

**A PROPOSAL TO CONDUCT A  
COMPREHENSIVE MANAGEMENT AUDIT OF  
NIAGARA MOHAWK POWER CORPORATION  
d/b/a NATIONAL GRID ELECTRIC BUSINESS**

Submitted to the:

New York Public Service Commission

Three Empire State Plaza  
Albany, NY 12223-1350

**AUGUST 14, 2008**



MANAGEMENT CONSULTANTS

NEW LONDON, NH • LAS VEGAS, NV • SANTA MARIA, CA

August 14, 2008

Ms. Jaclyn A. Brilling  
Secretary  
New York State Department of Public Service  
3 Empire State Plaza  
Albany, NY 12223-1350

Dear Ms. Brilling:

NorthStar Consulting Group is pleased to provide our proposal to the New York State Department of Public Service (Department) to perform a Comprehensive Management Audit of Niagara Mohawk Power Corporation d/b/a National Grid electric business. We have responded to your Request for Proposal (RFP) in all respects, and our proposal is detailed as to the scope and approach to be employed during this engagement. As requested, NorthStar has provided an original and nine copies of our proposal and one electronic version sent to the Project Manager, Ms. Patrice O'Connor, separately at [patrice\\_oconnor@dps.state.ny.us](mailto:patrice_oconnor@dps.state.ny.us).

In the preparation of this proposal, we have been guided by some key needs for this assignment. We briefly describe them to provide the underlying philosophy of our approach.

- We have taken particular care to assemble a senior team of professionals to conduct this audit. Our team has significant utility management audit experience.
- The approach, methodology and work plan is comprehensive, and designed to address the areas of work outlined in the RFP.
- We understand the Department's objectives and needs for this audit. We plan to keep the Department informed of our findings as we proceed.
- We are aware of and can meet the critical milestone dates and deliverables.

As evidenced by my signature below, I certify that:

- All the information in the proposal is accurate;
- NorthStar is committed and able to perform all the work contained in the proposal;
- NorthStar is in compliance with all RFP requirements; and
- The proposal is valid for 180 days from this date.

I will act as the primary contact for this proposal if you have any questions. My contact information is as follows:

P. O. Box 2390  
New London, NH 03257  
(603) 763-2400  
Email: [perrywheaton@comcast.net](mailto:perrywheaton@comcast.net)

The NorthStar project team is available to meet with the evaluation committee to elaborate on this proposal and to give you a better basis on which to judge our capabilities.

Yours truly,

Perry L. Wheaton

Director

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# **I. INTRODUCTION**

NorthStar Consulting Group (NorthStar) is pleased to respond to the July 16, 2008 Request for Proposal (RFP) from the New York Public Service Commission (PSC) to perform a Comprehensive Management Audit of Niagara Mohawk Power Corporation d/b/a National Grid electric business (National Grid) (CASE 08-E-0827). Our proposal takes into account the specific requirements of the PSC, as expressed in the RFP and our extensive knowledge of the electric utilities industries. This section summarizes key aspects of our proposal to conduct the audit and provides the format for the remainder of our proposal.

## **A. Proposal Summary**

The audit provides a unique opportunity for the PSC and the Department of Public Service (DPS) Staff to gain valuable insight about National Grid's operations and management from objective third-party experts. We believe that the audit should be conducted in a constructive manner, characterized by frank and open discussion of findings, conclusions and recommendations. NorthStar's final report will provide an independent and objective evaluation of National Grid's current performance, specifically with respect to its construction program planning.

### **Scope and Objectives**

As indicated in the Request for Proposal (RFP), the audit scope is based on a framework of a series of elements or functions that are generally sequential in nature which can be viewed as a feedback loop. The elements, although generally sequential, require feedback from one or more of the latter elements to allow for revisions, adjustments, and other changes, over both the short- and long-term. This framework begins with the element of "corporate mission, objectives, goals and planning" and ends with "performance and results measurement." The "end" is actually the means by which the flow of the elements is connected to the first element. The feedback typically facilitates changes and improvements that will result in better performance.

This audit scope includes the following eight elements of the feedback loop:

- Corporate mission, objectives, goals and planning
- Load forecasting
- Supply procurement
- System planning
- Capital and operations and maintenance (O&M) budgeting
- Program and project planning and management
- Work force management

- Performance and results measurement.

The scope elements and their components are the major elements of the program feedback loop.

The audit scope focuses on National Grid's electric distribution and transmission operations. The scope of this audit also includes providing five full-day workshops to train Department of Public Service (DPS) Staff at the DPS' offices in Albany. The workshops will be scheduled after the audit begins and will be distributed over the duration of the audit. We understand that five to ten participants from the DPS Staff will participate in each workshop and that the workshop subjects will be determined after the audit starts.

## **Project Approach**

NorthStar views this audit as a unique opportunity to provide crucial support to the PSC and DPS in meeting the numerous internal and external challenges it faces in regulating National Grid's operations. Our approach is designed to help assure that National Grid is addressing strategic and operational concerns consistent with the needs of its customers.

NorthStar will ensure that:

- All construction program planning issues which may affect the National Grid's operations are being addressed in an effective manner;
- National Grid's corporate mission, objectives, goals and planning are consistent with its customers' needs;
- Our final report provides detailed and practical recommendations that address strategic and operational issues facing National Grid; and
- Our final report is well-documented, easy to understand and will withstand public scrutiny.

## **Project Team**

NorthStar is highly qualified to perform the management audit of National Grid. Our proposed Project Manager, Perry Wheaton, has a proven track record of delivering excellent results in other similar studies within the utility industry. He has managed over thirty utility management reviews for various regulatory agencies throughout the country.

We have taken care to propose a project team that consists of experts in utility strategic and operational issues, construction program planning and electric utility operations and who have substantial management audit experience in the utility industry. We are proposing a work plan requiring an estimated 4,210 professional staff hours to complete this project, at least seventy-five to eighty percent of which would be spent on site.

In addition to completing our projects within budget, we normally try to complete our projects ahead of the client's requested schedule. We believe that we have assembled the right team with the appropriate expertise and experience to perform the highest quality job in

the proscribed time frame. Our anticipated start date, based on dates in the RFP, would be November 5, 2008. Based on that start date, we are prepared to submit our draft report to the DPS in June, 2009 and our final report in October, 2009.

## **B. Organization of the Proposal**

This chapter has presented the objectives and scope of the audit and a brief discussion of the team which will conduct the project. The remaining sections of our proposal describe our preliminary work plan, firm and individual consultant experience, and our schedule and budget estimates. These sections are organized as follows:

- **Section II** – Scope and Objectives, provides our understanding of the scope and objectives for this audit.
- **Section III** – Approach, discusses our approach, project management and provides a description of project deliverables.
- **Section IV** – Areas and Issues, provides our preliminary work plan which includes a list of element areas to be reviewed including evaluative criteria and list of work tasks to be performed for each element.
- **Section V** – Consulting Staff Organization provides the structure of the consulting team assignments and background of personnel proposed for the assignment.
- **Section VI** – Schedule and Budget, itemizes professional staff fees and out-of pocket expenses, and provides our total not-to-exceed cost to perform the audit. It also provides the elapsed time estimate for each task in the work plan and a complete project schedule.
- **Section VII** – Firm Qualifications, describes NorthStar's history and provides a list of relevant projects with client names and references.
- **Section VIII** – Exhibits, provides our initial data and interview requests and our detailed project schedule.

## **II. SCOPE AND OBJECTIVES**

In this section, NorthStar provides background on National Grid and confirms the scope and objectives of the management audit as noted in the RFP and other materials.

### **A. Introduction**

With the acquisition of KeySpan in August 2007, National Grid became the second largest utility in the US in terms of customer numbers. About fifty percent of National Grid's business is now located in the US. This audit will focus on the electric business of the former Niagara Mohawk Power Corp. (Niagara Mohawk) which was acquired by National Grid in January, 2002 for about \$3 billion. At the time of its acquisition, Niagara Mohawk provided electricity to more than 1.5 million customers across 24,000 square miles in upstate New York. At that time, National Grid became the eighth largest electric utility in the US with over 3.5 million customers. For fiscal year 2008, U.S transmission, and electricity distribution and generation operations provided about 19 percent of National Grid's operating profit. National Grid's New York electricity regulated asset base approximates \$3.5 billion, and National Grid expects to invest \$1.47 billion in its New York electric plant in the five year period from 2007 to 2011.

National Grid has an international corporate structure that differs from the other electric/gas utilities in New York State. National Grid's Executive Management is located in Great Britain (UK) including its Board of Directors, Chief Executive, and the Executive Directors for each of five separate lines of business – Transmission, Gas Distribution, Electric Distribution & Generation, Business Development & Non-Regulated, and Finance & Shared Services. Each line of business has an Executive Vice President for US Operations which includes operations in New York and New England.

In 2007, National Grid began centralizing work processes and locations in support of their corporate goals and operating model. The physical location of the US facilities include main offices which are centralized for employees who don't need to be geographically located with operations; special purpose facilities including data centers, control centers, call centers and training facilities; and operations sites for field operations. For electric operations, New York is divided into three regions – Central, East and West. Geographically, this includes parts of eastern upstate New York, Central New York, Western New York, Brooklyn and Long Island.

### **B. Scope**

NorthStar's management audit will be comprehensive and thorough, and will focus on National Grid's construction program planning, operational efficiency and performance, including reliability, as required by the Public Service Law, Section 66(19). The Public Service Law states "the audit shall include, but not be limited to an investigation of the



company's construction program planning in relation to the needs of its customers for reliable service and an evaluation of the efficiency of the company's operations."

As indicated in the Request for Proposal (RFP), the audit scope is based on a framework of a series of elements or functions that are generally sequential in nature which can be viewed as a feedback loop. The elements, although generally sequential, require feedback from one or more of the latter elements to allow for revisions, adjustments, and other changes, over both the short- and long-term. This framework begins with the element of "corporate mission, objectives, goals and planning" and ends with "performance and results measurement." The "end" is actually the means by which the flow of the elements is connected to the first element. The feedback typically facilitates changes and improvements that will result in better performance.

This audit scope includes the following eight elements of the feedback loop:

- Corporate mission, objectives, goals and planning
- Load forecasting
- Supply procurement
- System planning
- Capital and operations and maintenance (O&M) budgeting
- Program and project planning and management
- Work force management
- Performance and results measurement.

The scope elements and their components are the major elements of the construction program feedback loop.

The audit scope is National Grid's New York State electric transmission and distribution operations. The scope of this audit also includes providing five full-day workshops to train Department of Public Service (DPS) Staff at the DPS' offices in Albany. The workshops will be scheduled after the audit begins and will be distributed over the duration of the audit. We understand that five to ten participants from the DPS Staff will participate in each workshop and that the workshop subjects will be determined after the audit starts.

## **C. Objectives**

Generally, the objectives of this audit as identified in the Audit Guide are guided by the principle that process improvements lead to performance improvements. The objectives include:

- Identify specific opportunities, as needed, for improving: planning, organizational design, business processes, management practices, systems and operations.
- Identify specific opportunities, as needed, to improve performance, including operational productivity, operational reliability, organizational effectiveness, cost controls and savings, work quality, customer service, safety and other measurable elements.
- Develop recommendations, as needed, for implementing changes or undertaking the studies necessary to achieve performance improvements. Where feasible, recommendations should be supported by benefit/risk and benefit/cost analyses.
- Receive a written report that meets the scope and objectives of the RFP, including factual findings, conclusions and recommendations.

This audit will assess National Grid’s effectiveness in meeting its mission, particularly with respect to meeting its performance goals and the extent to which there are opportunities for improvement. In this regard, this audit will focus on National Grid’s construction program planning, operational efficiency and performance including reliability. Included within each element of the construction program feedback loop are components, issues, parameters, and questions. Within each element, the audit objective will address the following generic questions and issues:

- The purpose, mission, planning, goals and objectives, and strategies.
- Functions processes, practices and systems.
- Organizational design.
- Staffing, responsibilities, and accountabilities.
- Cost control/cost oversight.
- Efficiency and effectiveness.
- Results and performance.
- Opportunities for improvements, including “best practices” (based on past experience) that are appropriate to national Grid’s operating environment.

The components and issues for each element in the feedback loop as identified in the RFP are reviewed in detail in the **Section IV - Areas and Issues for Review**. An audit objective will be to compare these elements and their components to industry “best practices”, appropriate to National Grid’s operating environment based on our past experience.

An additional objective of this audit will be to provide workshop type training to DPS Staff on subjects yet to be determined. As indicated in the RFP, one workshop may be focused on optimum (or “best”) practices that utilities use to assess operational risks associated with the delivery of the commodity, how risk assessment impacts the long-term corporate construction and O&M decisions, and how budgeting priorities are managed.

### **III. APPROACH, METHODS, PROCEDURES AND AUDIT MANAGEMENT**

This section provides a discussion of NorthStar's general approach to management audits. Our approach is based on what we believe is the most efficient and effective means of completing the audit of National Grid.

#### **A. Introduction**

NorthStar prides itself on performing independent and objective management audits for regulators. In this context, we plan and conduct our assignments to maximize client participation (the DPS Staff), and we will work closely with the DPS project manager to finalize our work plans for each task area and to conduct the audit. To facilitate the interaction and dialogue among the audit team, the DPS Staff and National Grid, our project manager will also work closely with both the DPS and National grid project managers to coordinate audit activities, to schedule and conduct regular briefings and three-party meetings, as appropriate.

The RFP identified a reasonable time schedule for the consultant to issue a draft report in June, 2009. Our schedule presented in **Section VI – Schedules and Budgets** is designed to meet this deadline, and, in fact, to issue our draft report in June, 2009 assuming a starting date of November 5, 2008. To complete the work plan within that timeframe, we have developed an initial data request (**Exhibit III-1** located in **Section VIII - Exhibits**) that should be provided to National Grid as soon as we are selected in order that it can make the responses available to us at the time of the “kick off” of the audit. Our project team has the availability and commitment to meet this target. Our team has a history of bringing projects in on time and on budget. Our experience indicates that an audit of this magnitude is best performed when a rigorous time schedule is established and adhered to. It enhances the sense of urgency that an undertaking as complex and important as this audit be performed in an expeditious and timely manner. Attaining our aggressive schedule will require the full cooperation of both National Grid and the DPS Staff.

NorthStar will use a time-proven approach to perform this audit that will ensure the delivery of a high quality product in a cost-effective and timely manner. Our approach is designed to: promote a focus on the specific needs of the DPS Staff; rely on quantitative data to support findings; have open communication among the parties; adhere to generally accepted auditing standards; and, thoroughly document our report findings in our work papers.

Our approach has the following characteristics:

- It will be performed by experienced consultants who have the appropriate combination of utility management audit, utility industry and functional expertise and

who have worked together on numerous previous audits of a similar magnitude and complexity.

- Maximize the value of input from the DPS Staff and National Grid while minimizing the disruption of regular operations through our practice of scheduling interviews and other activities well in advance.
- Evaluations based on demonstrated performance, and, when appropriate, qualitative and quantitative metrics.
- Eliminate surprises by keeping the DPS Staff and National Grid informed of our activities, findings, and conclusions throughout the audit.

Our approach has three phases:

- Phase I. Orientation and Planning
- Phase II. Technical Review
- Phase III. Report Development

## **Phase I. Orientation and Planning**

The objectives in the first phase of the audit are as follows:

- Confirm our understanding of the audit objectives and scope and the DPS' expectations from the audit.
- Finalize contractual, project management and other administrative matters.
- Develop an understanding of the current operations, organization, and key management processes of National Grid.
- Perform a risk assessment of audit task areas to prioritize our audit activities.
- Finalize and gain approval of our detailed work plan which will guide our activities during the remainder of the audit.

At the commencement of the project, we will conduct initial interviews (**Exhibit III-2** located in **Section VIII - Exhibits**) and collect and review responses to our initial data request. We will also prepare follow-on data requests and request additional interviews as may be required. Specifics regarding project logistics, key contacts, interfaces, schedules and communications will be established during this phase. Work activities included in this phase are listed below.

- Complete logistical and contractual arrangements. The NorthStar project manager will meet with DPS Staff and National Grid project managers to complete logistical

and contractual arrangements. We will also reach agreement on protocols for the audit, including, at a minimum, the following:

- Procedures for requesting and tracking interviews and documents.
- Working paper and documentation requirements.
- Procedures for adhering to auditing standards.
- Identify any additional issues or concerns and further explore DPS Staff objectives for this audit.
- Policies and procedures for treating confidential information.
- Quality control and reporting procedures.
- Review responses to our initial document requests. To facilitate the start of the review, we would expect National Grid to have a complete set of all requested documents available at the time of the kick-off meeting.
- Attend National Grid presentation and conduct initial interviews. To ensure that we have a detailed understanding of National Grid’s organization, relationships and processes, we would ask that the appropriate National Grid personnel make a presentation to our consulting team. Following this presentation, we will initiate our interviews of key personnel.
- Schedule and conduct additional interviews and request and review additional documents.
- Analyze the information received obtained from our interviews and our document reviews.
- Prioritize audit requirements. We will assess audit risk exposures to prioritize our work and to determine areas in which sampling techniques will be employed.
- Finalize plans to conduct training workshops for DPS Staff.
- Prepare our draft work plan and obtain DPS Staff’s approval of it.
- Issue additional data and interview requests required for Phase II.

## Phase II. Technical Review

In this phase, the audit team will perform its principal investigation, data collection and other technical review activities for each of the eight identified audit elements and the DPS Staff training workshops. Work activities which we would expect to perform in the technical review are provided in **Section IV – Areas and Issues for Review** for each element. Wherever possible, the audit team will seek to employ quantitative measures for evaluation. National Grid’s organization, operations management and financial management will be evaluated against industry “best practices.” **Table III-1** provides an example of a preferred practices checklist against which we would evaluate National Grid management practices.

**Table III-1**  
**Preferred Practices Checklist: Corporate Planning**

No.	NorthStar Preferred Practices	Yes	No
1	Directed by the CEO.		
2	Has significant senior management involvement.		
3	Reviewed and approved by the Board of Directors.		
4	Coordinated and monitored by dedicated resources.		

No.	NorthStar Preferred Practices	Yes	No
5	Processes and responsibilities are well-documented and understood by key management personnel.		
6	Process assures appropriate bottom-up input.		
7	Addresses a wide range of issues.		
8	Is responsive to dynamic changes in the operating environment.		
9	Includes detailed functional and departmental performance goals.		
10	Links goal attainment to incentive compensation.		

Our audit team will integrate and summarize information gained during this phase and develop preliminary findings, conclusions and recommendations to be included in our task reports and our draft report. In general, our work activities will include the following:

- Review of documents and other data to be requested from National Grid.
- Interviews with National Grid personnel.
- Testing compliance with company, industry and other standards.

In formulating conclusions, the audit team will focus on substantive issues. National Grid management practices will be evaluated against existing rules and regulations as well as sound, generally accepted business practices. We will apply a standard of reasonableness which regulators and courts have accepted in a wide range of retrospective evaluations of management performance, that is, one that does not require perfection, is not based on outcomes, and does not rely on hindsight. The conclusions will reflect areas where National grid is appropriately managing as well as areas where improvement may be required.

The audit team will verify the facts in our task reports for each audit element in three-party meetings with National Grid and the DPS Staff prior to drafting reports to assure that our facts are accurate and that we have appropriately addressed major issues. After the audit team has finalized its conclusions, we will prepare recommendations that may take a variety of forms. For example, they may identify specific accounting adjustments or changes in organizational structure, policies, processes, information systems and operating practices. Other recommendations may require additional studies in some areas to identify more specific opportunities and some may identify policy considerations for National Grid and/or the DPS. The expected cost and benefits of each recommendation will be described. We will also recommend schedules for implementation.

