provided Under This Contract |
|---|---|---|
| None | N/A | N/A |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

# 6. Schedule

Liberty has reviewed the suggested timeframes in the RFP to complete this audit. Our experience with many such similar projects suggests that this timeframe is too short to complete a first-cut analysis, let alone a thorough quantitative analysis, particularly given the number and wide variety of performance items and utilities to be audited. We recognize, however, the Commission's desire for an efficient and expeditious audit that identifies and focuses on the key issues, if any, with each utility's performance reporting and avoids dwelling unnecessarily on unimportant details. Liberty has therefore developed a proposed schedule that will provide a complete final report only about one and a half months after the final date suggested in the RFP. This report would include complete findings, conclusions, and recommendations from the work of our Conformance with Requirements and Expectations and Data Collection and Measurement Systems audit areas for all of the metrics subject to the audit. If no significant issues are found in the initial analysis of the Data Extraction and Processing Testing, this report would also include a complete set of findings, conclusions, and recommendations from this element of the audit as well.

Sections 1 and 2 of this proposal discuss how Liberty has found from our extensive experience with audits of this nature that discrepancies discovered through data testing often require significant time and effort to verify and draw firm conclusions. Such discrepancies can arise, for example, simply from inadvertent misunderstanding between the auditor and the utility. The detailed analysis work necessary to identify the source of the discrepancies, moreover, it often takes several weeks of meetings and back-and-forth analysis. We have found that this time is well spent, because it solidifies the auditor's conclusions and accelerates the utility's identification of the source of true errors and correcting them.

Liberty therefore proposes two phases to the audit:

- Phase I attempts to conclude the audit as close as feasible to the timeframe originally proposed in the RFP although it is somewhat longer. This phase would:
    - Complete the tasks of the Conformance with Requirements and Expectations audit element to complete the work
    - Complete the tasks of the Data Collection and Measurement Systems and Processes audit element
    - Complete the initial tasks of the Data Extraction and Processing Testing audit element to determine whether there are any significant discrepancies between Liberty's analysis and the processed data the utility uses for reporting performance
    - Draft a final report that documents the findings, conclusions, and recommendations of the Conformance with Requirements and Expectations and the Data Collection and the Measurement Systems and Processes audit elements, and those that can be completed for the Data Extraction and Processing Testing.
- If Liberty observes no significant unresolved discrepancies in the Data Extraction and Processing Testing, there would be no need for Phase II. If significant unresolved discrepancies emerge, however, Liberty will ask whether Staff desires a continuation of the audit in Phase II to attempt to resolve these discrepancies. Once that process is

complete, we will update the final report to describe the additional analysis performed and incorporate any new findings, conclusions, and recommendations.

Phase I Schedule:

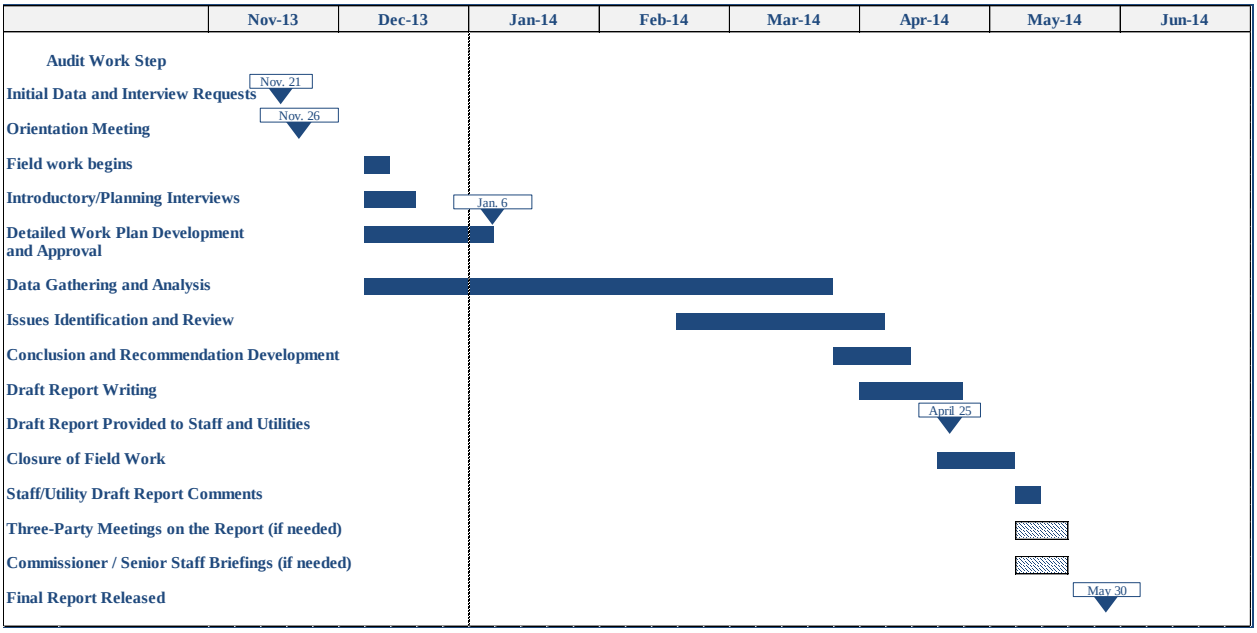
| | |
|---|---|
| *Initial Data and Interview Requests*: | November 21, 2013 |
| *Orientation Meeting*: | November 26 |
| *Field Work Begins:* | December 9 |
| *Introductory/Planning Interviews:* | December 9 - 20 |
| *Detailed Work Plan Development:* | December 9, 2013 – January 6, 2014 |
| *Draft Work Plan Submitted to Staff:* | January 6, 2014 |
| *Data Gathering and Analysis:* | December 9 – March 28 |
| *Issues Identification and Review:* | February 17 – April 4 |
| *Conclusion and Recommendation Development:* | March 28 – April 11 |
| *Draft Report Writing:* | April 4 – April 25 |
| *Draft Report Provided to Staff and Utilities:* | April 25 |