### Sampling Techniques

During the course of our work, we will select transactions, data, documents and other information for review. We expect that in some cases we will utilize sampling techniques to examine this data. When we use sampling techniques, our goal will be to select a sample of the population and make inferences from that sample. The two general approaches to audit sampling are statistical and non-statistical.

Each of these approaches has the same basic requirements.

- Planning: When planning the audit sample, the relationship of the sample to the audit objective should be considered.
- Selection: Items should be selected so that the sample can be expected to be representative of the population and all items in the population have an opportunity to be selected.
- Evaluation: The results of the audit sample should be projected to the population from which the sample was selected.

No single audit sampling technique can be predicted, or is likely to be used, in all sampling situations for the audit. The specific sampling techniques we use will be selected based on the audit objective for each sample selected and the nature and availability of data for a population. During the audit, NorthStar will develop specific sample methodologies for our testing as appropriate.

Our selection of a representative sample of construction programs and projects that are completed and/or in progress will be based on the aforementioned approach to sampling. First, we will develop a profile of recently completed, in progress and planned construction projects. From this profile, we will select projects that, at a minimum, have the following characteristics:

- Be representative of the transmission and distribution operations.
- Provide significant overall dollar coverage.
- Reflect different types of projects.
- Reflect different-sized projects by dollar amount.
- Are performed in varying geographical locations by different organization groups.
- Provide a valid sample.

### **Phase III. Report Development**

Bi-weekly briefings in person or by teleconference will be provided to the DPS Project Manager. At a minimum, these briefings will address the following:

- Summary of progress towards the objectives and schedules of the audit.
- Discussion of emerging issues, preliminary findings and likely conclusions.
- Review of challenges encountered to date.
- Discussion of open data or interview requests.



- Discussion of any modifications to the work plan or schedule which may be appropriate as a result of the challenges and/or preliminary findings and conclusions.

As indicated in our project schedule in **Section VI – Schedules and Budgets**, we will have a mid-point status meeting with DPS Staff the week of March 2 - 6, 2009 (mid-point of our Phase II - Technical Review), to discuss emerging issues.

Task reports will be prepared and submitted to the DPS project manager for each of the eight element areas for the three businesses as the work is completed. Each task report will include an overview, evaluative criteria, findings, conclusions and recommendations, and a detailed narrative describing the applicable policies and management processes in sufficient detail to allow the reader to understand the reasoning behind each finding and conclusion. Assuming work begins by November 5, 2008, the draft report can be provided to the DPS Staff in June, 2009, unless other arrangements are made with the DPS project manager.

After we complete the three-party fact verification meetings for our task reports, we will prepare a draft report and submit it to the DPS Staff for comment. The draft report will include an executive summary, a description of the audit process, and the completed task reports in each audit area. After receiving comments from the DPS Staff on the draft report, we will revise the draft report as appropriate and issue it to National Grid for comment. Prior to receiving comments from national grid, we will hold a three-party meeting with DPS Staff and National Grid to address any issues or misunderstandings that might exist among the three parties.

After receiving comments from National Grid, we will revise our report as appropriate and issue our revised report to the DPS Staff and National Grid. After receiving comments about the revised report from the DPS Staff and National Grid, we will finalize and issue our report. We will prepare a completely annotated copy of the final report containing all of the information supporting our recommendations. The final report will be written using terminology that will be meaningful to National Grid management, DPS Staff and others generally familiar with the subject area. The report will be objective, comprehensive and conclusive. At a minimum, the report will address all of the audit elements identified in the RFP and present our investigation, and recommendations relating to the subject matter.

## **B. Audit Management**

Effective project management requires the development of a logical and efficient work plan that is clearly understood by the project team and the DPS Staff. The project manager will closely manage the cost and schedule of this audit through careful planning and the use of proven project controls. Project management activities will include:

- Defining tasks to investigate thoroughly all audit areas.
- Specifying task dependencies so that interdependent tasks will be completed in the appropriate sequence to ensure that the flow of work builds a cumulative body of knowledge rather than clusters of data with possible contrasting conclusions. Since



several of the work activities in different task areas are related, work will be planned and scheduled to avoid duplication of activities.

- Defining protocols for interfacing with external parties, if any.
- Estimating staff hours and preparing schedules to complete each task.
- To ensure that the audit is managed at all times, the project manager will carefully:
  - Review the work in progress including performing such quality control activities as attending interviews, reviewing the processes used in analysis, testing conclusions, and checking the clarity and completeness of all written materials.
  - Compare actual versus estimated hours and expenses by staff for each task defined in the work plan.
  - Make project plan adjustments based on the project progress to date, changes in project scope or changes in priorities.
  - Establish and enforce documentation standards for audit work papers to ensure confidentiality, accuracy, completeness, and consistency.
  - Establish a workable set of administrative procedures covering:
    - Requesting, storing, and returning documentation and other information.
    - Scheduling interviews and documenting results.
    - Reporting project hours and expenses.
    - Reporting progress and dealing with exceptions.

We believe that the audit should be a positive experience for National Grid and the DPS Staff, as well as National Grid's customers, stakeholders, and other constituencies. In conducting the audit we will ensure that a spirit of cooperation is maintained among the three key parties involved – the DPS Staff, National Grid, and our audit team. In conducting the audit, we will maintain a professional relationship with National Grid personnel and DPS Staff. Our consulting team members are experienced in conducting studies on client premises and know how to minimize disruption to the client's normal operations. We plan interviews ahead of time, maintain our appointment schedules, and are sensitive to the normal demands placed on a manager's time during the business day.

We expect that the project managers designated by the DPS and National Grid will be the sole sources of contact for NorthStar in any discussion with the DPS or National Grid personnel regarding the audit process. NorthStar further understands that the DPS Staff and National Grid personnel will be active participants in the review, and we are prepared to work with them throughout the course of the audit. NorthStar expects that DPS Staff and National Grid staff may attend selected interviews, review analytical procedures, and will monitor the audit's progress as to scope, budget, work plans, and time. In any event, NorthStar expects that each consultant assigned to a task area will frequently discuss his/her progress informally and directly with the DPS Project Manager or his designee.

NorthStar strives for all our work products to be of the highest quality. Utility management audits are complex projects, involving many consultants and many separate tasks. While careful planning is an important task in an audit, we believe that the experience

and organization of the project team is the most important factor in determining the quality of the final product. Three distinctive features of our proposed team and approach will ensure a quality product.

- The project manager and lead consultants are experienced utility management audit professionals.
- Third, the NorthStar audit team will perform all work in a professional manner in accordance with *Government Auditing Standards July 2007 revision GAO-07 731G* (also known as the Yellow Book). NorthStar will also adhere to the American Institute of Certified Public Accountants' (AICPA) Code of Professional Conduct; the National Association of Regulatory Commissioners' *Consultant Standards and Ethics for the Performance of Management Analysis*; and "The Guide - A Guide for Consultants Submitting Proposals Management and Operations Audits" issued by the State of New York Department of Public Service in June, 2008. Adherence to these standards will provide the project controls and reporting standards necessary to perform the audit effectively and provide sufficient justification for all recommendations.
- The NorthStar project team has a demonstrated track record for producing quality products within schedule and budget limits. Members of the proposed audit team have successfully performed audits or similar projects in many states.

The NorthStar Project Manager will review both the process and analysis used by the consultants, and he will review all the work products prepared by the audit team. This review will prove useful in helping the audit team place appropriate emphasis on issues important to the DPS.

NorthStar will maintain adequate documentation of report findings and conclusions to ensure that our work is factually based, that our findings and conclusions are supported by relevant data, that our professional judgment, where applied, is differentiated from analytical results, and that the results of our audit are easily traceable to specific consultant efforts. In short, NorthStar will establish an "audit trail." NorthStar consultants are familiar with the need for such an audit trail. Our consultants' involvement in numerous proceedings that have called for providing expert witnesses for public testimony has sensitized them to the need to correlate each statement in a report with the working papers and documents that support it.

In accordance with generally accepted auditing standards (GAAS), our work papers will be:

- Complete and accurate.
- Clear and easily understandable.
- Legible and neat.

- Relevant, i.e., "restricted to matters that are materially important and relevant to the objectives of the assignment."

## **C. Deliverables**

As part of the audit process, we will prepare and obtain a number of documents, working papers and reports that will be available during and upon completion of the project to the DPS Staff. These include the following:

- **Interview Documentation.** The project team will use a formal interview request form that will be provided as a record of our request and the topics to be covered in interviews. All interview requests will be assigned a unique number that will allow us to track the status of responses and reference the specific document in the final report. When possible, interviews with personnel will be requested at least ten working days in advance. Upon completion of each interview, we will prepare a formal interview summary including participants, conclusions and observations, data requests generated, issues identified, and follow-up required. The interview summaries will become part of our audit work papers.
- **Data Requests.** Throughout the audit, we will provide written requests for documents and other information. These document requests will clearly specify the information or documents needed and, if possible, the person most likely to have access to the document or information. All data requests will be assigned a unique number that will allow us to track the status of responses and reference the specific document in the final report.
- **Progress Reports.** To keep the DPS Staff apprised of audit progress, we expect to have frequent contacts and will provide periodic oral and written reports as requested by the DPS project manager. All such contacts will be documented and become part of the project work papers.
- **Task Reports.** Task reports will be developed for each of the eight element task areas. The facts in these task reports will be reviewed by the DPS Staff and National Grid for factual verification and will be included in the final report. Comments provided to us regarding the verification will be fully documented and become part of our project work papers.
- **Final Audit Report.** We will provide the DPS Staff and National Grid both written and electronic versions of the final report in whatever reasonable quantity and format is requested. The full report will describe each audit task area, our evaluative criteria, audit tasks performed, findings, conclusions, and recommendations. The report will be a complete description of the results of our audit of the respective task areas. In preparing the final report, the only changes NorthStar will make to the final draft report will be in response to specific comments from the DPS Staff and/or National Grid.

- **Working Papers.** We will develop an organized set of work papers that will be the basis for our report. The report will be footnoted to these work papers as the source of its factual statements as well as the basis for its findings, conclusions and recommendations. If requested, we will provide a complete set of working papers, indexed and in orderly form upon completion of the audit. The working papers will include a copy of the work plan indicating the consultant, who performed the work and date completed, and documents, interview summaries and analysis supporting our findings and conclusions. All work papers, interview notes, statistical analyses, and other supporting documents developed or obtained during the course of the audit will be made available to Staff in an organized electronic format. We will maintain a data base of non-sensitive material received during the course of the audit to which DPS Staff will be given both on-site and off-site access.
- **Interviews and Site Visits Schedules.** A report of interviews and site visits scheduled for the following week will be issued weekly. At a minimum, this report will include the interviewee, interviewer, topic/area of focus, date, time and location. As this report is updated weekly, it will serve as a report on interviews conducted.
- **Person-Days Expended Report.** A monthly report of person-days expended by activity in each task area. This is a progress report relative to the calendar (time-line) schedule provided in **Section VI – Schedules and Budgets** and will show the original estimate, time spent during the current month and to-date, estimated time to complete, and percent completed.
- **Weekly Document Request Log.** This log will identify documents requested and date received, will be kept on-site at National Grid and will also be available electronically. Documents will be kept in a document data base.
- **Interview Summaries.** At a minimum, the interview summaries will include the names of the interviewee and interviewer, the title and organization of the interviewee, documents requested and items discussed.
- **Emerging Issues/Conclusions Summaries.** Prior to the submission of our initial draft audit report, we will prepare written summaries of emerging issues. These summaries will be prepared prior to the mid-point of our Phase II – Technical Review.

## D. Testimony

At this point in time, it is uncertain whether testimony will need to be presented on the final report. Therefore, the not-to-exceed price outlined in **Section VI – Schedules and Budgets** does not include the activities associated with the preparation and presentation of testimony. However, NorthStar would prepare and present testimony on the final report, if requested. The project manager and/or lead consultants most familiar with the specific findings, conclusions and recommendations would prepare and provide the testimony. The number of witnesses would depend on the specific areas being addressed in testimony. Our billing rates would be the same as indicated in Section VI.

## **IV. AREAS AND ISSUES FOR REVIEW**

This section provides a detailed description of how the audit areas and issues will be examined by the NorthStar consulting team, and indicates the consultants assigned and our estimated level of effort for each audit area,

### **A. Overview**

As indicated in the Request for Proposal (RFP), the audit scope is based on a framework of a series of elements or functions that are generally sequential in nature which can be viewed as a feedback loop. The elements, although generally sequential, require feedback from one or more of the latter elements to allow for revisions, adjustments, and other changes, over both the short- and long-term. This framework begins with the element of “corporate mission, objectives, goals and planning” and ends with “performance and results measurement.” The “end” is actually the means by which the flow of the elements is connected to the first element. The feedback typically facilitates changes and improvements that will result in better performance. The scope elements and their components are the major elements of the construction program feedback loop. The audit scope includes National Grid’s electric transmission and distribution businesses.

The scope of this audit also includes providing five full-day workshops to train Department of Public Service (DPS) Staff at the DPS’ offices in Albany. The workshops will be scheduled after the audit begins and will be distributed over the duration of the audit. We understand that five to ten participants from the DPS Staff will participate in each workshop and that the workshop subjects will be determined after the audit starts.

This audit will assess National Grid’s effectiveness in meeting its mission, particularly with respect to meeting its performance goals and the extent to which there are opportunities for improvement. In this regard, this audit will focus on National Grid’s construction program planning, operational efficiency and performance including reliability. Included within each element of the construction program feedback loop are components, issues, parameters, and questions. Within each element, the audit objective will address the following generic questions and issues:

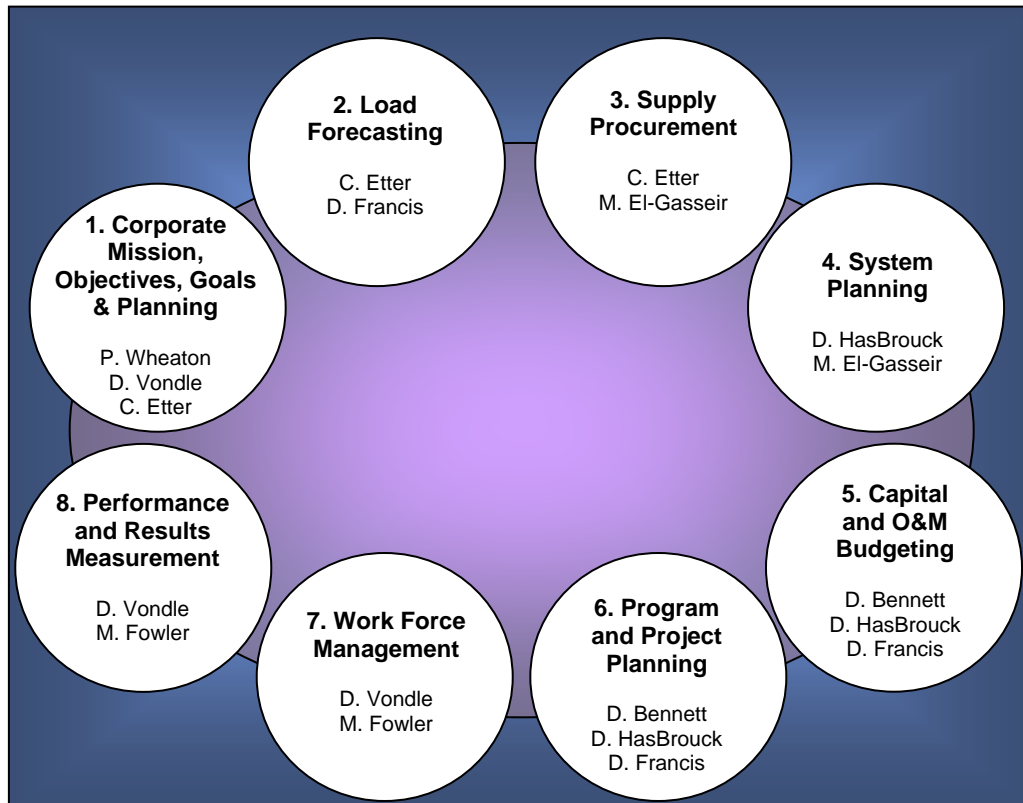
- The purpose, mission, planning, goals and objectives, and strategies.
- Functions processes, practices and systems.
- Organizational design.
- Staffing, responsibilities, and accountabilities.
- Cost control/cost oversight.
- Efficiency and effectiveness.
- Results and performance.

- Opportunities for improvements, including “best practices” (based on our past experience) that are appropriate to National Grid’s operating environment.

## B. Feedback Loop Audit Elements

The eight elements of the feedback loop are displayed in **Table IV-1**.

**Table IV-1**  
**Elements of the Feedback Loop**



Collectively, these elements cover most of National Grid’s operations and touch many functional aspects of the Company. Therefore, our review will require obtaining information from and observing many aspects of National Grid’s organization. Our proposal assigns specific process areas to individual consultants as outlined in **Section V** based on the specific expertise of the consultants. The audit work in each element area will be directed by a lead consultant. An estimated breakdown of the hours required and personnel associated with each element are provided in **Table IV–2** at the end of this section. Our proposed project organization is shown in **Table V–1** in **Section V - Consulting Staff Organization**.

## C. Preliminary Element Area Work Plans

In this section, we provide the following for each element area:

- Perspective
- Assigned Consultants
- Phase II – Technical Review Consultant Hours
- Evaluative Criteria as identified in the RFP
- Additional NorthStar Evaluative Criteria to supplement those provided in the RFP
- Work Tasks

**Exhibit III - 1** provides an initial list of the documents and data we would review at the beginning of the audit and **Exhibit III - 2**, provides a list of initial interviews we intend to conduct. **Exhibits III-1** and **III-2** are provided in Section VIII – Exhibits.

### Element No. 1: Corporate Mission, Objectives, Goals and Planning

As a global company, National Grid faces a formidable challenge to having an effective and cohesive corporate mission, objectives, goals and planning program. It has both regulated and unregulated businesses that operate in different countries. Most of its operations are in the regulated electric and gas businesses. Since its U. S. operations were all acquired, i.e. the former New England Electric System, Niagara Mohawk and KeySpan, National Grid has the additional challenge of integrating vastly different cultures within the U.S. as well as world-wide. In 2007, National Grid began the onerous task of centralizing work processes and locations in support of their corporate goals and operating model.

The successful acquirers of utilities have a strong and well-articulated governing philosophy and operating model. Two successful acquirers in the utility industry are FirstEnergy and AT&T. Key members of our project team have had significant experience with both companies through the management audit of FirstEnergy's Pennsylvania Companies and the review of the savings from the SBC/Ameritech merger. Our experience indicates that this audit needs to determine that National Grid's New York electric ratepayers are not harmed as a result of not receiving the necessary resources. The corporate processes of a large and complex business like National Grid have an inherent need to standardize all processes without necessarily reflecting the unique requirements of each entity. Key to our audit process will be our ability to understand National Grid's operating model and how it affects New York ratepayers.

**Lead Consultant:** Perry Wheaton  
**Consultants:** Carol Etter  
Dave Vondle



## **Phase II – Technical Review Consultant Hours: 250**

### **RFP Evaluative Criteria:**

- Are the governance, organizational structure missions and relationships within National Grid as they relate to the electric program planning process appropriate?
- Are organizational responsibilities for planning priorities and budgeting allocations for the electric business appropriate?
- Are the Board of Directors and executive and senior management properly involved in the development of budgeting guidelines and periodic budget reviews and approvals?
- Are National Grid's financial position and the level of its rates appropriately factored into the budgeting process?
- Does executive management use measurable goals, metrics and key performance indicators to achieve the corporate mission and objectives, and is the performance process handled effectively by successive levels of management?
- Does National Grid comply with procedures and practices related to the scope of the audit, e.g., internal controls, Internal Audit function and the Sarbanes Oxley Act?
- Are management performance and compensation programs aligned with the corporate mission, objectives and goals at all organizational levels within the corporation?
- Are National Grid's goals for modernization of its electricity transmission and distribution system responsive to the Energy Independence and Security Act of 2007"

### **Additional NorthStar Evaluative Criteria**

- Does the parent affect budgeting priorities and allocations among the businesses in a positive manner?
- Are budgeting priorities and allocations for the National Grid's electric transmission and distribution operations appropriate?
- Was an effective process used to establish the current corporate mission?
- Is there a strategic planning process in place? Is it used and useful? Does the process receive input from appropriate stakeholders? Is the strategic plan reviewed and updated periodically?
- Is there a tactical business/operational plan? Are there department tactical business/operational plans? Are these plans consistent with the Company's strategic plan? Are they reviewed and updated periodically?



- Are the types and extent of communications between management and the Board sufficient?
- Are the types and extent of communications between management and employees sufficient?
- Are the types and extent of communications between management and external stakeholders (customers, regulators, shareholders, others) sufficient?
- Is employee feedback concerning the corporate mission and supporting strategic plans collected and used?
- Is external (customer, regulator and shareholder) feedback concerning the corporate mission collected and used?
- Are the Company goals and objectives reasonable? Are they generally achieved?

#### **Work Tasks:**

1. Determine how budgeting priorities and allocations among National Grid's businesses are established
2. Examine budgeting priorities and allocations for New York operations.
3. Interview members of the Board of Directors and executive and senior management to determine their involvement in developing budgeting guidelines, performing periodic budget reviews and approving budgets.
4. Examine how National Grid's financial position and the level of its rates are factored into the budgeting process.
5. Determine if executive management uses measurable goals to achieve the corporate mission and objectives, and how the performance process is handled by successive levels of management.
6. Interview the Internal Audit Director and the Chairman of the Audit Committee of National Grid's Board.
7. Review the independent auditors' recent management letters and reports regarding Sarbanes Oxley compliance.
8. Evaluate how National Grid ensures compliance with procedures and practices related to the scope of the audit, e.g., internal controls, Internal Audit function and the Sarbanes Oxley Act.
9. Evaluate how management performance and compensation are aligned with the corporate mission, objectives and goals at all levels within the corporation.

10. Review processes used to develop and maintain the corporate mission, objectives and goals.
11. Assess the formal and informal processes used by senior management to communicate the corporate mission, objectives and goals to employees.
12. Assess the formal and informal processes used by senior management to communicate the corporate mission, objectives and goals to the Board of Directors.
13. Assess the formal and informal processes used to communicate the corporate mission, objectives and goals to external stakeholders (customers, regulators, shareholders and others).
14. Determine if the corporate mission is aligned with strategic plans, operating objectives, goals and tactics.
15. Assess whether National Grid policies (operations, human resources and financial,) policies are aligned with the corporate mission.
16. Determine if the corporate mission is aligned with regulatory requirements (e.g., energy efficiency, other demand side management programs, customer services and communication requirements).
17. Assess whether service reliability and financial results are aligned with the corporate mission.
18. Compare performance to industry “best practices”.
19. Prepare a task report for this element.

## **Element No. 2: Load Forecasting**

The load forecast affects reliability and price of supply and operations. National Grid needs to identify and address changing needs, supply, and market conditions in a timely and accurate manner. Historical weather and weather patterns determine the main elements of supply procurement forecasts for the design day and for the normal and design peak day forecasts. Other factors for developing accurate load forecasts include incorporating energy efficiency savings and trends in use per customer. We will gain an understanding of the effectiveness of the load forecasting function by comparing forecasts with actual requirements. Volatile weather patterns can raise havoc with load forecasts if the forecasts are not sufficiently robust. For example, “heat storms” in Los Angeles in recent years made Department of Water and Power’s traditionally prepared load forecasts worthless at a time of greatest need.

**Lead Consultant:** Carol Etter  
**Consultant:** Dawn Francis

## **Phase II – Technical Review Consultant Hours: 120**

### **RFP Evaluative Criteria:**

- Does National Grid effectively use models, assumptions, key drivers and other inputs to forecast load and system-wide load requirements?
- Are demand side management (demand response) and energy efficiency, and other initiatives given appropriate consideration in the forecasting process?
- Are forecasting functions organized and staffed appropriately?
- Is planning for electric load integrated with National Grid's overall business processes and strategies appropriately?
- Does the New York Independent System Operator (NYISO) play an appropriate role in the National Grid's electric forecasting?

### **Additional NorthStar Evaluative Criteria**

- Does National Grid have effective region-specific planning processes?
- Is forecast load incorporated into rate cases in an appropriate manner?
- Does the load forecast provide reasonably accurate information for projecting future electric demand?
- Are the assumptions used in developing the load forecast for the Integrated Resource Plan (IRP) valid?
- Does National Grid employ current technology and modern methods for data gathering in the development of its load forecasts?
- Does National Grid have a single load forecast that it uses used for both supply procurement and distribution system planning?
- Has National Grid had accurate system load forecasts and are deviations between the forecasts and actual experience investigated and promptly corrected?

### **Work Tasks:**

1. Assess the models used to forecast load and system-wide load requirements.
2. Determine how demand side management (demand response) and energy efficiency, and other initiatives are considered in the forecasting process.
3. Assess the models, inputs and assumptions National Grid uses to forecast load requirements.

4. Assess the organization structure of forecasting activities.
5. Determine if the planning for electric load is integrated with the overall business strategy.
6. Determine if forecast load is incorporated into rate cases.
7. Assess the New York Independent System Operator (NYISO) role in National Grid's electric forecasting.
8. Assess the manner in which load forecasting affects various strategic initiatives or provides substantial risk to National Grid.
9. Determine the adequacy of demographic assessment, appliance saturation studies, customer surveys, and elasticity of demand studies and similar information used in the development of load forecasts.
10. Review the use of planning models to support the development of load forecasts.
11. Determine the adequacy of the input data used and consider whether the models provide adequate capability to assess the effects of potential loss of load to alternative energy providers, conservation, price sensitivity and other variables across a broad range of possibilities.
12. Determine whether a management process is in effect to ensure that all planning is based upon a set of common assumptions relating to demographics, economic conditions, financial capability and other factors which significantly affect the load forecast.
13. Review actual peak load and electricity sales information for the years 2003 and 2008 in comparison to information contained in the integrated resource plans and investigate the reasons for significant variations.
14. Identify performance measurement criteria that would indicate success or failure of this area and compare against existing measurements used by National Grid, if any.
15. Compare National Grid performance to industry "best practices".
16. Prepare a Task Report for this area.

### **Element No. 3: Supply Procurement**

The reliability of electric supply for National Grid's New York ratepayers is dependent on a number of factors:

- Availability of renewable energy.
- Long term contracts.
- ISO New York effectiveness.

- Spot market robustness.
- Transmission availability.
- Cascading outages and blackout risk.
- Energy efficiency, self-generation and distributed generation potential.
- Risk management practices and strategies.

With respect to risk management practices, National Grid should have a “Risk Management Policy” which includes all associated control practices. Key risk management control practices are governance, control practices and execution of the process. Senior National Grid management should be involved in policy development, oversight, hedge strategy and execution. The Board of Directors should approve the Risk Management Policy, and the Audit Committee of the Board should oversee and review quarterly risk reports. A dedicated Risk Management function (which includes wholesale credit risk) should be independent from the supply procurement function.

Preventive controls that should be in place include trade documentation, trader authorization, financial product approval, and trade limits. Front, middle and back office activities should be segregated from the Risk Management function. Controls should include internal audit review, system-generated limit exception reports, accounting trade reconciliations, daily reconciliations, and voice recordings.

Effective execution of trade control requires proper segregation of duties, appropriate software systems, reconciliation processes, trained staff and senior management support. The oversight process should ensure that an appropriate control environment exists, that industry leading practices are in place and that senior management is committed to having an effective hedge strategy.

**Lead Consultant: Carol Etter**  
**Technical Advisor: Mohamed El-Gasseir**

**Phase II – Technical Review Consultant Hours: 240**

#### **RFP Evaluative Criteria:**

- Does National Grid have appropriate supply portfolio principles, goals and objectives for mass market default customers?
- Does National Grid have effective risk management strategies and practices?
- Does National Grid have effective supply procurement strategies, policies, processes, and methods?
- Are financial and physical hedging practices appropriate and effective?
- Does National Grid’s supply procurement performance benchmark favorably with other utilities?

- Does National Grid set achievable portfolio performance goals?
- Does National Grid oversee and control its portfolio in an effective manner?
- Is the role of demand management/response, energy efficiency and migration of retail customers to competitive suppliers in the portfolio and procurement processes appropriate?

#### **Additional NorthStar Evaluative Criteria**

- Is the organization structure consistent with established mission, goals and objectives of other supply procurement groups?
- Do controls exist over points of contact with other corporate departments involved in or supporting supply procurement activities?
- Are experience levels of managers consistent with those generally found in the industry in similar positions?
- Do the front, middle, and back offices operate under clearly defined and segregated missions, exhibit sufficient independence from each other, support the making of decisions and transactions as required and in an arm's-length manner, and are subject to periodic outside reviews of their effectiveness and integrity?
- Do internal measurement systems address performance quality on a comprehensive, ongoing basis?
- Are data capture, maintenance, reporting, and retrieval systems complete, accurate, secure, and useful in verifying that assets are used and transactions made and assigned appropriately?
- Are supply procurement policies and procedures consistent with work requirements and supply procurement and marketing objectives?
- Do well-defined document creation and maintenance objectives and requirements exist?
- Is documentation adequate to support management and regulatory oversight and review?
- Does National Grid have well-defined supply procurement strategies that properly balance long-term and short-term considerations of cost and reliability of supply?
- Is the supply procurement process sound, and integrated with strategic and operational planning processes?
- Do financial and physical hedging practices benefit customers?

## **Work Tasks:**

1. Identify and evaluate supply portfolio principles, goals and objectives for mass market default customers.
2. Identify and evaluate risk management strategies and practices.
3. Review supply procurement strategies, policies, processes, and methods.
4. Assess financial and physical hedging practices.
5. Examine use of performance benchmarking with other utilities.
6. Review portfolio performance goals.
7. Evaluate portfolio oversight and controls.
8. Assess the role of demand management/response, energy efficiency and migration of retail customers to competitive suppliers in the portfolio and procurement processes.
9. Review the organizational placement of the responsibility for supply procurement. Consider whether supply procurement strategies are adequately supported by the current organizational structure.
10. Determine whether or not the current mix of long-term and short-term supply arrangements adequately balance the consideration of cost and reliability of supply.
11. Determine whether or not the current mix of long-term and short-term supply arrangements was established in accordance with a well-developed plan.
12. Determine whether National Grid has reviewed and revised its supply procurement strategies to address competitive pricing and risk issues associated with current energy markets.
13. Identify performance measurement criteria that would indicate success or failure and compare against existing measurements used.
14. Evaluate the organizations responsible for supply procurement planning, acquisition and management.
15. Examine the training, experience, and performance of the supply procurement staff.
16. Evaluate whether there is a clear and definitive system of approval authority by: a) type of commitment, b) value of commitment, c) level of approval required, d) stage at which approval is required, and e) documentation of approval.
17. Evaluate the policies and procedures that control supply procurement-related activities.

18. Examine documentation requirements concerning development and evaluation of portfolio and supply alternatives. Confirm that requirements are observed and adhered to.
19. Examine the policy and practice regarding internal audit reviews of the supply procurement functions.
20. Examine the organizations and systems used to capture key data (e.g., credit evaluations, risk exposures, transaction details).
21. Verify that those systems operate with adequate accuracy, completeness, security and integrity.
22. Compare performance to industry “best practices”.
23. Prepare a Task Report for this area.

#### **Element No. 4: System Planning**

A primary objective of system planning is to maintain a high level of T&D reliability as measured by the various industry indices such as SAIDI and SAIFI. In this respect, National Grid recently announced electric customer credits for missing their reliability goals. Our experience indicates that declines in T&D reliability are typically due to:

- Limited maintenance program funding and staffing.
- Maintenance that is largely corrective upon failure, rather than preventive.
- A relatively old T&D infrastructure and under-funded capital programs which are not replacing old equipment and systems at a rate sufficient to avoid age-related failures.
- Low staffing levels in key work groups are unable to keep up with engineering, maintenance programs, capital programs and recordkeeping.
- Poor or inadequate management, organization, leadership and work processes.
- Many poles, cables and transformers which need to be replaced.

The linkage between National Grid’s system planning for its New York operations and NYISO is very important. For example, last year Vermont planners determined that a data set published by NYISO included a previously cancelled plant (about 500MW) in Rotterdam. Taking that plant out of the data set exposed a generation deficient load pocket north of Albany. This deficiency contributed to a major summer outage in 2007, when exports from New England across a tie near Rutland, Vermont had to be nearly cut because of a voltage collapse in the Glens Falls/Saratoga region. The possibility of that event occurring was hidden by the inclusion of the Rotterdam plant in the NYISO data set. .

**Lead Consultant: Derek Hasbrouck**



**Technical Advisor: Mohamed El-Gasseir**

**Phase II – Technical Review Consultant Hours: 310**

**RFP Evaluative Criteria:**

- Do the infrastructure planning and engineering functions operate effectively?
- Does National Grid have appropriate priorities, guidance and other instructions for evaluations, tradeoffs and decision making including (1) an asset condition and management process (2) using input from the asset health review process, and (3) linking asset management decisions (e.g., predictive failure analyses) to improved reliability and performance?
- Does National Grid develop accurate forecasts for infrastructure requirements?
- Are alternative resources such as distributed generation and demand response initiatives given appropriate consideration in the planning process?
- Are other load and infrastructure factors, such as advanced metering, smart grid, and energy efficiency initiatives given appropriate consideration in the planning process?
- Are the needs for major projects (e.g., substations, breakers, switches, transmission feeders and secondary systems) identified, developed and justified adequately?
- Is the process and criteria for making decisions regarding replace vs. repair, including how the overall construction program planning process is affected, documented and adhered to?
- Are the planning processes for: (a) network vs. radial systems, (b) underground versus overhead systems, (c) reliability versus new business tradeoffs, and (d) regional versus central planning dynamics appropriate?
- Are benefit/cost analyses and risk analysis considered in the decision-making process including whether the level is appropriate and effective?
- Are the specific types of benefit/cost analysis methodologies used appropriately?
- Are trade-offs being optimized with respect to the replacement of older technology with newer technology and the resulting effect on the useful lives and depreciation assumptions of the existing infrastructure, cash flow and system reliability?

**Additional NorthStar Evaluative Criteria**

- Are load forecasts, resources, transmission and distribution loads integrated and reconciled periodically?

- Are interconnection requests/studies and planning factors integrated with native system planning analyses?
- Are renewable generation resources effectively factored into the system plan?
- Does National Grid’s long-term system planning address land availability for rights-of-way and land use and environmental siting constraints, and establish a context for future public interaction on specific projects?
- Does National Grid take appropriate steps to ensure that the data provided by NYSIO for system planning is accurate?

### **Work Tasks:**

1. Assess infrastructure planning and engineering functions.
2. Examine the priorities, guidance and other instructions for evaluations, tradeoffs and decision making.
3. Examine the development of forecasts for local area networks and infrastructure requirements.
4. Determine if alternative resources such as distributed generation and demand response initiatives are considered in the planning process.
5. Determine if other load and infrastructure factors, such as advanced metering, smart grid, and energy efficiency initiatives are considered in the planning process.
6. Assess how needs are developed for major projects (e.g., substations, breakers, switches, transmission feeders and secondary systems)?
7. Review the process and criteria for making decisions regarding replace vs. repair, including how the overall construction program planning process is affected.
8. Assess the effects on the planning process of: (a) network vs. radial systems, (b) underground versus overhead systems, (c) reliability versus new business tradeoffs, and (d) regional versus central planning dynamics.
9. Determine the extent to which benefit/cost analyses and risk analysis are considered in the decision-making process. Examine the specific types of benefit/cost and risk analysis methodology being used.
10. Determine how trade-offs are considered with respect to the replacement of older technology with newer technology and the resulting effects on the useful lives and depreciation assumptions of the existing infrastructure, cash flow and system reliability.
11. Compare performance to industry “best practices”.

12. Prepare a Task Report for this area.

### **Element No. 5: Capital & O&M Budgeting**

Weaknesses in the capital and O &M budgeting process are typically indicated by:

- Cost effective, efficiency improvements are deferred due to lack of capital.
- The budgeting process does not have sufficient input from the bottom-up.
- Decision-making criteria are not well-articulated and consistently applied across all business units.
- The interface between workforce planning and the budgeting process is not effective.
- Budgets and the related variance / management reporting processes are not consistent with operational plans.
- Financial reports are not useful in assisting managers to exercise their business responsibilities.
- The lack of an effective asset allocation methodology/program.

**Lead Consultant: Doug Bennett**  
**Consultants: Derek Hasbrouck**  
**Dawn Francis**

**Phase II – Technical Review Consultant Hours: 320**

#### **RFP Evaluative Criteria:**

- Are the respective roles of Boards of Directors and executive and senior management appropriate?
- Does the Board get involved in the capital and O&M budgets at the right time and to the appropriate extent?
- Do the Boards see and have access to sufficient level of budget detail?
- Are the Boards' responsibilities with respect to the budget appropriate?
- Is the construction/capital priority setting process balanced and appropriate?
- Are incremental O&M expenses associated with new construction factored into the budgeting process in an appropriate manner?
- Do allowed revenues/rates and financing opportunities or constraints adversely affect budget levels and priorities?

- Are relationships among planned/budgeted expenditures, rate case proposed expenditures, and actual expenditures appropriate?
- Is the capital budgeting process, including project authorization, project appropriation, increase/decrease of authorization/appropriation, capital budget status reporting, validation in advance of appropriation, funding controls, and other elements of the capital budgeting process, documented and adhered to?
- Does National Grid use budgeting guidelines, practices and procedures, including “zero-based” and other alternative methods effectively?
- Are the roles of and relationships between regional and centralized planning and budgeting functions appropriate?
- Does National Grid have an effective methodology for prioritizing and determining which capital projects get approved?
- Are capital budgets managed and controlled? Are appropriate methodologies used to control and manage company, program and project capital costs in the near and long term?
- Is the annual process for reviewing and determining whether total capital and O&M planned expenditures adequate?
- Are the cost control systems and processes from both a top-down and bottom-up perspective effective in ensuring that increases and decreases to the construction budget/expenditures are justified and appropriately approved?
- Are bottom-up and top-down processes for developing the budgets for capital/construction classifications and categories appropriate?

#### **Additional NorthStar Evaluative Criteria**

- Do repair versus replace decisions affect infrastructure/capital expenditures positively over the long term?
- Are budget forecasts incorporated into rate case revenue requirements accurately?
- Is National Grid’s capital spending level comparable to other similarly-sized utilities?
- Does National Grid have sufficient access to capital to implement cost-effective decisions? Are cost-effective, efficiency improvements deferred due to lack of capital?
- Are budgets and the related variance / management reporting processes effective tools to manage spending consistent with operational plans?