If there is no Phase II:

| | |
|---|---|
| *Closure of Field Work:* | April 18 – May 2 |
| *Staff/Utility Draft Report Comments:* | May 9 |
| *Three-Party Meetings on the Report (if needed):* | May 9 – May 23 |
| *Commissioner/Senior Staff Briefings (if needed):* | May 9 – May 23 |
| *Final Report Released:* | May 30 |

As described in Section 1.B.7.f, the schedule for the Data Gathering and Analysis phase includes data requests, interviews, site visits, and analysis.

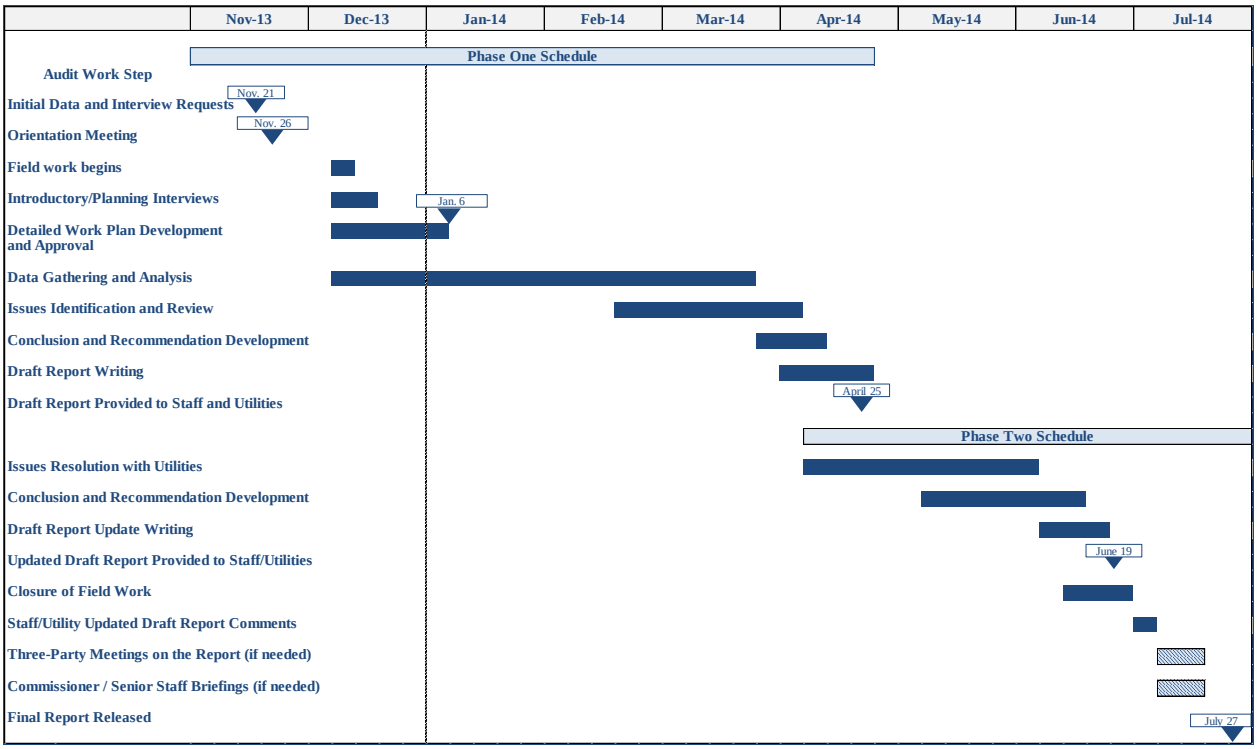
The following chart displays this proposed schedule.



Phase II Schedule:

| | |
|---|---|
| *Issues Resolution with Utilities:* | April 4 – June 6 |
| *Conclusion and Recommendation Development:* | May 9 – June 13 |
| *Draft Report Update Writing:* | June 2 – June 19 |
| *Updated Draft Report Provided to Staff/Utilities:* | June 19 |
| *Closure of Field Work:* | June 6 – June 20 |
| *Staff/Utility Updated Draft Report Comments:* | July 3 |
| *Three-Party Meetings on the Report (if needed):* | July 3 – July 20 |
| *Commissioner/Senior Staff Briefings (if needed):* | July 3 – July 20 |
| *Final Report Released:* | July 27 |

The following chart displays the full schedule, should a Phase II be proposed and accepted.




In order to meet the projected final report dates of these two possible schedules, it is important to avoid delays associated with the start of the project and in completing approval of the formal work plans. Therefore, the schedules assume:

- The initial data and interview requests can be issued prior to the designated date that field work begins (Dec. 9).
- The initial orientation meeting can be held prior to the designated date that field work begins (Dec. 9).
- Liberty can begin gathering data for all audit elements, including the data testing element of the audit (Data Extraction and Processing Testing), prior to approval of the work plan.