## **Work Tasks:**

1. Determine if the respective roles of National Grid's Board of Directors and executive and senior management are appropriate?
2. Assess whether the Boards get involved in the capital and O&M budgets at the right time and to the appropriate extent.
3. Determine if the Boards see and have access to sufficient detail?
4. Determine if the Boards' responsibilities are documented and adhered to.
5. Assess whether the relationship between National Grid corporate and New York operations regarding budget priorities is balanced.
6. Determine if the construction/capital priority setting process is balanced and appropriate.
7. Determine if repair versus replace decisions affect infrastructure/capital expenditures positively over the long term.
8. Evaluate whether incremental O&M associated with new construction is factored into the budgeting process in an appropriate manner.
9. Determine if allowed revenues/rates and financing opportunities or constraints adversely affect budget levels and priorities.
10. Evaluate National Grid's use of budgeting guidelines, practices and procedures, including "zero-bases" and other alternative methods.
11. Evaluate National Grid's methodology for prioritizing and determining which capital projects get approved.
12. Determine if expenditures are managed and controlled and if methodologies used to control and manage total company, program and project capital costs in the near and long term are effective.
13. Assess the annual process for reviewing and determining whether total capital and O&M planned expenditures are adequate. Determine if there are sufficient controls in place to ensure that increases and decreases to the construction budget/expenditures are justified and appropriately approved.
14. Determine if budget forecasts are incorporated into rate case revenue requirements accurately.
15. Compare capital spending level comparable to other similarly-sized utilities.

16. Determine if National Grid has sufficient access to capital to implement cost-effective decisions. Determine if cost-effective, efficiency improvements are deferred due to lack of capital?
17. Determine if budgets and the related variance / management reporting processes are effective tools to manage spending consistent with operational plans.
18. Analyze the efficiency and effectiveness of the business processes that support the Capital Program. Determine the process inputs, process activities, process outputs, process customers and process performance.
19. Compare performance to industry “best practices”.
20. Prepare a Task Report for this area.

## **Element No. 6: Program and Project Planning and Management**

When considering program and project planning, management performance has generated significant interest as a result of the following:

- The potential effects of poor project cost and schedule performance.
- Management caught off guard and poorly informed of project issues and events.
- Technical and managerial limitations or insufficient staff.
- Public/voter/political pressure.
- A litigious environment.

The full implication of many project management decisions cannot be known until project completion, or at least for some years, and cannot be evaluated fairly without significant analysis of the contemporaneous project environment. The emphasis in reviewing and establishing a baseline of project management capabilities must focus on the management decision-making processes – as evidenced, for example, by organization and control mechanisms used – and whether they are sound, adhered to, logical, and responsive to changing conditions. Our assessment of program planning and management will determine if National Grid has the appropriate project management tools.

**Lead Consultant:** Doug Bennett  
**Consultants:** Derek Hasbrouck  
Dawn Francis

**Phase II – Technical Review Consultant Hours: 340**

### **RFP Evaluative Criteria:**

- Do capital and O&M plans and budgets convert to specific programs and projects in an effective manner?

- Are programs and projects prioritized and approved over various time horizons in a cost-effective manner?
- Are the program and project planning, design, estimating, engineering, costing, scheduling and execution functions performed effectively?
- Are materials and equipment, transportation and other logistical support planned and managed effectively for programs and projects?
- Are trade-offs analyzed and decisions made in order to optimize the use of in-house workforce versus contractor labor?
- Are contractor and engineering practices appropriate?
- Are construction contractor projects planned and managed effectively?
- Does National Grid have effective quality assurance and quality control at the program and project level?
- Does National Grid have effective contractor management, project/program management, including accountability, goals, objectives, and performance measurement?
- Does National Grid have an effective methodology for tracking costs, work units and work quality for specific programs and projects?
- Does National Grid routinely identify typical variances between original budgeted and actual capital expenditures and work units?
- Does National Grid track and minimize variances in order to improve the cost control, efficiency/productivity and work quality/

#### **Additional NorthStar Evaluative Criteria**

- Does National Grid utilize a well-defined work breakdown structure to estimate, track and monitor project performance?
- Is the project work breakdown structure consistent between in-house, contracted projects and the utility's cost accounting systems?
- Are project estimates accurate and updated on a periodic basis?
- Are project contingency funds appropriate, consistent among projects, managed and controlled effectively?
- Are project scope changes effectively controlled and communicated among participants?
- Are project change orders managed and controlled effectively?

- Are project quality control and technical requirements effectively transferred to contractors?

### **Work Tasks:**

1. Review how capital and O&M plans and budgets convert to specific programs and projects.
2. Assess how programs and projects are prioritized and approved over various time horizons.
3. Define and review program and project planning, design, estimating, engineering, costing, scheduling and execution.
4. Evaluate how materials and equipment, transportation and other logistical support are planned and managed for programs and projects.
5. Determine how tradeoffs are analyzed and decisions made in order to optimize the use of in-house workforce versus contractor labor?
6. Examine contractor and engineering bidding processes.
7. Evaluate how construction contractor projects are planned and managed.
8. Examine quality assurance and quality control at the program and project level,
9. Examine contractor management, project program management, including accountability, goals, objectives, and performance measurement.
10. Examine methodology for tracking costs, work units and work quality for specific programs and projects.
11. Determine if the typical variances between original and budgeted and actual capital expenditures and work units are justified.
12. Assess how National Grid tracks and minimizes the variances in order to improve cost control, efficiency/productivity and work quality.
13. Compare performance to industry “best practices”.
14. Prepare a Task Report for this area.

### **Element No. 7: Work Management**

Surprisingly, many utilities still do not have a comprehensive and effective work management program. An effective work management program provides a utility with a net positive benefit that can be directly related to improved performance and significant cost savings for the following reasons:



- The utility is able to align its work-load with available resources which directly translates into reductions in labor costs.
- Work planning improves efficiency and effectiveness in the use of human resources.
- Work management supports the budgeting process by identifying the workload requirements for planned activities. Work management also assists in the determination of the time frame for activities consistent with the utility's ability to finance the work.
- Employee utilization is improved because managers have the tools to monitor and direct resource distribution.
- Efficiency is improved by getting more work or higher quality work done with the same number of people.
- Effectiveness is improved by focusing available work-hours on higher priority tasks and eliminating less important or unnecessary work.
- The utility is better able to determine the optimum work force for each area or function.
- Work management provides management the tools needed to benchmark its efforts against other utilities.
- Benchmark data developed from consistent reporting also gives management the information needed to negotiate with its union to define better work rules.

A comprehensive work management program incorporates the following attributes:

- All employees are covered by an appropriate work management system.
- The program includes contractors when part of the work is outsourced.
- All employee and billed contractor time is covered by the program.
- Service level measurements exist for each work group.
- Identified workload drivers are tracked and forecast for each work group.
- Systems have appropriate automation and are relatively "easy to use".
- Work management information is useful for workforce planning and staffing decisions.

**Lead Consultant: Dave Vondle**  
**Consultant: Mark Fowler**

## **Phase II – Technical Review Consultant Hours: 250**

### **RFP Evaluative Criteria:**

- Are planning and execution of programs and projects converted into short-term and day-to-day work effectively?
- Are work management systems used effectively to schedule and manage field crews, including transportation, equipment, and materials?
- Are the roles and responsibilities of project managers, supervisors and inspectors defined and adhered to appropriately?
- Does National Grid manage quality assurance and quality control effectively?
- Does National Grid measure and manage employee availability, utilization, efficiency, productivity and effectiveness in an appropriate manner?
- Are work program and project schedules managed effectively on a day-to-day basis?
- Does information about rework, failures and repair history get translated into corrective actions, infrastructure aging analysis, and repair versus replace decisions in an effective and timely manner?
- Do the workforce and work management systems feed back into performance improvement opportunities?

### **Additional NorthStar Evaluative Criteria**

- Does management have and use appropriate work planning and management tools and techniques?
- Do excess work backlogs exist, and if so, does the National Grid have plans to eliminate them?
- Are work measurement standards valid? Does National Grid use the measurements to manage the workforce?
- Are work schedules practical? Are the schedules at an appropriate level of detail?
- Are all major work groups covered by work management systems?

### **Work Tasks:**

1. Examine how planning and execution of programs and projects are converted into short-term and day-to-day work planning and management.
2. Determine how work management systems are used to schedule and manage field crews, including transportation, equipment, and materials.

3. Review the roles and responsibilities of project managers, supervisors and inspectors.
4. Determine how National Grid measures and manages employee availability, utilization, efficiency, productivity and effectiveness.
5. Evaluate how work program and project schedules are managed on a day-to-day basis.
6. Determine if information about rework, failures and repair history gets translated into corrective actions, infrastructure aging analysis, and repair versus replace decisions.
7. Determine if workforce and work management systems feed back into performance improvement opportunities?
8. Analyze staffing trends for the past five years by functional area.
9. Analyze workforce planning and management tools.
10. Assess key work backlogs by functional area.
11. Review overtime in total, by functional area and by job classification.
12. Compare performance to industry “best practices”.
13. Prepare a Task Report for this area.

## **Element No. 8: Performance and Results Management**

One of the most important aspects of results measurement is the linkage between results and incentive compensation. Targets for incentive compensation must be realistic and attainable and they must be in alignment with the corporation’s real challenges. National Grid management personnel should have a clear understanding of how corporate objectives and key performance indicators (KPIs) relate to their incentive compensation. We would expect to see National Grid have corporate and business unit objectives with targets and metrics in all areas, for example:

- Earnings per share.
- Free cash flow.
- Safety – no more than X incident rate.
- Recruitment – hiring X percent of planned vital hires.
- Power plant availability and production – gross output of X million MWH and an equivalent forced outage rate X percent.
- Reliability – distribution SAIDI goal of X minutes.
- Customer service – speed of answer of X seconds.

**Lead Consultant: Dave Vondle**  
**Consultant: Mark Fowler**

## **Phase II – Technical Review Consultant Hours: 200**

### **Evaluative Criteria:**

- Does National Grid’s performance (reliability and productivity) feed back to its corporate mission, objectives and goals so that it can improve its processes, redirect resources, and change priorities?
- Does the Board get involved in this feedback loop at the right time and to the right extent?
- Are managers held accountable for performance improvements, e.g., cost savings and productivity gains anticipated from specific capital and O&M programs and projects, and specific corporate goals?
- Does National Grid make appropriate use of goals, key performance indicators and metrics?
- Does National Grid benchmarking techniques to identify and develop performance targets?
- Does National Grid have effective change management and continuous improvement processes?
- Are there impediments that tend to constrain performance improvements and necessary changes and does National Grid take appropriate actions to remove impediments to performance improvements?
- Are compensation and performance metrics linked effectively?
- Are there additional performance measures or indicators that are needed to facilitate the corporate mission, objectives and goals? For example, in addition to lagging indicators, are there appropriate leading indicators, metrics and measures that will help improve performance?

### **Additional NorthStar Evaluative Criteria**

- Are National Grid’s performance measures in alignment with its corporate mission, strategies, objectives and goals?
- Are there gaps or overlaps in National Grid’s performance measures relative to its corporate mission, objectives and goals?
- Is there evidence that National Grid has used performance feedback to improve its processes, redirect resources and change priorities?
- Is the Board involved in utilizing performance feedback to make adjustments in processes, resource allocation and priorities?

- Do improvement initiatives such as capital and O&M programs and projects have defined expected performance improvements, such as, cost savings and productivity or service level improvements?
- What are the consequences of achieving or not achieving expected performance improvements?
- Are elements of the corporate mission, strategy, objectives and goals not covered by appropriate performance measurements?
- Are leading indicators, metrics and measures used?
- Are there additional leading indicators, metrics and measures that would help improve performance?

### **Work Tasks:**

1. Assess whether National Grid's performance (reliability and productivity) feeds back to its corporate mission, objectives and goals so that it can improve its processes, redirect resources, and change priorities? Determine at what point and to what extent the Board is involved in this feedback loop?
2. Determine if managers are held accountable for performance improvements, e.g., cost savings and productivity gains anticipated from specific capital and O&M programs and projects, and specific corporate goals.
3. Determine if there are impediments that tend to constrain performance improvements and necessary changes.
4. Assess whether additional performance measures or indicators are needed to facilitate the corporate mission, objectives and goals.
5. Determine if there are additional appropriate leading indicators, metrics and measures that will help improve performance.
6. Compare performance to industry "best practices".
7. Prepare a Task Report for this area.

## **9. Workshop Training**

**Lead Consultant:** Perry Wheaton  
**Consultants:** Doug Bennett  
 Derek HasBrouck  
 Carol Etter  
 Dave Vondle

**Consultant Hours:** 400

## **RFP Objective**

Provide workshop type training to DPS Staff on subjects yet to be determined. As indicated in the RFP, one workshop may be focused on optimum (or “best”) practices that utilities use to assess operational risks associated with the delivery of the commodity, how risk assessment impacts the long-term corporate construction and O&M decisions, and how budgeting priorities are managed.

### **Work Tasks:**

1. Identify workshop topics.
2. Schedule workshops.
3. Prepare curriculum for each workshop.
4. Obtain DPS Staff approval for each workshop curriculum.
5. Conduct workshops.

**Table IV-2  
Work Hour Estimates**

		Resources										
		P. Wheaton	D. Bennett	C. Etter	D. HasBrouck	D. Vondle	M. Fowler	D. Francis	El-Gasseir		Admin. Support	Total
<b>Phase I. Planning and Orientation</b>		130	70	70	70	70	50	50	50		70	630
<b>Phase II. Technical Review</b>												
	Load Forecasting	20		50				50				120
	Supply Procurement	20	20	150					50			240
	System Planning	20	40		200				50			310
	Capital and O & M Budgeting	20	100		50			150				320
	Program Planning	20	100		50			170				340
	Work Force Management	20				100	130					250
	Corporate Mission	100		100		50						250
	Performance and Results Management	20				100	80					200
<b>Phase III. Report Development</b>		100	80	70	50	70	50	50	30		100	600
<b>Project Management</b>		150									400	550
<b>Phase I-III Subtotal</b>		<b>620</b>	<b>410</b>	<b>440</b>	<b>420</b>	<b>390</b>	<b>310</b>	<b>470</b>	<b>180</b>		<b>570</b>	<b>3,810</b>
<b>Workshop Training</b>		60	60	60	60	60					100	400
<b>Total Hours</b>		<b>680</b>	<b>470</b>	<b>500</b>	<b>480</b>	<b>450</b>	<b>310</b>	<b>470</b>	<b>180</b>		<b>670</b>	<b>4,210</b>

## V. CONSULTING STAFF ORGANIZATION

The successful execution of the audit will require a project team with a unique blend of capabilities. NorthStar has assembled a project team with:

- Knowledge of utility industry matters and the capability to identify and address significant issues that may affect the Company's ability maintain its preeminence among New York's energy utilities.
- Experience in conducting utility management audits of utilities balanced with experience in assisting clients to implement recommendations.
- Technical and functional expertise and skills to meet the objectives of the audit.

### A. Key Personnel and Project Organization

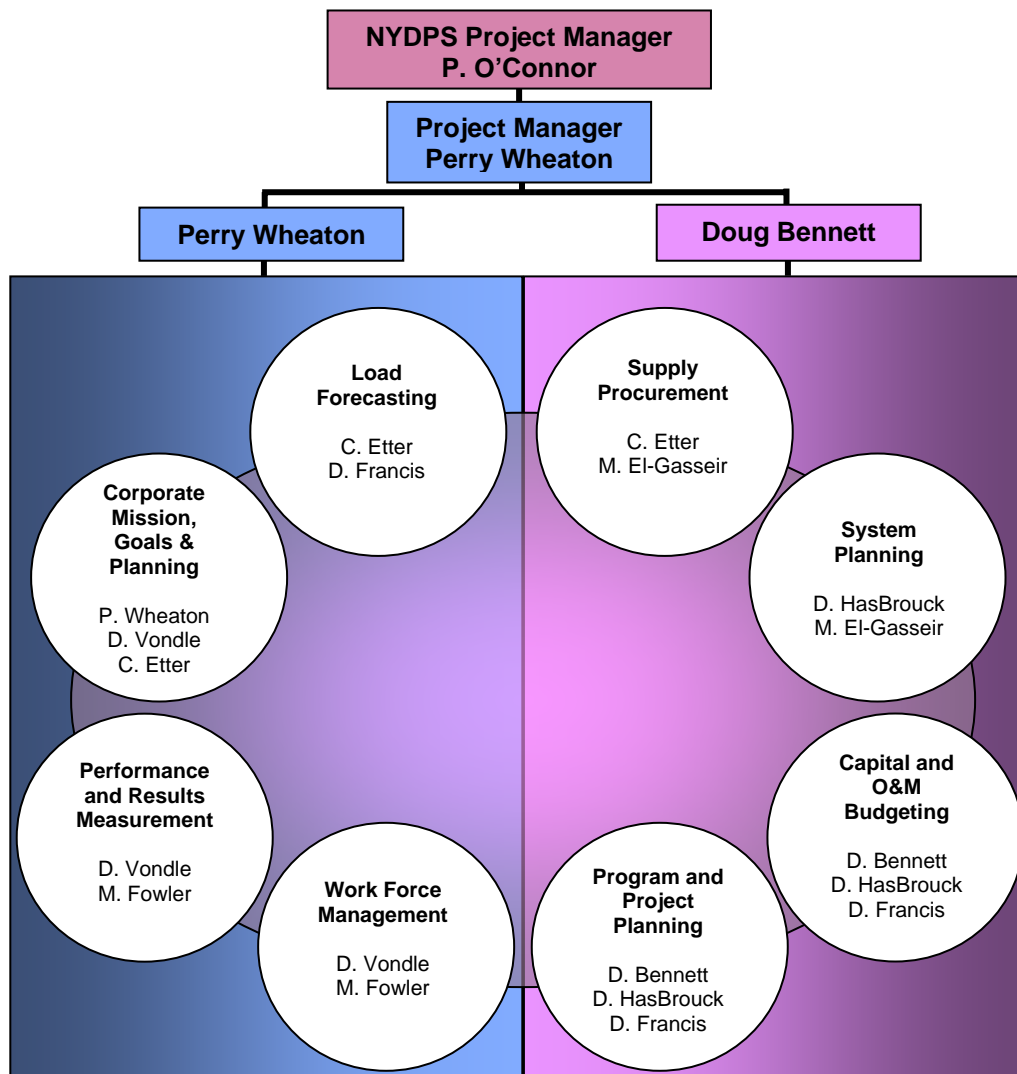
Each major audit area is assigned to a Lead Consultant who is an expert in the particular field and each Lead Consultant is assisted by at least one other consultant. To facilitate coordination of our project team activities, we have organized the eight project element areas into two groups as displayed in **Table V-1**. One group will be led by our project manager, Perry Wheaton, and the other by NorthStar Managing Director Doug Bennett. The relevant experience and the role of each consultant are summarized below.

**Mr. Perry Wheaton**, a NorthStar Director, will serve as Project Manager for the audit. He will also be the Lead Consultant for the corporate mission area and workshop training areas. He will be responsible for the overall quality of the work product and adherence to schedule. Mr. Wheaton, a CPA and a Certified Management Consultant (CMC), has over forty years of diversified management consulting and auditing experience and has served as either the project manager or engagement manager for over twenty-five audits of public utilities for regulatory commissions. He has directed high visibility assignments for a number of commissions throughout the country, including the Department. He has an AB from Hamilton College and an MBA in public accounting from Rutgers University.