Full cooperation from the utilities is also necessary. In particular, these schedules assume:

- All utilities will respond to all data and interview requests within 10 business days, including requests for source and calculated data extracts.
- All utilities will provide data in a uniform format and using Liberty's proposed centralized data repository.
- Liberty can work with each utility directly to resolve problems with any data provided in response to data request responses (e.g., formatting and documentation problems) and these will take no more than 5 business days to resolve.
- Each utility has sufficient documentation of its systems and processes minimizing the number of interviews and data requests that otherwise would be required to obtain information.
- There is limited rework and recalculation required during the analysis phase as the result of incomplete provision of data by the utilities or the need to explore alternative analysis approaches for the same reason.

The schedules also assume the Staff and utilities require no longer than 2 weeks to provide comments on the draft report.

# 7. Cost

Liberty offers to complete the work of both Phases I and II, if as described above a second phase is necessary and approved by Staff, for a not-to-exceed price of $1,254,906, including expenses. The details of the cost proposal by consultant, audit area, and audit phase is shown in the chart below.

| Consultant | Rate | Hours | | | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Phase I | | | | | Phase II | | | | | | |
| | | Electric Interruption | Gas Safety | Customer Service | Prelim / Report / Proj Mgmt | Total Phase I | Electric Interruption | Gas Safety | Customer Service | Prelim / Report / Proj Mgmt | Total Phase II | Total | |
| J. Antonuk | $290 | 20 | 40 | 60 | 120 | 240 | 5 | 5 | 10 | 20 | 40 | 280 | $81,200 |
| King | $265 | 35 | 85 | 120 | 240 | 480 | 15 | 40 | 55 | 110 | 220 | 700 | $185,500 |
| Martin | $145 | 0 | 0 | 0 | 120 | 120 | 0 | 0 | 0 | 40 | 40 | 160 | $23,200 |
| Sherrod | $245 | 125 | 0 | 0 | 25 | 150 | 20 | 0 | 0 | 0 | 20 | 170 | $41,650 |
| Vitale | $275 | 0 | 190 | 0 | 25 | 215 | 0 | 25 | 0 | 0 | 25 | 240 | $66,000 |
| Kozlosky | $250 | 0 | 0 | 235 | 25 | 260 | 0 | 0 | 30 | 0 | 30 | 290 | $72,500 |
| Teumin | $250 | 25 | 70 | 100 | 25 | 220 | 5 | 5 | 10 | 0 | 20 | 240 | $60,000 |
| Weber | $245 | 25 | 70 | 100 | 25 | 220 | 5 | 5 | 10 | 0 | 20 | 240 | $58,800 |
| Lautenschlager | $245 | 25 | 70 | 100 | 25 | 220 | 5 | 5 | 10 | 0 | 20 | 240 | $58,800 |
| Berger | $245 | 25 | 70 | 100 | 25 | 220 | 5 | 5 | 10 | 0 | 20 | 240 | $58,800 |
| Falcone | $245 | 40 | 80 | 120 | 60 | 300 | 15 | 40 | 70 | 35 | 160 | 460 | $112,700 |
| Salzberg | $245 | 15 | 40 | 65 | 0 | 120 | 5 | 25 | 30 | 0 | 60 | 180 | $44,100 |
| Scott | $225 | 40 | 100 | 160 | 0 | 300 | 20 | 60 | 80 | 0 | 160 | 460 | $103,500 |
| Freda | $245 | 20 | 40 | 120 | 0 | 180 | 15 | 35 | 50 | 0 | 100 | 280 | $68,600 |
| Gawronski | $245 | 0 | 120 | 60 | 0 | 180 | 0 | 50 | 50 | 0 | 100 | 280 | $68,600 |
| M. Antonuk | $145 | 40 | 80 | 160 | 0 | 280 | 15 | 45 | 60 | 0 | 120 | 400 | $58,000 |
| Total Hours | | 435 | 1055 | 1500 | 715 | 3705 | 130 | 345 | 475 | 205 | 1155 | 4860 | |
| Total Fees | | | | | | | | | | | | | $1,161,950 |
| Expenses | | | | | | | | | | | | | $92,956 |
| Total Cost | | | | | | | | | | | | | $1,254,906 |

Any costs associated with the presentation of testimony before the Commission will be provided at the rates included in the previous table and at reasonable and actual expenses as described in the RFP.

# 8. Relevant Experience

A number of the following engagements focused specifically and solely on metrics design, use, accuracy, and completeness. Others involved the use, and in some cases design, of metrics associated with specific areas of utility infrastructure and customer service operation.