**Mr. Douglas Bennett**, a NorthStar founder and Managing Director, will act as Lead Consultant for capital and O&M budgeting, and for program planning. He will also participate consulting in the Workshop Training program. Mr. Bennett has over 30 years of management consulting experience. He has directed and performed management audits for over 50 public service clients including electric and gas utilities, municipalities, seaports, airports and public service commissions. His numerous management audits of utilities include operations and maintenance management, corporate performance, fuels procurement, work force management, materials management, purchasing, engineering and construction. He has a BS in Industrial Engineering from California State Polytechnic University.



**Table V-1  
Audit Team Organization Chart**



**Mr. David P. Vondle**, a CMC, has extensive experience in workforce strategy and planning, work management and performance and results measurement. His management consulting and audit experiences have addressed each of these topics on many occasions. He also has substantial corporate performance management (including mission statements) and process improvement experience. Most of his consulting engagements involve workforce strategy, work management, reviewing or developing performance metrics and improving productivity. Mr. Vondle will direct the reviews of the work management and performance and results management areas and provide consulting support for the corporate mission and workshop training areas. . Mr. Vondle received his M.B.A. from Southern Methodist University and his B.S. in Industrial Management from the University of Akron.

**Mr. Derek W. HasBrouck** is an accomplished consultant with over 25 years of utility consulting and industry experience. Mr. HasBrouck will be the lead consultant for system planning and a consultant in the program planning, capital & O&M budgeting and workshop

training areas. He is an expert in utility transmission and distribution planning, design, operations and maintenance. He has served as the chief financial officer of the Vermont Electric Power Company and as T&D supervisor for Florida Power & Light. Mr. Hasbrouck earned a Bachelor of Science in Electrical Engineering from Rensselaer Polytechnic Institute and a Masters in Management (MM) from the Kellogg School at Northwestern University.

**Ms. Carol L. Etter** has over twenty years experience in the energy and utility industry, including strategic and business planning, fuel procurement and regulatory compliance, budgeting and financial analysis, implementation of enterprise software system, acquisition analysis and execution, and energy industry restructuring. Ms. Etter will direct the reviews of load forecasting and supply procurement, and will provide consulting support for the corporate mission area and workshop training areas. She was employed by Citizens Utilities, a gas, electric and water utility where she conducted strategic planning and special projects for all segments of the company's operations. She has a BS, in Mechanical Engineering from Swarthmore College and an MBA in Finance - Public Accounting from the University of Colorado.

**Mr. Mark Fowler** will be a consultant in the work management and performance and results management areas. He has over 25 years experience in the utility industry as a management consultant and employee. His functional expertise in the utilities industry includes electric reliability, T&D operations, emergency restoration, support services and customer services. Prior to beginning his consulting career he worked as a Director of Distribution for Buckeye Gas Products where he was responsible for all product movements in the Eastern US. He also was a Scheduler and Dispatch Coordinator for Williams Pipeline. He has a B.S. and an MBA from the University of Tulsa.

**Ms. Dawn Francis** has over 20 years of professional experience in the utility industry as both a consultant and utility professional. She will be a consultant for the capital & O&M budgeting, program planning and load forecasting areas. Ms. Francis served as the project manager of a management audit of the Lower Colorado River Authority and its Transmission Services Company. Prior to joining NorthStar, Ms. Francis had over ten years of direct experience in utility resource and financial planning having served as the electric rates manager for the LADWP. She holds a Bachelor of Science in Electric Power Engineering from Rensselaer Polytechnic Institute and is a Registered Professional Engineer in the State of California.

**Dr. Mohamed El-Gasseir** has consulted for a number of utilities and regulatory commissions in the many technical areas including purchase power agreements (PPAs) contracting and due diligence applications, market simulation for PPA negotiation support, renewable power market assessments and project development, and developing transmission access for renewable resources. He will be a technical advisor for the supply procurement and system planning areas. Dr. El-Gasseir has a Ph.D in Energy and Resources from the University of California at Berkeley, an MS in Chemical Engineering from the University of Rochester and a B.Sc in Chemical Engineering from the University of California at Berkeley.

## Shared Project Experience

The members of the proposed project team have worked together on many projects in the past; **Table V-2** provides a list of assignments which included at least two of the project team members.

**Table V-2**  
**Consultant Shared Project Experience**

Audit Assignment	Consulting Team						
	Wheaton	Bennett	Francis	HasBrouck	Vondle	El-Gasseir	Etter
CECONY (1988)	X	X					
Port of LA (2004)		X	X				
LCRA (2007)		X					
Peoples Gas (2008)	X				X		X
PG&E (2001)	X				X	X	
FirstEnergy (2007)	X				X		
DWP (2001 – 2007)	X				X	X	
NJ Electrics (2003)	X					X	
PGW (2001)	X				X		
CA PX (2000)	X					X	
UI (2002)	X				X		
CVPS (2008)	X				X		X
SCE RD&D (1993)	X	X					
PG&E DSM (1994)	X	X					
PG&E Pipeline (1995)	X	X					
CL&P (1996)	X					X	
NJ Natural Gas (2006)	X				X		
NJ Natural Gas (1993)	X	X					
SCE - NorthStar		X	X				
NYPA Audit (1990)	X	X		X			
SCE - BWG (2005)	X				X	X	
GPU (1989)	X	X		X			

## International Experience

The international nature of National Grid's operations requires that the management audit team have experience in how utilities outside the U.S. operate. In this connection, members of our project team have had considerable international utility consulting experience as illustrated in **Table V-3**.

**Table V-3**  
**Project Team International Experience**

<b>Consultant</b>	<b>Country</b>	<b>Project</b>
	UK	Co-directed a Study Mission for U.S. electric utility executives to learn about the deregulated environment in the United Kingdom as a result of the privatization and deregulation of the electric utility industry.
	Japan	Directed an eight-day Japanese Study Mission for executives from Public Service Electric & Gas to benchmark its progress in implementing Total Quality Management (TQM) efforts against Japanese companies and utilities.
	Japan	Directed an eight-day Japanese Study Mission for U. S. electric utility executives to learn how Japanese companies and utilities were using TQM) techniques.
D. HasBrouck	Singapore	Directed the design and implementation of a competitive wholesale electricity market for the Republic of Singapore. This market co-optimizes energy, reserves, and ancillary services using locational marginal pricing for all generation resources.
	Poland	Directed the acquisition screening and analysis of electric distribution companies in Poland for a U.S. utility. Analyzed the evolving industry structure, the industry and company specific privatization plans, and the customer base of specific companies.
	UK	Directed a multi-client benchmarking study of the UK Regional Electric Companies. Assessed their performance and practices and compared them with similar utilities in the U. S.
D. Vondle	Multi-country	Developed, and directed the AUC Management Consultants International Best Practices Consortium for seven years. Attracted thirty energy utility member participants from seven countries. The Consortium included a balanced scorecard of benchmarked performance measures covering all aspects of utility operations and examined innovative best practices.
	Germany	Lead consultant for affiliate relationships, strategic planning and incentive compensation in the management audit of Kentucky Utilities and Louisville Gas & Electric for the Kentucky PSC. KU and LG&E are subsidiaries of Eon, a European company.

## B. Resumes

The following pages contain detailed resumes of the proposed audit team.

# **PERRY L. WHEATON**

## **Project Role: Project Manager**

### **Lead Consultant – Corporate Mission**

### **Workshop Training**

## **Summary of Qualifications**

Mr. Wheaton has over forty years of diversified management consulting experience and has directed twenty-five management reviews of public utilities for regulatory commissions. He was a senior vice president of the Putnam Financial Services Company where he was responsible for the information systems operations of this major mutual fund investment management company. In his twelve years as an auditor and consultant with Coopers & Lybrand, he had extensive experience in reviewing the financial systems and operations of utilities and financial energy services companies. Mr. Wheaton is a CPA and a Certified Management Consultant (CMC). He has an AB from Hamilton College and an MBA in public accounting from Rutgers University.

## **Corporate Mission Consulting Experience**

- Reviewed the organization and staffing and wage and salary structure of Central Vermont Public Services (CVPS) in a business process review jointly sponsored by CVPS and the Vermont DPS. (2008)
- Lead consultant for the corporate governance, corporate planning and shareholder proposal areas for the management audit of the FirstEnergy PA Companies for the PA PUC. (2007)
- Directed a management audit of Cap Rock Energy. Lead Consultant for executive management. The audit was sponsored by Cap Rock and the Texas PUC. (2007)
- Performed a detailed review of the strategic planning process of a gas distribution utility for the utility's chief executive officer. (2006)

## **Other Utility Consulting Experience**

- Project director for two revenue requirements reviews of DWP for the City of Los Angeles. (2005 and 2007)
- Lead consultant for the power division in the strategic assessment of DWP for the city of Los Angeles. (2002)

- Directed a diagnostic audit of DWP for the Los Angeles City Council. Compared the Department's overall performance relative to best practices of well-managed private and public corporations. (1994)
- Directed the review of Pacific Gas & Electric's financial condition for the California PUC in the midst of the California energy crisis. The audit addressed holding company, power purchases, and non-regulated subsidiary activities. (2001)
- Directed the diagnostic management audit, the focused audit of nuclear operations and the review of Connecticut Light & Power Company's (CL&P) financial condition for the Connecticut DPUC in the midst of Northeast Utilities' (CL&P's parent) financial crisis, which was precipitated by the Millstone nuclear crisis. (1996 -1998)
- Directed the deferred balance account prudence audit of three NJ electric utilities - PSE&G, JCP&L and Atlantic City Electric - for the NJ BPU for the period from August 1, 1999 to July 31, 2003. (2002- 2005)
- Directed a management audit of Consolidated Edison (Con Ed) for the New York PSC. A major objective of this review was to determine if a utility with only one nuclear unit could operate it effectively. (1988)
- Co-directed a Study Mission for U.S. electric utility executives to learn about the deregulated environment that exists in the United Kingdom as a result of the privatization and deregulation of the electric utility industry in Great Britain. (1991)
- Directed an eight-day Japanese Study Mission for twelve executives from Public Service Electric & Gas to benchmark its progress in implementing Total Quality Management (TQM) efforts against "world class" Japanese companies. (1993)

### **Utility Management Audit Project Manager Experience**

Project Manager for the following commission-mandated management reviews:

- Cap Rock Energy – Comprehensive – Texas PUC (2007)
- Arizona Public Service – Meter Reading, Billing – AZ Corporate Commission (2004)
- N J Electric Utilities - Deferred Balance Account Prudence –NJ BPU (2003)
- United Illuminating – Comprehensive - CT DPUC (2002)
- Pacific Gas & Electric - Financial Condition -- California PUC (2001)
- California Electric Utilities - PX Prices -- California PUC (2000)
- Philadelphia Gas Works -- PA PUC (2001)
- Southern Connecticut Gas - Affiliate Relations -- CT DPUC (2000)

- Connecticut Light & Power - Financial Condition -- CT DPUC (1998)
- Maine Yankee Atomic Power -- Maine PUC (1997)
- Northeast Utilities - Nuclear Operations -- CT DPUC (1997)
- Connecticut Light & Power - Diagnostic Audit -- CT DPUC (1996)
- Pacific Gas & Electric - DSM -- California PUC (1994)
- Los Angeles Department of Water and Power -- LA City Council (1994)
- Southern California Edison - RD&D -- California PUC (1993)
- Maryland Natural Gas -- Maryland PSC (1990)
- Consolidated Edison Company -- New York PSC (1988)
- Apollo/Carnegie Gas Companies -- Pennsylvania PUC (1988)
- Central Hudson Gas & Electric -- New York PSC (1980)
- New York State Electric & Gas -- New York PSC (1979)
- Pennsylvania Gas & Water -- Pennsylvania PUC (1978)
- United Illuminating --CT DPUC (1977)
- Salem Nuclear Project -- Public Advocate of New Jersey (1977)
- Nine Mile Two Prospective -- New York PSC (1981)
- Seabrook Phase I -- CT DPUC (1987)
- New York Tel/Construction Program Planning -- New York PSC (1986)

### **Work Experience**

- Director, NorthStar Consulting Group (2008 to present)
- Director, Huron Consulting Group (2007 – 2008)
- Co-President and Founder, BWG. (1990 - 2007)
- Vice President, and Board Member, Theodore Barry & Associates. (1976-1981, 1985-1990)
- Senior Vice President, Putnam Investor Services, Inc. (1982 - 1985)
- Manager, Management Consulting, Coopers & Lybrand. (1964-1976)

# DOUGLAS BENNETT

**Project Role: Lead Consultant:**      **Capital & O&M Budgeting**  
   **Program Planning**  
**Consultant:**                                   **Workshop Training**

## Summary of Qualifications

Mr. Bennett, a NorthStar founder and Managing Director, has over thirty years of consulting experience to the public service and utilities industries. He has directed and performed management reviews for over 50 utility clients as well as directing audit assignments for over 20 regulatory agencies. He is an expert in operations improvement and corporate performance particularly in the areas such as production operations, work force management, materials management, purchasing, engineering and construction. In his 16 years as a Vice President and Director for a major management consulting firm, he had responsibility for the firm's operations and productivity improvement practice area. He has a BS in Industrial Engineering from California State Polytechnic University.

## Capital and O&M Budgeting

- Directed a program for Southern California Edison's T&D Business Unit to improve policies and procedures utilized to identify, design, and construct electric system capital projects. Improvement areas included: the Transmission Construction Master Plan; the project management organization; evaluation criteria and prioritization scheme; executive decision-making; policies and procedures, and strategies for outsourcing and contracting.
- Directed a capital project planning and organizational review of the Sky Harbor International Airport for the City of Phoenix, Arizona. The Department renewed efforts to complete the Master Plan, improve project management controls and reporting systems; and develop policies and procedures to support project management.
- Directed a management audit of Pacific Gas & Electric's Pipeline Expansion Project's management practices, project costs and controls, and cost allocations for the CPUC. Focused on project management fees, contract selection, engineering and construction costs, cost classifications, and owner involvement.
- Conducted a comprehensive management audit of the Research Demonstration and Development program of Southern California Edison for the CPUC. Reviewed projects to ensure compliance with FERC guidelines, costs and accounting treatment, program justification, cost-benefit requirements and project controls.
- Performed a comprehensive production competitive study for Public Service Electric & Gas. Revised organizational structure and management practices in plant operations and maintenance, capital project planning, economic dispatch, performance and cost comparisons, and production cost modeling.



- Assisted Nevada Power Company in its efforts to improve capital and O&M facilities planning and management activities, resulting in facility improvements that were incorporated in the North Las Vegas service center.
- Project manager for a management audit of the Los Angeles Department of Water and Power. Reviewed power operations and maintenance, design and construction, transmission, dispatch, fuels management, and for overall project administration.
- Conducted numerous generation, transmission and distribution improvement programs for clients that include:

Boston Edison Company  
 Central Power and Light  
 City of Colorado Springs Department of Public Utilities  
 Columbus and Southern Ohio Electric  
 Consumers Power Company  
 Glendale Public Utilities  
 Kentucky Utilities  
 Ketchikan Municipal Utilities  
 Los Angeles Department of Water and Power  
 Montana Power Company  
 Mountain Fuel Supply Company

Nevada Power Company  
 Niagara Mohawk Power Corporation  
 New York State Electric & Gas Company  
 Niagara Mohawk Power Corporation  
 Oklahoma Gas and Electric  
 Omaha Public Power District  
 Public Service Company of New Mexico  
 Public Service Electric and Gas  
 Seattle City Light  
 Tampa Electric Company  
 Utah Power and Light

### **Program and Project Planning and Management**

- Directed a project for Southern California Edison to develop strategies to reduce regulatory risks for its construction program. Surveyed large utility construction projects and performed benchmarking analysis to highlight regulatory risk potential.
- Directed an improvement program for the City of Phoenix Aviation Department's Capital Expenditure Program. Developed project management tools, and integrated management controls between the program manager, contractors, and the City.
- Directed numerous studies of engineering and construction management functions for the following clients:

Arizona Public Service Company  
 Consolidated Edison Company  
 El Paso Electric  
 Los Angeles Dept. of Water and Power  
 Nevada Power Company  
 New York Power Authority

Pacific Gas & Electric Company  
 Public Service Electric & Gas Company  
 Public Service Company of New Hampshire  
 Sierra Pacific Power Company  
 Southern California Edison Company  
 Utah Power and Light Company

- For the Los Angeles Bureau of Engineering, conducted a performance benchmarking study and reviewed the processes used to identify, design and construct capital projects including the interaction among City departments and the City Council.

- Directed three projects covering the engineering and construction of the Palo Verde Nuclear Generating Station for Arizona Public Service: project management, planning and construction; litigation support; and summary level project history.
- Conducted numerous reviews of materials management and logistics functions to improve organizational structure, re-engineer processes, upgrade technology and systems support, and control inventory. Clients include:

Arizona Public Service  
 Carolina Power & Light  
 Columbus Southern Ohio Electric  
 East Bay Municipal Utility District  
 Glendale Public Utilities  
 General Public Utilities Corporation  
 Jersey Central Power & Light  
 Pennsylvania Electric Company  
 Metropolitan Edison Company

Los Angeles Dept. of Water & Power  
 Nevada Power Company  
 New Jersey Natural Gas Company  
 Northern States Power Company  
 Oklahoma Gas & Electric Company  
 Public Service Company of New Mexico  
 Public Service Electric & Gas Company  
 San Diego Gas & Electric Company  
 Southern California Gas Company

### **Management Audit Experience**

- Directed the 1999, 2000, 2001 and 2006 Affiliate Transaction Audits for Southern California Edison. These audits, ordered by the California PUC, determined compliance with the State's Affiliate Transaction Rules.
- Lead consultant for the 2002 and 2004 Affiliate Transaction Audits for San Diego Gas & Electric and Southern California Gas. These audits, ordered by the California PUC, determined compliance with the State's Affiliate Transaction Rules.
- Directed a management audit of the Los Angeles Harbor Department. Assessed the strengths and weaknesses of organizational entities. Made recommendations to improve business planning, decision-making, performance management, environmental planning, infrastructure planning, and port security.
- Lead consultant on an audit of Public Service Electric & Gas's compliance with affiliate transaction standards. Assessed the extent of cross-subsidization of competitive services provided by the utility or its affiliates.

### **Work Experience**

- Managing Director and Founder, NorthStar Consulting Group, Inc. (1999 – present)
- Vice President, Navigant Consulting. (1997 - 1999)
- Managing Director and Founder, Barrington-Wellesley Group, Inc. (1990 - 1997)
- Vice President and Director, Theodore Barry & Associates. (1973 - 1990)

# DAVID P. VONDLE

**Project Role: Lead Consultant:**      **Work Management**  
   **Performance and Results Management**  
**Consultant:**                                **Corporate Mission**  
   **Workshop Training**

## Summary of Qualifications

**Mr. David P. Vondle**, a CMC, has extensive experience in workforce strategy and planning, work management and performance and results measurement. He also has substantial corporate performance management (including mission statements) and process improvement experience. Most of his consulting engagements involve workforce strategy, work management, reviewing or developing performance metrics and improving productivity. His book, Service Management Systems: How to Create Competitive Advantages through Integrated Work Management, Materials Management, Facilities Management, and Cost Management Systems, was published by McGraw-Hill. Mr. Vondle received his M.B.A. from Southern Methodist University and his B.S. in Industrial Management from the University of Akron.