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | District of Columbia Public Service Commission | Management and Operations Audit of Pepco (metrics and benchmarking to assess systems & operations performance) |
| 2013 – Present | Connecticut Public Utilities Regulatory Authority | Statewide Gas Infrastructure Availability/Expansion Initiative (benchmarks/incentives to target and measure effectiveness of infrastructure investment) |
| 2013 – Present | California Public Utilities Commission | PG&E Risk Assessment Use in Identifying Capital/O&M Expenditures (network performance, other metrics used to identify safety initiatives and measure performance) |
| 2011 - 2013 | New Hampshire Public Utilities Commission | Audit of FairPoint Communications' Wholesale Performance Metrics/Performance Assurance Plan (accuracy/completeness of broad spectrum of metrics used to measure quality of network performance and customer service) |
| 2009, 2012, 2013 | District of Columbia Public Service Commission | Review of Washington Gas Light's Replacement Program & Cost Recovery Clause (metrics for measuring progress and costs and for prioritizing work) |
| 2009 – 2013 | NorthWestern Energy – Butte, Montana | Development of Long-Term Electric & Gas Infrastructure Improvement Plan (metrics for determining improvement priorities and measuring progress and efficiency) |
| 2012 | Connecticut Public Utilities Regulatory Authority | State Utilities' Response to Two 2011 Storm Events (reliability and infrastructure performance metrics) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2007 - 2012 | Illinois Commerce Commission | Review and assessment of 3 Ameren Utilities Electric Systems and Planning/Response to Storm Events (reliability and infrastructure performance metrics) |
| 2010 - 2011 | New Hampshire Public Utilities Commission | Audit of FairPoint Retail Quality of Service Measurements (accuracy/completeness of broad spectrum of metrics measuring quality of service to customers) |

| | | |
|---|---|---|
| 2010 - 2011 | Kentucky Public Service Commission | Audit of KU/LG&E Customer Service (metrics used to assess all aspects of customer service performance) |
| 2008- 2010 | Illinois Commerce Commission | Evaluation of Peoples Gas Pipeline Safety Program (metrics for required and other pipeline and safety performance) |
| 2010- 2011 | Arizona Commerce Commission | Liberty performed a benchmarking analysis covering a ten-year audit period which benchmarked Arizona Public Service's performance with the following metrics:<br>• Operational Performance, including safety, reliability, customer satisfaction, coal plant performance, nuclear performance, and sustainability<br>• Cost Performance, including O&M expenditures, capital expenditures, and management and regulatory expense<br>• Financial Performance, including overall financial performance, cash flow metrics and financial risk measures<br>• Affiliate Expenses<br>• Hedging & Risk Management.<br><br>Liberty designed four separate panel groups of peer companies in order to perform this benchmarking study. |
| 2008 - 2009 | New York Public Service Commission | Management and Operations Audit of Consolidated Edison (metrics and benchmarking to assess systems & operations performance) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |
| 2000 - 2008 | Illinois Commerce Commission | Assessment of Commonwealth Edison's transmission and distribution reliability (reliability and infrastructure performance metrics) |
| 2008 | New Jersey Board of Public Utilities | Management and Operations Audit of Elizabethtown Gas & AGLR (metrics and benchmarking to assess systems & operations performance) |
| 2008 | Maine Public Utilities Commission | Examination of Northern Utilities Gas Company's gas safety operations and practices (metrics and benchmarking to assess systems & operations performance) |

The following hyperlink provides a source of greater detail on these projects: http://www.libertyconsultinggroup.com/nypscproposal. It also sets forth more detail on our experience outside the five-year window specified in the RFP. The materials at the hyperlink demonstrate that we have a 25-year history of performing engagements addressing electric, gas,

and customer service management and operations, including broad familiarity with metrics design, use, and measurement validation in these areas. The hyperlink also provides the work samples requested by the RFP.

# 9. Relevant Individual Consultant's Experience

**Name**: John Antonuk **Role** Engagement Director

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | District of Columbia Public Service Commission | Management and Operations Audit of Pepco (metrics and benchmarking to assess systems & operations performance) |
| 2013 – Present | Connecticut Public Utilities Regulatory Authority | Statewide Gas Infrastructure Availability/Expansion Initiative (benchmarks/incentives to target and measure effectiveness of infrastructure investment) |
| 2013 – Present | California Public Utilities Commission | PG&E Risk Assessment Use in Identifying Capital/O&M Expenditures (network performance, other metrics used to identify safety initiatives and measure performance) |
| 2011 - 2013 | New Hampshire Public Utilities Commission | Audit of FairPoint Communications' Wholesale Performance Metrics/Performance Assurance Plan (accuracy/completeness of broad spectrum of metrics used to measure quality of network performance and customer service) |
| 2009, 2012, 2013 | District of Columbia Public Service Commission | Review of Washington Gas Light's Replacement Program & Cost Recovery Clause (metrics for measuring progress and costs and for prioritizing work) |
| 2009 – 2013 | NorthWestern Energy – Butte, Montana | Development of Long-Term Electric & Gas Infrastructure Improvement Plan (metrics for determining improvement priorities and measuring progress and efficiency) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2010 - 2011 | New Hampshire Public Utilities Commission | Audit of FairPoint Retail Quality of Service Measurements (accuracy/completeness of broad spectrum of metrics measuring quality of service to customers) |
| 2010 - 2011 | Kentucky Public Service Commission | Audit of KU/LG&E Customer Service (metrics used to assess all aspects of customer service performance) |
| 2008-2010 | Illinois Commerce Commission | Evaluation of Peoples Gas Pipeline Safety Program (metrics for required and other pipeline and safety performance) |

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|---|---|---|
| 2010-2011 | Arizona Commerce Commission | Liberty performed a benchmarking analysis covering a ten-year audit period which benchmarked Arizona Public Service's performance with the following metrics:<br>• Operational Performance, including safety, reliability, customer satisfaction, coal plant performance, nuclear performance, and sustainability<br>• Cost Performance, including O&M expenditures, capital expenditures, and management and regulatory expense<br>• Financial Performance, including overall financial performance, cash flow metrics and financial risk measures<br>• Affiliate Expenses<br>• Hedging & Risk Management.<br><br>Liberty designed four separate panel groups of peer companies in order to perform this benchmarking study. |
| 2008 - 2009 | New York Public Service Commission | Management and Operations Audit of Consolidated Edison (metrics and benchmarking to assess systems & operations performance) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |
| 2008 | New Jersey Board of Public Utilities | Management and Operations Audit of Elizabethtown Gas & AGLR (metrics and benchmarking to assess systems & operations performance) |
| 2008 | Maine Public Utilities Commission | Examination of Northern Utilities Gas Company's gas safety operations and practices (metrics and benchmarking to assess systems & operations performance) |