## Work Management Consulting Experience

- Assisted a combination utility develop a labor resource optimization program. The program included a thorough review of enterprise metrics and targets and leveraging the performance management process to achieve the objectives of reducing employee staffing by ten percent.
- Led the Workforce Planning, Business Information Systems, Gas Procurement and Risk Management task areas on the Industrial, Economic and Administrative Survey of the Los Angeles Department of Water and Power.
- Directed a project to achieve cost reductions and customer service improvements through organization, work management, and facility changes for a large gas company. Areas covered included engineering, customer service, construction, maintenance, warehousing, and business offices.
- Directed a project to analyze and improve the service, quality, and cost performance levels for the customer service representatives and service technicians for a major Midwestern energy utility. This project included developing service, quality and cost performance metrics.
- Led a team of engineers and inspectors to reengineer the contractor inspection process. The team developed practical recommendations to improve inspection, reduce risk exposure, and lower total costs.
- Directed a process improvement program for a major southeastern gas utility. Areas included were system integrity (leak survey, leak repair, valve maintenance, right of way maintenance, patrols and inspections, cathodic protection, and pipe replacement program) and pressure management.

- Directed the overhaul and modernization of the services contracting process for a large energy utility. The effort included the company's contracting philosophy, contracting economics, contractor qualifications, labor relations issues, bid packaging, bidding and selection procedures, contract pricing, contract documents, internal controls, and audit requirements.
- Directed an organization and work management study for a regional Bell holding company. Evaluated the organization structure, workload trends, the use of available technology, and cost accounting practices. Developed appropriate productivity performance metrics.
- Conducted a comprehensive audit of an electric company's workforce planning, productivity and staffing levels. Addressed the workforce planning process, contract versus in-house decision-making, overtime control, proposed labor saving investments and reward systems.
- Conducted a study that related staffing needs to performance for a growing Western city. Departments covered included police, courts, parks, water and wastewater, and public works.
- Conducted a work management study for a municipal water utility. Developed a plan for integrated work management and materials management systems.
- Conducted an organization and staffing study that produced a streamlined organization structure that improved customer service and reduced costs for large municipal water utility.
- Conducted a management review of the organization, staffing and work management practices of the public works and utilities departments of a major Texas city.
- Directed a project to achieve cost reductions and customer service improvements through organization, work management, and facility changes for a large gas company. Areas covered included engineering, customer service, construction, maintenance, warehousing, and business offices.
- Directed a project to analyze and improve the service, quality, and cost performance levels for the customer service representatives and service technicians for a major mid-western gas utility.

### **Performance and Results Management and Corporate Mission Consulting Experience**

- Lead consultant on a Corporate Performance Management Organization and Process Improvement program for a Midwest investor owned combination utility. The program included the mission statement, strategic planning, business planning, issues management, performance metrics, individual performance planning and evaluation and incentive compensation.
- Assisted a combination utility develop a succession management program that was fully integrated with its performance management program.

- Assisted a large utility develop a new mission statement.
- Facilitated two process improvement teams for a major western gas transmission and distribution company. One team addressed compressor station operations and maintenance and the other team covered damage prevention. Improvements included lower costs, reduced downtime, and fewer damage incidents. Both projects developed metrics for work management, cost and service levels.
- For a large Western municipal water and electric utility, examined all shared support services and recommended a new management process to improve internal client satisfaction and reduce costs. The new management process included clear definition of roles, defined quality and service requirements, accurate costing, clear pricing and billing, integrated business planning and performance appraisal.
- Initiated, developed, and directed the AUC Management Consultants International Best Practices Consortium. Over its seven years, the Consortium attracted thirty energy utility member participants from seven countries. The Consortium included a balanced scorecard of benchmarked performance measures covering all aspects of company operations and examined innovative best practices.
- Project manager on an engagement to develop a balanced scorecard of key performance indicators for a large Midwestern energy utility. The indicators are used to guide the business planning process and for self-evaluation.

## **Work Experience**

- Independent Consultant (1999 to present)
- Founder and Managing Director, AUC Management Consultants (1989 – 1998).
- Director, Impell Pacific (1988 – 1989)
- Founder and President, Management Technology, Inc. (1985 – 1988)
- Senior Vice President, Wolfe & Associates, Inc. (1982 – 1985)
- Principal, Theodore Barry & Associates, Inc. (1974 – 1982)

## CAROL L. ETTER

**Project Role: Lead Consultant:**    **Supply Procurement**  
   **Load Forecasting**  
**Consultant:**                                **Corporate Mission**  
   **Workshop Training**

### Summary of Qualifications

Ms. Etter has over twenty-five years experience in the energy and utility industry, including strategic and business planning, fuel procurement and regulatory compliance, budgeting and financial analysis, implementation of enterprise software system, acquisition analysis and execution, and energy industry restructuring. She has extensive experience in market and financial analysis, rate, and regulatory initiatives, supply portfolio development, operational efficiencies, management analysis and business process re-engineering. She has consulted for public utility commissions, public and municipal utilities, and private energy companies across the country. She was employed by Citizens Utilities, one of the early nationwide gas, electric and water utilities, conducting strategic planning and special projects for all segments of the company's operations. She has a BS in Mechanical Engineering from Swarthmore College and an MBA in Finance from the University of Colorado.

### Corporate Mission Experience

- Coordinated all budgeting and strategic planning for the public utility operations of Citizens Utilities. As part of these efforts, oversaw the activities to forecast gas and electric demand and to integrate the purchasing of natural gas, and contracts for the purchase and sale of power into the strategic and operational plans. The budgeting efforts also included review and coordination with regulatory affairs and accounting department personnel to assure appropriate recording, forecasting, and tracking of supply purchases and costs for regulatory oversight purposes.
- Lead consultant on the management decision-making and productivity improvement elements of a Business Process Review of Central Vermont Public Service. Included assessment of the decision-making processes, models, documentation, and effectiveness. Reviewed over two dozen business decisions ranging from the overall Strategic Planning Process, to implementation of an Enterprise Resource Program (ERP) software package. For the productivity improvement process review, examined the mechanisms used to identify and prioritize process improvements, as well as the results of the improvements. (2008)
- Developed corporate policies, state commission filings, and implementation plans for Citizens Utilities' electric industry restructuring activities. Prepared initial and supplemental electric industry filings for Vermont and Arizona commissions addressing activities for Citizens' operations in those states. Developed corporate positions on consumer protection, supplier of last resort, stranded cost recovery,

functional separation of regulated and non-regulated operations, and provision of ancillary services.

### **Supply Procurement Experience**

- Reviewed technical and financial risks for numerous wind-power and cogeneration power projects, including developing appropriate contractual and/or rate treatments to mitigate risks to both investors and ratepayers associated with non-performance.
- Served as Senior Consultant on fuel procurement projects in Illinois and Indiana. In both projects, reviewed existing practices and policies and identified gaps and opportunities for improvements. The Illinois project also included examination of the risk mitigation program operated by the company.
- Prepared a Midwest gas distribution utility for a biannual gas procurement review audit. Reviewed all procurement, demand forecasting, and price volatility mitigation programs and documentation. Reviewed all on-system gas procurement over a three-year period, along with price and deliverability risk mitigation programs.
- Served as project manager on a three-year gas procurement audit in Tennessee involving all three of the regulated gas utilities in the state. Developed on-going monitoring reports, and oversaw the monthly tracking of gas procurement activities. Prepared quarterly status reports for the Tennessee PSC on each of the companies, and conducted an annual on-site audit to verify compliance.
- In Iowa, reviewed the gas procurement practices of four gas distribution utilities, developing recommendations for pricing adjustments and process improvements.
- Lead consultant on several natural gas and electric fuel and power contract management audits. Prepared detailed evaluations of fuel supply portfolios, purchased power, coal and gas supply contract terms, and developed assessments of those terms relative to market trends and corporate risk abatement activities.
- Project manager for a proposed joint venture between Citizens Utilities and an engineering firm to supply backup generation for pumping stations for the New Orleans Sewerage & Water Board. Coordinated efforts of the gas supply and the regulatory affairs departments, and the engineering firm to obtain the necessary permits from the state regulatory commission and the City Council.

### **Load Forecasting Experience**

- Project manager on a comprehensive review of Atlanta Gas Light's (AGL) integrated resource plan, one of the first gas utility integrated resource plans in the country. Reviewed the demand forecasting methodologies for their appropriateness for use in Demand-side Management (DSM) program development. Also reviewed the gas supply planning processes and identified opportunities for improving the integration of demand forecasting impacts into the supply planning process.



- Project manager on projects, in Montana and British Columbia, to evaluate the role of gas DSM programs as alternatives to expending pipeline facilities to meet increased customer demand. These projects involved integration of supply forecasting procedures, demand forecasting models, and the demand side management programs.
- As part of prudence reviews, assisted reviewed management decisions associated with continuing or canceling construction of large nuclear and coal-fired power plant decisions. The projects involved examining changes in demand forecasts over time, compared to the costs of continuing, suspending, or canceling construction contracts.

### **Other Utility Experience**

- Project manager for the implementation of the SAP Enterprise Resource Program at Citizens Utilities. Activities included:
  - Coordinating review and conversion of charts of accounts, consolidating a dozen different account listings into one common chart for application across electric, gas and water/wastewater utilities.
  - Worked closely with the Division accounting group to develop standardized reports, systems and processes for use by all operating units.
  - Coordinated the development of a system for properly accounting for and allocating revenues and costs across multiple jurisdictions and between regulated and non-regulated operations.
  - Documented the prior procedures, confirmed their correctness with the regulatory department, and developed accounting procedures to assure accuracy for regulatory and financial reporting purposes.

### **Work Experience**

- Independent Consultant (2002 – present)
- Director – Economic Development, Downtown Development District, New Orleans, Louisiana, (2000 – 2001).
- Citizens Utilities Company (Public Services Sector); Harvey, Louisiana (1995 – to 2000)
  - Director, Financial Analysis and Reporting
  - Project Director, Strategic Market Development Team
  - Acting Vice President, Marketing Department
  - Director, Market Development
- Manager RCG/Hagler Bailly, Boulder, Colorado (1983-1995)



# **DEREK W. HASBROUCK**

**Project Role: Lead Consultant:**    **Systems Planning**  
**Consultant:**                            **Program Planning**  
   **Capital & O&M Budgeting**  
   **Workshop Training**

## **Summary of Qualifications**

Mr. HasBrouck is an accomplished consultant with over 25 years of utility consulting and industry experience. He will be the lead consultant for system planning and a consultant in the program planning, capital & O&M budgeting and workshop training areas. He is an expert in utility transmission and distribution planning, design, operations and maintenance. He has served as the chief financial officer of the Vermont Electric Power Company and as T&D supervisor for Florida Power & Light. Mr. Hasbrouck Nelson earned a Bachelor of Science in Electrical Engineering from Rensselaer Polytechnic Institute and a Masters in Management (MM) from the Kellogg School at Northwestern University.

## **System Planning Consulting Experience**

- Expert Witness on transmission and distribution system performance on behalf of FirstEnergy before the Ohio Public Utilities Commission. (2006 – 2008)
- Expert Witness for reliability issues in a dispute between a major petrochemical company and the local transmission service provider. (2004)
- Directed research on historical network reliability performance for a major piece of reliability litigation. (2004)
- Directed the pre-audit preparation of a regulatory distribution network reliability audit of an East Coast utility. The preparation included a business risk assessment, development of desired audit outcomes, an audit management strategy and plan, interview preparation, data request management, and draft report review. (2001)
- Directed the regulatory and public affairs intervention following a major distribution system failure at a major East Coast utility. Managed the development of an Independent Review Board, the retention of an international engineering firm, and targeted research by an industry research consortia. (2000)
- Directed the diagnostic review, regulatory intervention, and major storm restoration process redesign for a major East Coast electric and gas utility following an extended storm outage. Reviewed the existing restoration processes, systems and procedures and benchmarked these against industry leaders. Provided data, coaching, and support for a seven- team, 25-person effort to redesign the restoration procedures for severe storm damage. (2000)

- Directed the proactive review of the reliability of the T&D system for a major Midwestern utility. The analysis included customer research, employee focus groups, a comprehensive inspection of the physical system using a sampling protocol, a review of design, operating, maintenance, and restoration policies, procedures, and performance, and a benchmark analysis of system performance. (1999)
- Directed the post-mortem analysis of emergency preparedness and restoration efforts following a major ice storm for a major electric utility. Benchmarked the state of the system, guided client teams through root cause analysis. Analyzed emergency planning, resource mobilization, customer communications, pre-event maintenance, and supporting information systems. (1999)
- On behalf of Commonwealth Edison Company in the Illinois CC's Reliability Rulemaking proceeding, conducted a benchmark analysis of the reliability of Illinois utilities, and statistically analyzed their performance. (1998)
- Expert witness on behalf of Entergy Gulf States for electric distribution system operations performance, including performance during a major storm. Analysis included a benchmark comparison of performance in reliability, system maintenance, tree trimming, call center operations, and storm/restoration management. (1998)
- Directed a benchmark evaluation of distribution O&M costs and reliability for an East Coast electric utility. Results demonstrated a high level of reliability and identified over \$10 million in feasible operating cost reductions. (1996)
- Directed the effectiveness review of the corporate engineering and T&D departments of a major Southwestern utility. The study identified critical gaps in responsibility for costs, schedules, and the introduction of new technologies and approaches. (1991)

### **Program Planning Experience**

- Directed the development and implementation of a new strategic business plan, including a comprehensive financial restructuring, and capital construction program management system for an independent transmission company. (2004 – 2006)
- Directed the development and implementation of OPTIMIZER, a software tool for optimizing capital and O&M spending. The software was installed at a vertically integrated utility, to enable informed trade-offs between generation efficiency, emission control, T&D, and customer service projects. (2004)
- Directed a distribution construction improvement program at a large Southern municipal utility. Facilitated the development of a plan with significant customer service improvements and construction savings of 15 percent annually. (1991)

## **Capital & O&M Budgeting Experience**

- Directed the due diligence reviews of several proposed sales of electric transmission assets. Focused on the actual assets to be transferred, their condition, levels of O&M and capital anticipated to be required to run the assets, and the related service contracts for the provision of engineering, construction, and O& M services. (2003)
- Expert Witness on transmission business management issues, including resource allocation, capital spending, maintenance spending, and asset performance on behalf of FirstEnergy in two class action lawsuits. (2004)
- Expert Witness on distribution capital & O&M spending, distribution reliability measurement and service level standard setting issues on behalf of Public Service of Colorado before the Colorado PUC. (2004 – 2006)
- Lead Consultant for the development of a workload-based expense budgeting process for gas and electric operations at a major West Coast utility. (1989)
- Managed the development and implementation of a workload-based expense budgeting process for the bulk power transmission and substation maintenance organization of a major utility. Designed the management processes used to evaluate and prioritize work volumes and funding levels for the O&M budget. (1989)
- Lead Consultant for a review of the capital and O&M budgeting process at a large East Coast utility. Identified improvement opportunities in the process and staffing reductions within the function. (1989)

## **Management Audit Experience**

- Directed an audit of Pennsylvania Power & Light's capacity to offer supplier consolidated billing and competitive metering for the Pennsylvania PUC. The audit identified the constraints in the Customer Information System. (1998)
- Directed three annual reviews of LDC gas purchase adjustments for the Tennessee PSC. (1995-1997)

## **Work Experience**

- Independent Consultant (2008 to present)
- Vermont Electric Power Company, Chief Financial Officer of the owner/ manager of the high voltage transmission system in Vermont. (2006 – 2007)
- Senior Partner, PA Consulting Group, Inc. and predecessor firms (Theodore Barry & Associates and Hagler Bailly) (1989 – 2006)
- T & D Supervisor and Field Engineer, Florida Power & Light Co. (1983 – 1986)
- Jones & Laughlin Steel Company, Project Engineer. (1982)

# **MARK FOWLER**

**Project Role: Consultant: Work Management**

**Performance & Results Management**

## **Summary of Qualifications**

Mr. Fowler has over 25 years experience in the electric and gas industry as a management consultant and employee. His functional expertise in the electric industry includes reliability, emergency restoration, customer service and support services. He is currently working with a large Midwestern investor-owned electric utility to develop an Emergency Response Organization. Mr. Fowler was formerly a senior consultant for the utility consulting practices of RCG/Hagler, Bailey, Inc., and Impell Pacific, Inc. He has performed numerous consulting assignments in the utility industry related to gas purchasing, transportation and storage as well as other topics in the gas industry. He has a B.S. and an MBA from the University of Tulsa.

## **Work Management Experience**

- Lead consultant in a review of Southern Connecticut Gas for the Connecticut DPUC. Responsible for review of the non-regulated charges to the operating company and for the review of the support-services and operations functions including work planning, materials, purchasing, MIS, and facilities.
- Consultant for a management and operations audit of the manpower planning, productivity, and staffing functions of Potomac Edison for the Maryland PSC. Focused on all areas, including contractors, distribution and plant fuel procurement.
- Lead Consultant in an 18-month reengineering and organizational review of Belize Electric. The review addressed organizational realignment and process improvements in new service installation, materials management, distribution, and computer systems.
- Conducted an operational improvement project for South Jersey Gas which examined all aspects of the field operations and dispatch. (2007)
- Consultant in a management review of Yankee Gas Services for the Connecticut DPUC. Areas included construction, maintenance and support services.
- Consultant on management audit of Central Hudson Gas & Electric Corporation for the New York PSC. Areas of review included corporate budgeting and the management of contractors.

## **Other Utility Management Audit Experience**

- Lead Consultant on an assignment to develop an Emergency Response Organization and Emergency Response Plan at a large Midwestern utility.

- Lead Consultant on an audit of the Emergency Response of Commonwealth Edison to storms of 2006.
- Consultant on two management reviews of Southern California Gas performed for the California PUC. Areas of review included affiliate transactions and relationships, gas transmission and distribution, engineering, and construction.
- Lead consultant for support services for Connecticut Natural Gas in a comprehensive management review for the Connecticut DPUC. Review included charges from the parent company to subsidiary operations.
- Lead Consultant on a FERC mandated audit of the California ISO following the California Energy Crisis.
- Directed a review of the affiliate transaction compliance of Pacific Gas & Electric.
- Conducted two affiliate reviews of SEMPRA in which the focus was on the gas trading, purchasing, storage, transmission and storage operations of Southern California Gas, San Diego Gas & Electric and their affiliates.
- Consultant on a management audit of the fuel procurement activities of Potomac Electric Power Company for the Maryland PSC. Areas of review included fuel inventory management, gas and oil procurement, transportation, and storage.

#### **Other Utility Consulting Experience**

- Reviewed the gas operations of Pacific Gas & Electric. This review included intrastate pipeline operations, scheduling, systems used for scheduling gas shipments, trades and storage arrangements.
- Lead consultant for analyzing the operations of materials management groups in the electric T&D, generation, water and gas departments of Colorado Springs Utilities.

#### **Work Experience**

- Independent Consultant (1990-2000,2001-present)
- Director Business Development-North America-Hansen Industries, Melbourne, Australia (2000-2001)
- Senior Consultant RCG/Hagler Bailly (1989-1990)
- Senior Consultant Impell Pacific(1986-1989)
- Senior Financial Manager- Plains Electric Generation and Transmission(1985-1986)
- Director Gas Distribution- Western US- Buckeye Gas Products (1979-1985)

# DAWN FRANCIS

**Project Role: Consultant: Capital & O&M Budgeting**

**Program Planning**

**Load Forecasting**

## **Summary of Qualifications**

Ms. Francis has over 20 years of professional experience in the utility industry as both a consultant and utility professional. Ms. Francis served as project manager for a management audit of the Lower Colorado River Authority and its Transmission Services Company. The scope of this audit included a review of the project management controls associated with the transmission development program and an audit of its cost of service. Ms. Francis also managed the 2004 Affiliate Transaction Audits of San Diego Gas & Electric (SDG&E). She was a lead consultant in the 2000, 2001, and 2002 Affiliate Transaction Audits of SDG&E and Southern California Gas. Ms. Francis has over ten years experience in utility resource and financial planning. She served as the electric rates manager for the Los Angeles Department of Water & Power. Ms. Francis actively participated in the utility's rate designs, marginal cost studies, load research program, and incremental cost causation models. Ms. Francis holds a Bachelor of Science in Electric Power Engineering from Rensselaer Polytechnic Institute and is a Registered Professional Engineer in the State of California.

## **Program Planning Experience**

- Lead consultant for a performance review of the City of Los Angeles' energy conservation program. Assessed how the City is planning, implementing and maintaining energy conservation initiatives for City facilities. Identified organizational and technological improvements that would assist the City meet its energy goals. (2008)
- Lead consultant responsible for regulatory research on construction retrospective reviews for Southern California Edison. Determined the causal factors that lead to increased regulatory scrutiny and rate base disallowances. Allowed the utility to include analyses and considerations prior to project initiation and ultimately obtain the required results while recovering all costs through the rate base. (2003)
- Lead consultant responsible for the development of project implementation policies processes for the City of Phoenix Aviation Department's Capital Improvement Program. Assisted in the development of the Capital Program Annual Budget and a project prioritization system.
- Performed a study for the City of Los Angeles Bureau of Engineering to evaluate the effectiveness of organization changes and project management tools. The study was

a “before and after” analysis that utilized metrics as percent cost overrun, number of projects on schedule, and percent overhead cost to complete project.

### **Capital & O&M Budgeting Experience**

- Directed a management audit of the Lower Colorado River Authority and its Transmission Services Corporation. The purpose of this audit was to determine the necessity of reasonableness of costs recovered through LCRA’s wholesale transmission rates. The study focused on the effectiveness of the administration of capital transmission expansion projects, the appropriateness of direct charges, and the reasonableness of overhead cost allocations. (2006)
- Lead consultant on the 2000, 2001, 2002 and project manager for the 2004 Affiliate Transaction Audits of SDG&E and SoCalGas. Responsible for review of customer service functions, non-discrimination, and separation. Performed analysis of affiliate transactions for the procurement of natural gas and electricity to determine compliance with the Affiliate Transaction Rules. Reviewed individual trades and financial transactions with affiliates and compared them with similarly situated transactions with non-affiliates to determine if affiliate transactions were comparable to non-affiliate transactions.
- Lead consultant on an audit of Public Service Electric & Gas’s compliance with affiliate transaction standards. The audit also assessed the extent of any cross-subsidization of competitive services provided by the utility or its affiliates. (2000).
- Lead Consultant for the 1999 Affiliate Transaction Audit of Southern California Edison. The purpose of audit, ordered by the California PUC, was to determine the degree of compliance of Edison with the State’s Affiliate Transaction Rules. Specific areas of responsibility included non-discrimination and separation applicability and assessment.

### **Load Forecasting Experience**

- As Assistant Supervisor of Load Forecasting for the Los Angeles Department of Water & Power, responsible for the development and population of econometric and end-use models used to forecast system peak demand. Developed weather normalization and customer elasticity models.

### **Other Utility Consulting Experience**

- Lead consultant responsible for performance measure calculation verification for the 2003/2004 Colorado Performance Assurance Plan Audit of Qwest Communications. The purpose of this audit was to determine if Qwest provides service to competitive local exchange providers in the same manner as to its own local exchange provider.
- Lead consultant on a Gas Procurement Study for the Public Service Company of New Mexico. The purpose of this study was to investigate Commission-approved trading and hedging mechanisms utilized for natural gas procurement throughout the US and



determine the impact on ratepayers. Responsible for identifying types of mechanisms utilized, how the mechanisms were developed, the relative merits and limitations of the mechanisms, and the constraints and limitations placed on traders. (1999)

- Participated in an organizational and operational assessment for the City of Phoenix Aviation Department. The goals of the project were to identify opportunities to reduce costs, increase efficiency and improve service levels. A comprehensive review was conducted that included organization missions and functions, management systems, administrative procedures and operational practices, based on benchmarking comparisons and a knowledge of best practices employed by other planning, engineering design and construction management organizations. Responsible for reviewing contract change order management.
- Lead consultant on regulatory reporting requirements review for Southern California Edison. The purpose of the study was to identify opportunities for consolidation, elimination, and modernization of processes associated with filing documents with the California PUC. (2002)

## **Work Experience**

- Senior Associate, NorthStar Consulting (1999 to present)
- Los Angeles Department of Water & Power
  - Manager of Electric Rates. Responsible for the development and maintenance of the City's Electric Rate Ordinance. Responsible for the development of rate classes, marginal cost of service studies, embedded cost of service studies, system and class load shapes, and rate design. Administered the system load research program.
  - Supervisor of Retail Customer Contracts. Responsible for the development of long-term customer performance contracts. The purpose of these contracts was to encourage customers to alter usage patterns, interrupt load and/or defer uneconomic bypass of the system.
  - Assistant supervisor of Strategic and Business Planning. Responsible for the development of customer marginal cost and profitability analysis and evaluation of wholesale utility costs against wholesale market cost.



# **DR. MOHAMED EL-GASSIER**

**Project Role:      Technical Advisor:      Supply Procurement  
System Planning**

## **Summary of Qualifications**

Dr. El-Gasseir has consulted for numerous utilities and regulatory commissions, state agencies, grid operators and independent power producers in many technical areas including purchase power agreements (PPAs) contracting and due diligence applications, market and system simulations for PPA negotiations support, renewable power market assessments and project development, and developing transmission access for renewable resources. Other specific areas of expertise include: stochastic price forecasting for risk management and bid evaluations; identification and assessment of on-site generation investment opportunities; integrated (generation and T&D) cost effectiveness studies of alternative generation investments in central power plants, distributed resources and DSM alternatives; and configuration and assessment of integrating high-voltage dc and ac transmission applications. Dr. El-Gasseir has a PhD in Energy and Resources from the University of California at Berkeley, an MS in Chemical Engineering from the University of Rochester and a B.Sc. in Chemical Engineering from the University of California at Berkeley. He has written over 25 publications, reports and conference presentations on energy related subjects.

## **Supply Procurement Consulting Experience**

- Assessing the feasibility and cost effectiveness of HVDC-aided segmentation of the Eastern Interconnection grid to prevent cascading outages in the Northeast (as in the 2003 blackout) and to increase available transfer capability between New England, New York, PJM, MISO and Ontario. (2005)
- Analyzed the availability, prices and competitiveness of Pacific Northwest power exports. (Testimony before the California Energy Commission).
- Developed and applied a forecasting methodology to project (transmission-constrained) bus-level and zonal post-restructuring wholesale power market prices for the WSCC area for a consortium of power marketers, customers and utilities.
- Developed and applied a forecasting methodology to project (transmission-constrained) bus-level and zonal post-restructuring wholesale power market prices for the WSCC area (work performed on behalf of a consortium of power marketers, industrial customers and utilities).
- Simulated nodal and zonal prices for all service areas in the California and Western electricity markets.

- Evaluated the performance of California's \$30 billion portfolio of State Power Contracts to assess the potential impacts of impending implementation of a Locational Marginal Pricing Platform market and associated transmission Congestion Revenue Rights allocation schemes – resulted in a two-year delay and overhaul of the California ISO's market redesign program to correct a costly new design flaw.
- Designed an auction for procuring wholesale Standard Offer service and market-based load management to meet customer-load obligations of New England investor-owned utilities and mitigate market price spikes (2002)
- Technical advisor for audits of the three largest California electric utilities' - Pacific Gas & Electric, Southern California Edison and San Diego Gas & Electric - Hourly Power Exchange Energy Credit (PX Credit) calculations to ensure compliance with CPUC orders and utility advice letters. Developed a PC-based price calculation model to recalculate hourly PX prices for the period 1998 through 2002 (2002)
- Technical advisor for the reasonableness review of Atlantic City's power procurement practices and costs for the New Jersey BPU. Review examined the utility's power procurement processes (spot market purchases and competitive solicitations) to meet forecast load requirements (1999-2000)
- Assessed post-restructuring purchase power practices of Pacific Gas & Electric Power in the midst of the California energy crisis for the California PUC as part of a financial viability audit. ( 2001)
- Technical advisor for the reasonableness review of Atlantic City's power procurement practices and costs for the New Jersey BPU. Review examined the utility's power procurement processes (spot market purchases and competitive solicitations) to meet forecast load requirements.
- Analysis and evaluation of the contract performance of major utilities involved in a long-term multi-lateral contractual complex for the sale, exchange and banking of electricity (litigation support).
- Designed a novel market-based mechanism for bi-lateral trading of price-induced load reduction commitments for a major U.S. utility.
- Reviewed Atlantic City Electric's assumptions regarding future cost of power used in the development of stranded cost estimates and developed projections of the cost of generation of a merchant plant. Testified before the New Jersey BPU.
- Contract performance evaluation of major utilities involved in a long-term multi-lateral agreement for the sale, exchange and banking of electricity (litigation support).
- Developed and lectured on specialized techniques for anticipating and planning for price spikes and the use of hybrid (i.e., statistical and production costing) techniques to assess the worth of physical assets, including returns on real options trading.

- Developed a contractual mechanism for integrating market-based load management (price-responsive loads) into standard offer (supply) service/regimes for retail customers.
- Assisted POWEREX, the independent power subsidiary of B.C. Hydro, in preparing export sales power supply bids. Provided advice regarding power sales pricing strategies, contract terms and conditions, risk management alternatives and U.S. market requirements.

### **System Planning Consulting Experience**

- Conducted ISO-focused transmission-constrained simulations of the operation of centralized markets using General Electric's MAPS model to assess the impacts of changes in market rules, fuel prices, generation and transmission additions, and factors affecting system load flows on market clearing prices, power plant performance and purchase power contracts. (1997 to present.)
- Reviewed Connecticut Light & Power's actions to ensure system reliability in light of extended nuclear outages in a focused audit of Northeast Utilities for the Connecticut DPUC. Assessed the utility's emergency power supply planning activities and steps to reduce reactive power transmission limitations. (1997)
- Contributed to policy decisions on key provisions of regional transmission tariffs in California, New England and Canada (e.g., load-based vs. functional access fees, nodal vs. zonal congestion management usage charges, and incremental vs. average transmission loss compensation).
- Evaluated the system reliability impacts of the generation divestment plans of a major U.S. utility and the consequences on contract reliability requirements for replacement power purchases.

### **Work Experience**

1992–Present Independent Consultant

1991 - 1992 Barrington-Wellesley Group, Senior Associate

1988 - 1989 Department of Mechanical Engineering, University of California, Berkeley,  
Lecturer

1981 - 1991 Independent Consultant

1978 - 1981 Lawrence Berkeley Laboratory Energy Program, Research Assistant/Associate

1976 - 1977 U.S. Council on Environmental Quality and National Academy of Sciences  
Committee on Nuclear and Alternative Energy Systems, Consultant

## VI. SCHEDULES AND BUDGETS

NorthStar's proposed not-to-exceed cost for performing the management audit of National Grid is \$1,154,900. This proposed cost includes all professional fees (\$982,900) and expenses (\$172,000) associated with performing the work and delivering the necessary draft reports described in this proposal. As indicated in the RFP, the cost for all draft reports and the cost of printing ten hardcopies of the final report are included in our not-to-exceed cost. Our price for conducting the workshop training is \$117,265 which includes fees and expenses. This amount is included in our not-to-exceed cost of \$1,154,900. Additional appearances and testimony will be billed at the individual hourly rates shown in **Table VI-1**.

Our proposed cost is based on our normal hourly fees and normal travel, lodging, and other expenses. Details of our proposed project cost, including hours by consultant by task, are provided in Table VI-1. Details of project expenses can be found in **Table VI-2**. NorthStar's project cost information can be reconfigured in another format if desired by the Department.

Invoices will be submitted monthly in accordance with milestones and are due upon receipt. Invoices will include professional fees for hours worked to date, and will not exceed the limits shown in Table VI-1. Invoice backup will include:

- Hours worked, professional fees, and expenses (by expense category) for each consultant.
- Copies of all expense receipts over \$25.
- Percentage of work completed.

Individual consultants and the firm are reimbursed monthly for direct expenses incurred in conducting the assignment. In general, our policy provides that each consulting team member is reimbursed at the same levels, for the same expense item regardless of role according to the following:

- Personal mileage is reimbursed at the rate allowed by the IRS.
- Travel is reimbursed to and from the consultant's home, office, or last work assignment. Travel fares are based on coach or discounted rates when available. In cases where a consultant is traveling from another assignment, the cost will be allocated (with documentation) between assignments in an appropriate manner. However, the amount will not be greater than if from the consultant's home.
- Miscellaneous expenses are charged at cost with receipts.
- Communication, copying, and mail costs are charged at cost.

**Table VI-1  
Project Cost Summary**

	Core Team Resources									
	Wheaton	Bennett	Etter	Fowler	Hasbrouck	Vondle	Francis	El-Gasseir	Admin Support	Total
	\$275	\$275	\$230	\$230	\$275	\$275	\$230	\$275	\$100	
<b>Phase I. Planning and Orientation</b>	130	70	70	50	70	70	50	50	70	630
<b>Phase II. Technical Review</b>										
Load Forecasting	20		50				50			120
Supply Procurement	20	20	150					50		240
System Planning	20	40			200			50		310
Capital and O & M Budgeting	20	100			50		150			320
Program Planning	20	100			50		170			340
Work Force Management	20			130		100				250
Corporate Mission	100		100			50				250
Performance and Results Management	20			80		100				200
<b>Phase III. Report Development</b>	100	80	70	50	50	70	50	30	100	600
<b>Project Management</b>	150								400	550
<b>Phase I-III Subtotal</b>	<b>620</b>	<b>410</b>	<b>440</b>	<b>310</b>	<b>420</b>	<b>390</b>	<b>470</b>	<b>180</b>	<b>570</b>	<b>3,810</b>
<b>Workshop Training</b>	60	60	60		60	60			100	400
<b>Total Hours</b>	<b>680</b>	<b>470</b>	<b>500</b>	<b>310</b>	<b>480</b>	<b>450</b>	<b>470</b>	<b>180</b>	<b>670</b>	<b>4,210</b>
<b>Total Fees</b>	\$187,000	\$129,250	\$115,000	\$71,300	\$132,000	\$123,750	\$108,100	\$49,500	\$67,000	\$982,900
<b>Expenses Total Cost</b>										<b>\$172,000 \$1,154,900</b>

**Table VI-2**  
**Estimated Expenses**

Expense Category	Amount	Total
<b>Transportation and Lodging</b>		
Hotel (est.300 hotel nights)	\$60,000	
Air Transportation (est.75 trips)	\$45,000	
Per Diems	\$30,000	
Ground Transportation	\$14,000	
Miscellaneous	\$7,000	\$156,000
<b>Supplies and Materials</b>		
Copying	\$7,000	
Telephone	\$4,500	
Office supplies	\$4,500	\$16,000
<b>Total Expenses</b>		<b>\$172,000</b>

**Table VI-3** shows the proposed schedule for completing the audit. The final schedule will be developed in consultation with the Department. Assuming a start date of November 5, 2008 the draft report and review would be completed by September 2009 and the final report submitted by October 2009, as shown below. Key milestones/deliverables can be found in **Table VI-4**. A detailed project schedule is provided in **Exhibit VI-1** which is located in Section VIII-Exhibits.

**Table VI-3**  
**Proposed Project Schedule Summary (2008-2009)**

Activity	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
Orientation	■											
Work Plans		■										
Interviews			■	■	■							
Site Visits			■	■								
Mid-Point Status Meeting					▲							
Analysis			■	■	■	■						
Draft Report							■	■				
Third Party Meetings						■			▲			
Staff/Utility Comments								■	■	■	■	
Print/Release Final Report											■	■
Monthly Reports	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

**Table VI-4**  
**Key Milestones/Deliverables**

<b><u>Key Milestones/Deliverables</u></b>	<b><u>Date</u></b>
1. Begin audit	November 5, 2008
2. Detailed work plan approved (Phase I completed)	December 26, 2008
3. Technical audit begins	January 5, 2009
4. Mid-Point Status Meeting	March 4, 2009
5. Task reports completed (Phase II completed)	May 1, 2009
6. Draft report submitted to Staff	June 19, 2009
7. Final report submitted (Phase III completed)	October 16, 2009

## VII. FIRM QUALIFICATIONS

This chapter provides an introduction to NorthStar Consulting Group (NorthStar), brief summaries of relevant engagements performed that are similar to the scope of work described in the RFP and references for selected clients. Qualifications and resumes of individual consultants can be found in the Consulting Staff Organization section.

### A. NorthStar

NorthStar provides superior management consulting services to the transportation, utility, and public service industries undergoing competitive restructuring, major expansion, reorganization, and regulatory changes. NorthStar's primary area of expertise is providing clients with the understanding, knowledge, training, and tools necessary for clients to manage and overcome challenges. NorthStar's partners have over 50 years of experience working with highly regulated industries and organizations such as electric, gas, water, and communications utilities as well as federal, state and municipal government agencies. Founded in 1999 and incorporated in the State of California, NorthStar's partners and staff have served clients throughout the United States and Canada. While NorthStar is continually serving new clients, a substantial portion of its practice consists of providing consulting services to organizations that its partners and staff have established relationships over the years.

NorthStar provides a broad array of management services.

- **Management Audits.** Comprehensive audits of the management and operations of electric, gas, water and telephone utilities aimed at developing more effective and efficient policies and procedures. These projects include extensive investigation in areas such as executive management, financial management, customer services, human resources, field operations, and support services.
- **Operations Management.** Comprehensive studies in distribution and customer service including quality assurance procedures, work force management, scheduling, work standards, manpower utilization, methods engineering, equipment maintenance, inventory controls, and cost reduction.
- **Work Force Management.** Comprehensive and focused programs to increase worker productivity and reduce labor expenses. Strengths and improvement opportunities of current systems are evaluated and the utilization of the existing work force is established. A baseline for service level, quality and productivity is defined for an implementation program consisting of orientation sessions, training of supervisory personnel, measurement of work, development of and performance indicators.
- **Project Management.** Examination, evaluation and development of the overall engineering, procurement and construction management processes including: organization of engineering and construction functions; reporting relationships within



client and external contractors; selection of A/E or E/C firm and/or general contractors and subcontractors; evaluation of contracts; processes of planning, scheduling estimating, and reporting progress and expenditures; site management; accounting; materials tracking and control; work force productivity; quality assurance; and document control.