**Name:** Charles King **Role** Project Manager

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | District of Columbia Public Service Commission | Management and Operations Audit of Pepco (metrics and benchmarking to assess systems & operations performance) |

| | | |
|---|---|---|
| 2011 - 2013 | New Hampshire Public Utilities Commission | Audit of FairPoint Communications' Wholesale Performance Metrics/Performance Assurance Plan (accuracy/completeness of broad spectrum of metrics used to measure quality of network performance and customer service) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2010 - 2011 | New Hampshire Public Utilities Commission | Audit of FairPoint Retail Quality of Service Measurements (accuracy/completeness of broad spectrum of metrics measuring quality of service to customers) |
| 2010 - 2011 | Kentucky Public Service Commission | Audit of KU/LG&E Customer Service (metrics used to assess all aspects of customer service performance) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |
| 2008 | New Jersey Board of Public Utilities | Management and Operations Audit of Elizabethtown Gas & AGLR (metrics and benchmarking to assess systems & operations performance) |

**Name:** Steven Vitale **Role** Lead Consultant: Operational Area Team – Natural Gas

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| Summer 2013 and still in progress | Columbia Gas Transmission<br>Virginia | Developed and documented operating procedures for LNG plant expansion |
| Winter 2012 – 2013 and still in progress | Piedmont Natural Gas<br>North Carolina | Developed and documented Fire and Gas philosophy, operating philosophy and operating procedures for LNG plant expansion |
| Winter 2012 – 2013 and still in progress | Alliance Energy<br>Syracuse New York | Developed safety analysis for new transmission main installation within the city of Syracuse and presented same to City Common Council |
| Winter 2012 – 2013 | New Mexico Gas Company for<br>New Mexico PRC | Developed expert testimony for the installation of a new LNG facility within the city limits of Albuquerque |

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| Winter 2012 – 2013 | Gas Technology Institute<br>Doha, Qatar | Developed and taught a comprehensive LNG Import Terminal course |
| Fall 2012 | South Jersey Gas Company for<br>New Jersey Board of Public Utilities | Developed an analysis and expert testimony to justify expenditures for the installation of major reliability transmission infrastructure |
| Fall 2012 | Longview Power Plant<br>West Virginia | Evaluated options to supply interruptible gas serviced to a pulverized coal power plant |
| Fall 2012 | Gas Technology Institute<br>Dominican Republic | Developed and taught an 8 day safety and operations LNG course for AES to certify employees |
| Fall 2012 | Gas Technology Institute<br>Shanghai China | Developed and taught an LNG terminals course |
| Summer 2012 | Gas Technology Institute<br>Beijing China | Developed and taught an LNG and Peak Shaving and Gas Thermodynamics course |
| Spring 2012 | Gas Technology Institute<br>Bilbao Spain | Developed and taught an LNG terminals course |
| Spring 2012 | Gas Technology Institute<br>Houston Texas | Developed and taught an LNG Peak Shaving course |
| Spring 2012 | Vitale Technical Services Inc.<br>Published by the Gas Technology Institute | Authored and published the book titled: "LNG and Gas II, a Software Aided Guide to Thermodynamics"<br>This was Dr.Vitale's 2nd book |
| Spring 2012 | Vitale Technical Services Inc.<br>Published by the Gas Technology Institute | Developed an e-learning course on LNG Plant Safety |
| Winter 2011 – 2012 | Vitale Technical Services Inc.<br>Published by the Gas Technology Institute | Developed an e-learning course on LNG Plant Operations |
| Winter 2011 – 2012 | Vitale Technical Services Inc. | Developed an e-learning course on LNG and Gas Thermodynamics |

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| Winter 2011 – 2012 | Columbia Gas Transmission<br>Virginia | Developed and documented maintenance procedures for an LNG plant |
| Winter 2011 – 2012 | Pacific Gas and Electric<br>California | Developed and presented a custom course for Emergency and Peak Shaving responding LNG personnel for gas pipeline system integrity |
| Spring 2011 | Dominion Hope Gas<br>for<br>PSC of West Virginia | Provided expert testimony developed from company metrics and compared same to regional and U.S. utilities for an accelerated main replacement program |
| Summer 2011 | Gas Technology Institute<br>Rotterdam | Developed and taught an LNG terminals course |
| Spring 2010 | QNL Quintero<br>Chile South America | Audited the new installation of an LNG plant before transfer of the plant from the contractor to the owner |
| Spring 2010 | Citizens Gas Company<br>Indiana | Safety, reliability and operability audit of existing LNG facility |
| Spring 2010 | National Grid<br>New York | Developed an analysis of existing LNG tank capabilities |
| Winter 2009 – 2010 | Helms and Company working regarding Con Edison Construction irregularities<br>for<br>NYSPSC | Investigated construction checks and balances that allowed inappropriate activities to occur between Con Edison and contractor personnel. |
| Summer 2009 | Columbia Gas of Kentucky<br>for<br>PSC of Kentucky | Provided expert testimony developed from company metrics and compared same to regional and U.S. utilities for an accelerated main replacement program |
| Fall 2009 | Canaport LNG<br>New Brunswick, Canada | Developed training and employee certification tests for LNG staff |
| Summer 2008 | Dominion Gas of East Ohio | Provided expert testimony developed from company |

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| | for<br>PUC of Ohio | metrics and compared same to regional and U.S. utilities for an accelerated main replacement program |
| Summer 2008 | South Jersey Gas Company for New Jersey Board of Public Utilities | Provided expert testimony to analyze and evaluate various methods of providing a safe and reliable gas system that avoids service interruptions |

**Name**: Christine Kozlosky **Role** Lead Consultant: Operational Area Team – Customer Service

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | District of Columbia Public Service Commission | Management and Operations Audit of Pepco (metrics and benchmarking to assess systems & operations performance) |
| 2012 | Connecticut Public Utilities Regulatory Authority | State Utilities' Response to Two 2011 Storm Events (reliability and infrastructure performance metrics) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2007 - 2012 | Illinois Commerce Commission | Review and assessment of 3 Ameren Utilities Electric Systems and Planning/Response to Storm Events (reliability and infrastructure performance metrics) |
| 2010 - 2011 | Kentucky Public Service Commission | Audit of KU/LG&E Customer Service (metrics used to assess all aspects of customer service performance) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |
| 2000 - 2008 | Illinois Commerce Commission | Assessment of Commonwealth Edison's transmission and distribution reliability (reliability and infrastructure performance metrics) |
| 2008 | New Jersey Board of Public Utilities | Management and Operations Audit of Elizabethtown Gas & AGLR (metrics and benchmarking to assess systems & operations performance) |

**Name**: John Sherrod **Role** Lead Consultant: Operational Area Team – Electric

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2012 | Connecticut Public Utilities Regulatory Authority | State Utilities' Response to Two 2011 Storm Events (reliability and infrastructure performance metrics) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2007 - 2012 | Illinois Commerce Commission | Review and assessment of 3 Ameren Utilities Electric Systems and Planning/Response to Storm Events (reliability and infrastructure performance metrics) |

**Name**: David Berger **Role** Lead Consultant: Utility Team – CH and NF

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | Connecticut Public Utilities Regulatory Authority | Statewide Gas Infrastructure Availability/Expansion Initiative (benchmarks/incentives to target and measure effectiveness of infrastructure investment) |
| 2009, 2012, 2013 | District of Columbia Public Service Commission | Review of Washington Gas Light's Replacement Program & Cost Recovery Clause (metrics for measuring progress and costs and for prioritizing work) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2008- 2010 | Illinois Commerce Commission | Evaluation of Peoples Gas Pipeline Safety Program (metrics for required and other pipeline and safety performance) |
| 2008 - 2009 | New York Public Service Commission | Management and Operations Audit of Consolidated Edison (metrics and benchmarking to assess systems & operations performance) |
| 2000 - 2008 | Illinois Commerce Commission | Assessment of Commonwealth Edison's transmission and distribution reliability (reliability and infrastructure performance metrics) |
| 2008 | New Jersey Board of Public Utilities | Management and Operations Audit of Elizabethtown Gas & AGLR (metrics and benchmarking to assess systems & operations performance) |
| 2008 | Maine Public Utilities Commission | Examination of Northern Utilities Gas Company's gas safety operations and practices (metrics and benchmarking to assess systems & operations performance) |

**Name**: Mark Lautenschlager **Role** Lead Consultant: Utility Team – NGUS

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | District of Columbia Public Service Commission | Management and Operations Audit of Pepco (metrics and benchmarking to assess systems & operations performance) |
| 2009 – 2013 | NorthWestern Energy – Butte, Montana | Development of Long-Term Electric & Gas Infrastructure Improvement Plan (metrics for determining improvement priorities and measuring progress and efficiency) |
| 2007 - 2012 | Illinois Commerce Commission | Review and assessment of 3 Ameren Utilities Electric Systems and Planning/Response to Storm Events (reliability and infrastructure performance metrics) |
| 2000 - 2008 | Illinois Commerce Commission | Assessment of Commonwealth Edison's transmission and distribution reliability (reliability and infrastructure performance metrics) |

**Name**: Phillip Teumim **Role** Lead Consultant: Utility Team – CEI

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | District of Columbia Public Service Commission | Management and Operations Audit of Pepco (metrics and benchmarking to assess systems & operations performance) |
| 2009 – 2013 | NorthWestern Energy – Butte, Montana | Development of Long-Term Electric & Gas Infrastructure Improvement Plan (metrics for determining improvement priorities and measuring progress and efficiency) |
| 2012 | Connecticut Public Utilities Regulatory Authority | State Utilities' Response to Two 2011 Storm Events (reliability and infrastructure performance metrics) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2008- 2010 | Illinois Commerce Commission | Evaluation of Peoples Gas Pipeline Safety Program (metrics for required and other pipeline and safety performance) |

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|---|---|---|
| 2010-2011 | Arizona Commerce Commission | Liberty performed a benchmarking analysis covering a ten-year audit period which benchmarked Arizona Public Service's performance with the following metrics:<br>• Operational Performance, including safety, reliability, customer satisfaction, coal plant performance, nuclear performance, and sustainability<br>• Cost Performance, including O&M expenditures, capital expenditures, and management and regulatory expense<br>• Financial Performance, including overall financial performance, cash flow metrics and financial risk measures<br>• Affiliate Expenses<br>• Hedging & Risk Management.<br><br>Liberty designed four separate panel groups of peer companies in order to perform this benchmarking study. |
| 2008 - 2009 | New York Public Service Commission | Management and Operations Audit of Consolidated Edison (metrics and benchmarking to assess systems & operations performance) |
| 2008 | New Jersey Board of Public Utilities | Management and Operations Audit of Elizabethtown Gas & AGLR (metrics and benchmarking to assess systems & operations performance) |
| 2008 | Maine Public Utilities Commission | Examination of Northern Utilities Gas Company's gas safety operations and practices (metrics and benchmarking to assess systems & operations performance) |

**Name**: Philip Weber **Role** Lead Consultant: Utility Team – IUSA

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2009 – 2013 | NorthWestern Energy – Butte, Montana | Development of Long-Term Electric & Gas Infrastructure Improvement Plan (metrics for determining improvement priorities and measuring progress and efficiency) |

**Name**: John Gawronski **Role** Data Analysis Team

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2008-2010 | Illinois Commerce Commission | Evaluation of Peoples Gas Pipeline Safety Program (metrics for required and other pipeline and safety performance) |

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|---|---|---|
| 2008 - 2009 | New York Public Service Commission | Management and Operations Audit of Consolidated Edison (metrics and benchmarking to assess systems & operations performance) |
| 2008 | Maine Public Utilities Commission | Examination of Northern Utilities Gas Company's gas safety operations and practices (metrics and benchmarking to assess systems & operations performance) |

**Name**: Alan Salzberg **Role** Statistician – Data Analysis Team

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2011 - 2013 | New Hampshire Public Utilities Commission | Audit of FairPoint Communications' Wholesale Performance Metrics/Performance Assurance Plan (accuracy/completeness of broad spectrum of metrics used to measure quality of network performance and customer service) |
| 2010 - 2011 | New Hampshire Public Utilities Commission | Audit of FairPoint Retail Quality of Service Measurements (accuracy/completeness of broad spectrum of metrics measuring quality of service to customers) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |

**Name**: Jonathan Scott **Role** Data Analysis Team

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2011 - 2013 | New Hampshire Public Utilities Commission | Audit of FairPoint Communications' Wholesale Performance Metrics/Performance Assurance Plan (accuracy/completeness of broad spectrum of metrics used to measure quality of network performance and customer service) |
| 2010 - 2011 | New Hampshire Public Utilities Commission | Audit of FairPoint Retail Quality of Service Measurements (accuracy/completeness of broad spectrum of metrics measuring quality of service to customers) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |

**Name**: Giulio Freda **Role** Data Analysis Team

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | District of Columbia Public Service Commission | Management and Operations Audit of Pepco (metrics and benchmarking to assess systems & operations performance) |
| 2011 - 2013 | New Hampshire Public Utilities Commission | Audit of FairPoint Communications' Wholesale Performance Metrics/Performance Assurance Plan (accuracy/completeness of broad spectrum of metrics used to measure quality of network performance and customer service) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2010 - 2011 | New Hampshire Public Utilities Commission | Audit of FairPoint Retail Quality of Service Measurements (accuracy/completeness of broad spectrum of metrics measuring quality of service to customers) |
| 2008 | New Jersey Board of Public Utilities | Management and Operations Aaudit of Elizabethtown Gas & AGLR (metrics and benchmarking to assess systems & operations performance) |

**Name**: Robert Falcone **Role** Data Analysis Team

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2011 - 2013 | New Hampshire Public Utilities Commission | Audit of FairPoint Communications' Wholesale Performance Metrics/Performance Assurance Plan (accuracy/completeness of broad spectrum of metrics used to measure quality of network performance and customer service) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2010 - 2011 | New Hampshire Public Utilities Commission | Audit of FairPoint Retail Quality of Service Measurements (accuracy/completeness of broad spectrum of metrics measuring quality of service to customers) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |

**Name**: Michael Antonuk **Role** Data Analysis Team

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2013 – Present | District of Columbia Public Service Commission | Management and Operations Audit of Pepco (metrics and benchmarking to assess systems & operations performance) |
| 2013 – Present | California Public Utilities Commission | PG&E Risk Assessment Use in Identifying Capital/O&M Expenditures (network performance, other metrics used to identify safety initiatives and measure performance) |
| 2011 - 2012 | Iowa Utilities Board | Management & Operations Audit of IPL (metrics use and benchmarking to assess systems & operations performance) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2010 - 2011 | Kentucky Public Service Commission | Audit of KU/LG&E Customer Service (metrics used to assess all aspects of customer service performance) |
| 2010-2011 | Arizona Commerce Commission | Liberty performed a benchmarking analysis covering a ten-year audit period which benchmarked Arizona Public Service's performance with the following metrics:<br>• Operational Performance, including safety, reliability, customer satisfaction, coal plant performance, nuclear performance, and sustainability<br>• Cost Performance, including O&M expenditures, capital expenditures, and management and regulatory expense<br>• Financial Performance, including overall financial performance, cash flow metrics and financial risk measures<br>• Affiliate Expenses<br>• Hedging & Risk Management.<br><br>Liberty designed four separate panel groups of peer companies in order to perform this benchmarking study. |
| 2008 - 2009 | New York Public Service Commission | Management and Operations Audit of Consolidated Edison (metrics and benchmarking to assess systems & operations performance) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |
| 2008 | New Jersey Board of Public Utilities | Management and Operations Audit of Elizabethtown Gas & AGLR (metrics and benchmarking to assess systems & operations performance) |

**Name**: Nicole Martin **Role** Project Coordinator

| Date(s) | Name and Location of Client | Description |
|---|---|---|
| 2011 - 2013 | New Hampshire Public Utilities Commission | Audit of FairPoint Communications' Wholesale Performance Metrics/Performance Assurance Plan (accuracy/completeness of broad spectrum of metrics used to measure quality of network performance and customer service) |
| 2011 - 2012 | New York Public Service Commission | Management & Operations Audit of Iberdrola USA (metrics and benchmarking to assess systems & operations performance) |
| 2010 - 2011 | New Hampshire Public Utilities Commission | Audit of FairPoint Retail Quality of Service Measurements (accuracy/completeness of broad spectrum of metrics measuring quality of service to customers) |
| 2005 - 2009 | Regional Oversight Committee (14 Separate Commissions across Qwest Service Area) | Comprehensive audits and reviews of Qwest's wholesale performance metrics and performance assurance plan (accuracy/completeness of broad spectrum of metrics to measure quality of network performance and customer service) |

The following hyperlink makes available resumes of each of these consultants: http://www.libertyconsultinggroup.com/nypscproposal. We encourage a review of both their recent experiences and those extending past the five-year window of the RFP. Our consultants have decades of experience in the management and operations of electric and gas systems and in the design, use, and auditing of performance metrics accuracy and completeness.

# 10. Relevant References

*Note that The Guide requested three references which are included here as numbers one through three, and references four and five are included here only to match the requested five references from the Proposal Submission Form.

Reference 1

| | |
|---|---|
| Company Name: | **New Hampshire Public Utilities Commission** |
| Contact Name: | **Kathryn M. Bailey** |
| Contact Title: | **DIRECTOR, TELECOMMUNICATIONS DIVISION** |
| Contact Role: | **COMMISSION STAFF PROJECT MANAGER** |
| Street Address: | **21 SOUTH FRUIT STREET, SUITE 10** |
| City: | **CONCORD** |
| State: | **NH** |
| Zip: | **03301-2429** |
| Telephone Number: | **602-542-0858** |
| Email Address: | **KATE.BAILEY@PUC.NH.GOV** |

Reference 2

| | |
|---|---|
| Company Name: | **Illinois Commerce Commission** |
| Contact Name: | **Roy Buxton** |
| Contact Title: | **MANAGER OF ENGINEERING PROGRAM** |
| Contact Role: | **COMMISSION STAFF PROJECT MANAGER** |
| Street Address: | **160 NORTH LASALLE STREET, SUITE C-800** |
| City: | **CHICAGO** |
| State: | **IL** |
| Zip: | **60601** |
| Telephone Number: | **217-785-5424** |
| Email Address: | **RBUXTON@ICC.ILLINOIS.GOV** |

Reference 3

| | |
|---|---|
| Company Name: | **Arizona Commerce Commission** |
| Contact Name: | **Terri Ford** |
| Contact Title: | **CHIEF OF TELECOM & ENERGY** |
| Contact Role: | **COMMISSION STAFF PROJECT MANAGER** |
| Street Address: | **1200 WEST WASHINGTON STREET** |
| City: | **PHOENIX** |
| State: | **AZ** |
| Zip: | **85007** |
| Telephone Number: | **602-542-0858** |
| Email Address: | **TFORD@AZCC.GOV** |

Reference 4*

| | |
|---|---|
| Company Name: | **14 Qwest Commissions (Colorado Department of Regulatory Affairs)** |
| Contact Name: | **Lynn Notarianni** |
| Contact Title: | **SECTION CHIEF** |
| Contact Role: | **COMMISSION STAFF PROJECT MANAGER** |
| Street Address: | **1560 BROADWAY, STE. 250** |
| City: | **DENVER** |
| State: | **CO** |
| Zip: | **80202** |
| Telephone Number: | **(303) 894-5945** |
| Email Address: | **LYNN.NOTARIANNI@DORA.STATE.CO.US** |

Reference 5*

| | |
|---|---|
| Company Name: | **Kentucky Public Service Commission** |
| Contact Name: | **John Rogness** |
| Contact Title: | **MANAGEMENT AUDIT BRANCH** |
| Contact Role: | **COMMISSION STAFF PROJECT MANAGER** |
| Street Address: | **211 SOWER BOULEVARD** |

| | |
|---|---|
| City: | **FRANKFORT** |
| State: | **KY** |
| Zip: | **40601** |
| Telephone Number: | **502-564-7192** |
| Email Address: | **JOHN.ROGNESS@KY.GOV** |

# 11. Potential Conflicts of Interest

Is Bidder currently conducting any audits or management audits, or providing any management audit preparation services, to other electric or gas utilities in New York State, or has Bidder conducted such audits or provided such services within the last five years?

[X] Yes [ ] No

If "yes", please explain in the box below.

Liberty is not conducting now, but has conducted within the past five years management and operations audits for the New York Public Service Commission of Iberdrola USA and Consolidated Edison of New York. Liberty completed in the first part of 2011 an examination of the affiliate relationships and transactions of National Grid USA. The Company asked Liberty to perform this review independently, and in a manner conforming substantively to how Liberty would have performed such a review for the Commission.