- **Construction Program Management.** Design and implementation of management processes and working materials that enable client management and staff to effectively manage and control large scale construction and development programs. Developing project management organization, control tools, reporting systems, training modules, and performance measurement techniques for use by client personnel.
- **Strategic Business Planning.** Assessment of organization capability for anticipating and responding to changes in demand, market demographics, environmental factors, government regulations, cost factors, availability of capital, and those factors which affect operations and performance.
- **Performance Benchmarking and Process Re-Engineering.** Definition and quantification of basic indicators by which management, regulators and financial institutions can judge the performance of the company or specific functional unit; thus, providing a common basis for reviewing management. Identifying key measures of performance, establishing appropriate benchmarks to evaluate how well the company is being managed, and providing a tool for continuous measurement of such performance.
- **Best Practices and Operations Improvement.** Comprehensive programs covering the overall effectiveness of management, organization structure, policies, decision processes, and critical operating procedures. NorthStar consultants have conducted numerous management and operations improvement programs, ordered by public utility commissions and company authorized, because of the need to develop an improved understanding of company operations beyond those provided through routine processes.
- **Competitive Restructuring.** NorthStar provides consulting services to investor-owned and municipal utilities and federal, state and local government agencies regarding deregulation, privatization, asset divestiture, and competitive market strategies. NorthStar excels in providing overall project management of privatization and divestiture processes. Services include competitive assessments, financial analysis, contract negotiations, valuations, advertising, marketing, competitive bid solicitations, regulatory representation, expert witness testimony, and procurement assistance.
- **Management Information Systems.** Determination of information needs of management at all levels, development of integrated information systems, planning and design of applications programs, and computer equipment and software selection.

NorthStar maintains offices in Las Vegas, Nevada, New London, New Hampshire, and Santa Maria, California. NorthStar professionals are recognized specialists in the utilities industry and possess substantial experience in: business process re-engineering and best

practices, organizational planning and development, strategic planning, corporate performance, operations and maintenance management, work force management, engineering and construction, plant operations, financial planning, and supply chain management.

## Utility Experience

NorthStar consultants have successfully completed numerous challenging assignments for private- and public-sector clients. We have performed a significant number of project assignments for various federal, state and municipal government agencies, utility companies, boards and commissions. An important element of our approach to consulting engagements is developing and maintaining a close working relationship with the clients for whom we have performed work over the years. It is our goal to develop long-term client relationships by providing valuable counsel and assisting clients to achieve the benefits of our recommendations. We believe that achieving real, tangible and sustainable results for our clients generates the primary value added from consulting. Many of our projects have involved analyzing situations, identifying problems and developing solutions, as well as detailed implementation, planning and assistance.

We are committed to implementing the results of our analytical work and we are proud of our reputation of producing results for our clients. We believe that the strong implementation focus of our practice, combined with our experience in facilitating the change process in a variety of client environments is unique in the consulting profession and the key to our success. It is the hallmark of our consulting profession and the driving force behind our selection of staff and organizational structure.

We feel that our qualifications, as discussed below, optimally position us to effectively perform the management audit of National Grid.

1. **Independent, Unbiased and Objective Approach** - NorthStar is able to offer our services without the hindrance of any issues or concerns that might be raised about our independence and objectivity. NorthStar has never directly or indirectly worked for National Grid.
2. **Extensive Utility Industry Consulting Experience** - NorthStar consultants have worked with more than 50 clients during the last 30 years, including many reviews to evaluate management effectiveness. One of our hallmarks is that we have developed long-term relationships with many of our clients and continue to serve their consulting service needs in a wide variety of areas.
3. **Strong Project Management Capabilities** - NorthStar personnel have a proven track record of managing large, complex projects on time and within budget, while providing high quality work products. We have successfully managed numerous projects as large as the proposed review of National Grid.

4. **Extensive Testimony Experience** - Most of the members of our project team have experience with the preparation and/or presentation of testimony to public service commissions, state legislatures, and others.

NorthStar consultants have worked with many public and private utilities, municipal government departments, and regulatory bodies in the US. Some of clients we have served are listed below.

**Municipal Organizations**

Los Angeles Bureau of Engineering Phoenix Sky Harbor International Airport	Los Angeles Dept. of General Services Port of Los Angeles
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**Municipal Utilities**

Colorado Springs DPU East Bay Municipal Utility District Glendale Public Utilities Ketchikan Municipal Utilities Los Angeles Dept. of Water and Power	Memphis Light Gas and Water Nebraska Public Power District New York Power Authority Omaha Public Power District Seattle City Light
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**Investor-Owned Public Utilities**

Alliant Arizona Public Service Company Boston Edison Company Central Vermont Public Service Corp. Cilcorp CMS Energy Consolidated Edison Company Elizabethtown Gas Company Enbridge Consumers Gas Exelon General Public Utilities Corporation Great Plains Energy Jersey Central Power & Light Kentucky Utilities Company KeySpan MDU Resources MidAmerican Energy Montana Power Company Mountain Fuel Supply Company Nevada Power Company New Jersey Natural Gas Company	New York State Electric & Gas Niagara Mohawk NICOR Northeast Utilities Northern Indiana Public Service Oklahoma Gas & Electric Pacific Bell Pacific Gas and Electric Company Peoples Energy Public Service Co. of New Mexico Public Service Electric and Gas Public Service Oklahoma QWEST Communications San Diego Gas and Electric Southern California Edison Southern California Gas Company Southern New England Telephone United Illuminating Company US WEST WE Energies
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**Regulatory Commissions**

California Public Utilities Commission Connecticut PUC Massachusetts PUC Nevada PSC New Jersey Board of Public Utilities	New York PSC Ohio PUC Pennsylvania PUC US Dept. of Commerce US Environmental Protection Agency
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## Management Audit Experience

NorthStar founders have directed over 30 comprehensive and focused management audits over the past 30 years, including the following companies:

Arizona Public Service Company	Nevada Power Company
Boston Edison Company	New England Electric System
Central Vermont Public Service Corp.	New Jersey Natural Gas Company
Delta Natural Gas	Northern Indiana Public Service
Duquesne Light	Omaha Public Power District
East Bay Municipal Utility District	Pacific Gas and Electric Company
El Paso Electric	Peoples Gas
Elizabethtown Gas Company	Public Service Electric and Gas
Glendale Public Utilities	Sierra Pacific Power
Ketchikan Municipal Utilities	Southern California Edison
Los Angeles Department of Water and Power	Southern California Gas Company
Los Angeles Harbor Department	United Illuminating
Lower Colorado River Authority	US West
Montana Power Company	Utah Power and Light

**Lower Colorado River Authority** –NorthStar conducted a 2006 management audit of Lower Colorado River Authority (LCRA). The object of this audit was to assess LCRA’s transmission cost of service, allocation of overhead costs, and project management of its transmission construction projects.

**Los Angeles Harbor Department (Port of Los Angeles)** – NorthStar conducted a management audit of the Port of Los Angeles. The objective of this audit was to determine the effectiveness of the Port’s organization, operations, and policies and procedures.

**US WEST** – We examined the process and procedures used to monitor the transfer of intellectual property among US WEST affiliates and to compensate the regulated business of US WEST when intellectual property was commercialized by a non-regulated business.

**City of Memphis Light, Gas, and Water** – NorthStar founder D. Bennett conducted a review of MLGW’s customer service policies and procedures. The review aligned MLGW’s customer service policies and procedures with the needs of customers in a deregulated utility environment.

**Ketchikan Municipal Utilities** – NorthStar founder D. Bennett directed a comprehensive management audit of the City of Ketchikan Municipal Utilities covering electric, natural gas, water, and telephone operations.

## **B. Experience on Similar Projects**

The following selection of relevant case studies and project descriptions provide details of engagements completed for electric and water utilities, airports, marine ports and other major clients. These project summaries demonstrate NorthStar's recent experience in providing management consulting services and conducting audits. Client contacts as references for these projects are also included. We also describe our experience with handling confidential information.

### **Port of Los Angeles – Management Audit**

NorthStar was retained by the City of Los Angeles to conduct a management audit of the Port of Los Angeles. The Port of Los Angeles is a premier gateway for international commerce. The purpose of the survey was to assess the Port's capabilities in its role and a premiere international trading hub and to identify opportunities for meaningful change in management, operations, and culture in order to better serve strategic challenges and issues. The audit can be found at: [http://www.lacity.org/ctr/audits/ctraudits18025571\\_12032004.pdf](http://www.lacity.org/ctr/audits/ctraudits18025571_12032004.pdf)

NorthStar utilized a five phase approach:

- Identification of strategic issues
- Analysis of organizational structure
- Review of operations and infrastructure
- Evaluate performance (best practices analysis)
- Recommendations for Improvement

NorthStar assessed the Port's performance as it relates to achieving its mission and strategic objectives, and focused on those areas with the greatest impact on the Department's proposed course of action for addressing future challenges. The Port's master planning for capital improvements, engineering and construction management, and environmental stewardship were among the strategic areas highlighted and reviewed in depth.

NorthStar identified six different strategic issues during the study ranging from the environment to port security and executive decision-making to port master planning. The results provided both an assessment of the strengths and weaknesses of organizational entities as it relates to the strategic issues and responsibilities, and recommendations to allow the Department to meet the challenges identified. NorthStar provided Port management with over 30 recommendations for improving strategic business planning, executive decision-making, performance measurement and reporting, environmental planning, port master and capital project planning, and port security.

## **Southern California Edison (SCE) – Energy Efficiency Program Management Audit**

The California Public Utilities Commission (CPUC) recently performed a management audit of SCE's utility public goods charge (PGC) fund revenue collection and energy efficiency program expenditures from January 1, 1998 through December 31, 2002. The management audit was conducted over a period of nearly one year from mid-2003 to mid-2004. The audit included 15 recommendations for SCE that addressed management/financial controls, increased competitive procurement and energy efficiency program process improvements. SCE retained NorthStar to conduct a high level review of the critical aspects of energy efficiency program management within the control of SCE and evaluate the progress that the Energy Efficiency organizational unit within CSBU has made in addressing CPUC audit concerns. NorthStar's assessment included the following:

- Program decision-making including re-organization and assignment of processing duties, incentive payment process controls, and evaluative criteria used to determine outsourcing versus in-house resource utilization, application, and overall effectiveness.
- Procurement of contracted services for programs on a competitive basis – criteria, corporate guidelines, procedures, actual practices, and documentation.
- Contractor and vendor monitoring/inspection to verify performance results with program requirements, contract obligations and management controls.
- Management and financial controls exercised over program advertising expenditures, payments, and verification of results.
- Development and application of energy efficiency program management information, tracking systems and management reporting.
- Development and application of program management policies and procedures for the Energy Efficiency organization.

## **Southern California Edison – TDBU Management & Organization Review**

NorthStar recently completed a management and organization review of SCE's Transmission and Distribution Business Unit (TDBU). TDBU faces a number of challenges after the California Energy Market restructuring. Electric demand is forecast to increase requiring the development of new transmission facilities and TDBU is responsible for meeting this new electric demand after many years of dormancy. TDBU has the task of staffing and training to develop this new infrastructure. The scope of this program included:

- Evaluate the organization structure.
- Determine appropriate staffing levels.
- Establish effective resource planning.
- Provide quantitative manpower planning and work reporting.

NorthStar performed a top-down review of the TDBU organization and its current operating practices. The TDBU organization and responsibilities were evaluated for strengths and weaknesses, appropriateness to the TDBU mission, and against other similar

organizations in the industry. Organizational missions, products, and services were evaluated to ensure that they support the work management philosophy. Activities were categorized into tasks, project or time category work and then analyzed for efficiency utilizing standard industry engineering methodology. Recommendations were developed to match resource requirements with workload levels, defined management requirements, work management reporting systems, and defined management processes. The last step of the project was planning for implementation of long term recommendations.

## **Southern California Edison – Project Management Review**

SCE initiated a multi-billion dollar transmission construction program in 2003. Since the company had not developed any significant construction projects in over two decades, management recognized the need to identify potential risk areas and define strategies that would reduce regulatory risks to its rapidly expanding construction program. SCE engaged NorthStar to conduct a review of large utility construction projects carried out throughout the United States. NorthStar conducted a benchmarking survey of regulatory reviews of large electric transmission and generation projects recently completed. The survey highlighted potential regulatory risk by identifying subject areas where regulators and interveners took issue with projects and then translating them into strategic advantages for the company's transmission construction program.

NorthStar utilized a research oriented approach to this assignment that began with a broad perspective, then became selectively deep as the analysis focused on specific projects and risks. NorthStar researched a number of capital projects and then focused on a select number based on a series of parameters. Information sources included regulatory records, commission orders, filed testimony, and direct interviews with various project managers.

NorthStar's detailed analysis included 15 large transmission and generation projects and identified the following risk areas:

- Project decision making.
- Early design solutions to technical, financial, and regulatory issues.
- Strategies and relationships to mitigate conflicts, spread risk, provide information, and develop skills needed for successful project delivery.
- Finance, ownership, contract, organization, and risk management techniques.

## **Lower Colorado River Authority (LCRA) – Management Audit**

In December 2005, the Public Utility Commission of Texas ordered a management audit of LCRA. This audit encompassed five subject areas: Direct Transmission Charges, Allocation of Overhead Charges, FERC Reporting, Administration of Capital Expenditure Transmission Projects, and Transmission Cost-of-Service. Lower Colorado River Authority is a Texas reclamation and conservation district operating in Central Texas. LCRA, through its wholly owned subsidiary, LCRA Transmission Services Corporation (TSC), provides wholesale transmission services throughout the ERCOT region. TSC has gross revenues of approximately \$170 million annually and assets in excess of \$1.2 billion.



NorthStar determined that LCRA's allocation of overhead costs were unduly complicated. However allocations were based on causal relationships and did not create cross-subsidies between TSC and its other business units. TSC's debt service associated with new transmission plant outpaced ERCOT increases in demand causing a steep increase in total cost of service. LCRA has adequate cost accounting processes and procedures for assignment costs to TSC and other business units. TSC's administration of capital expenditure transmission projects was in compliance with the terms and conditions of the contracts. LCRA accurately maps costs between its chart of accounts and FERC accounts.

### **Southern California Gas Company and San Diego Gas and Electric – 2000, 2001, 2002, and 2004 Management Audit of Affiliate Relationships**

NorthStar conducted the affiliate transaction audits of Sempra Energy's two regulated utilities. The purpose of this audit was to provide a professional opinion as to each utility's relative compliance with the California Affiliate Transaction Rules. NorthStar was responsible for evaluating:

- Organizational Structure
- Policies and Procedures
- Electricity and natural gas risk management policies and procedures
- Electricity and natural gas trades with affiliates
- Financial transactions between affiliates and utilities
- Training practices

NorthStar utilized a qualitative and quantitative approach to this assignment that was applied to each of the California Affiliate Transaction Rules. The approach included interviews, document analysis, transaction reviews, and model development.

NorthStar completed the last audit in May 2005. NorthStar's audit results were given special recognition by the CPUC in D.06-12-029, pages 11-12 ([http://www.cpuc.ca.gov/WORD\\_PDF/FINAL\\_DECISION/63087.PDF](http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/63087.PDF)). Recommendations included:

- Separation of the Risk Management Function. Risk management was conducted at the Sempra Corporate level. NorthStar determined that adequate separation did not exist between the utilities and the affiliates in providing this service.
- Investigate trading brokers more completely. NorthStar determined that some of the brokers were not diversified enough in counter-party contracts to guarantee anonymity in trading partners.
- Improve controls and authorization in computer access for affiliate and utility employees.



## **Southern California Edison – 2000, 2001, 2002, and 2006 Management Audit of Affiliate Relationships**

NorthStar conducted four of the last seven management audits of SCE's affiliate relationships. The purpose of these audits was to express an independent opinion on the degree and extent of SCE's compliance with the Commission's rules governing affiliate transactions and relationships. NorthStar investigated the utility's accounting and operational practices as they relate to discrimination, fair disclosure of information, and corporate separation. While the NorthStar team performed standard audit tests of selected affiliate transactions, we also focused on the effectiveness of the control environment—i.e., the organization, business processes, and regulatory compliance procedures that affect SCE's compliance efforts. Specifically, NorthStar reviewed:

- Organizational Structure
- Policies and Procedures
- Electricity and trades with affiliates
- Financial transactions between affiliates and the utility
- Computer systems and network access
- Marketing and business development programs
- Training practices

NorthStar utilized a qualitative and quantitative approach to this assignment that was applied to each of the California Affiliate Transaction Rules. The approach included interviews, document analysis, transaction reviews, and model development.

NorthStar completed the last audit in April 2007. A copy of this document can be found at:

[http://www.sce.com/NR/sc3/tm2/RPA/Reg\\_Info\\_Ctr/AffiliateAuditReport/2006\\_affiliate\\_transactions\\_audit\\_report.pdf](http://www.sce.com/NR/sc3/tm2/RPA/Reg_Info_Ctr/AffiliateAuditReport/2006_affiliate_transactions_audit_report.pdf)

- Revise current definition of an affiliates "creation" and re-evaluate and reclassify affiliates as necessary. NorthStar found that SCE does not consistently use products and services directly produced by the affiliate as a determination of its classification.
- Discontinue joint meetings between the utility and affiliates. NorthStar determined that affiliates attending high level meetings including Board of Director, Risk Management, and Market Design Policy sessions jointly. This is problematic due to the potential of the utility disclosing non-public information to its unregulated affiliates.
- Improve controls and authorization in computer access for affiliate and utility employees.

## **Phoenix Sky Harbor Airport – Management Audit**

NorthStar completed a planning, operations, and organizational review of the Sky Harbor International Airport for the City of Phoenix, Arizona. The review identified areas within the Aviation Department's Planning and Development Division which, based on processes employed or comparative basis deviate sufficiently from industry best practices to warrant further review or immediate attention, and recommended opportunities to reduce costs, increase efficiency and improve service levels.

A comprehensive review was conducted that included an organizational review, administrative procedures, operational practices, management systems, and new technologies in order to achieve more efficient performance, resource optimization, forecast long-term resource requirements, and improve external communication and coordination barriers. NorthStar utilized a variety of tools to perform this assignment including: interviews, organizational mapping, review of organizational performance, and best practices.

As a result, the Aviation Department re-organized the Division around its two key functions: planning and capital project development. The Department reassigned other functions to units of the Department that more closely match their respective missions and functions while committing to staffing needs and initiate an aggressive professional development and training program. Planning policies and procedures were adopted to recognize the importance of planning concepts and provide formal mechanisms to assure that they are accomplished in a rigorous manner. The Department renewed efforts to complete the Master Plan update and provide an update every five years thereafter, improve project management controls and reporting systems; and develop formal policies and procedures to support project management from inception to completion.

## **Phoenix Sky Harbor Airport – Management Tools**

NorthStar assisted the City of Phoenix Aviation Department's Planning and Development Division in establishing management control processes for program management of its Capital Expenditure Program. NorthStar also participated in the program management of Sky Harbor International Airport's \$3 billion West Terminal Development Program. The scope of the West Terminal Project included a state-of-the-art terminal complex and an automated people mover system. Specific areas of work included the development of project management tools, communications planning, project management controls, and capital project implementation. Specific areas of NorthStar's support included the development of project management tools, communications planning, and the integration of management controls between the program manager, contractors, and the City of Phoenix.

NorthStar assisted the airport by developing the following:

- Policies and procedures in identifying and controlling risk including determining the project manager, appropriate project approach (turn-key, design/build, in-house etc) and appropriate contractual relationships.

- Policies and procedures in developing project estimates including preliminary, detailed and final estimates.
- Provided training and policies and procedures in developing and controlling project schedule including project planning, scoping, pre-design, design, construction, and turn-over.
- Assisted in the Capital Expenditure Program development process including project identification, project submittal, project approval, project grouping, project prioritization and project budgeting.
- Policies and procedures in controlling project cost including work breakdown, cost reporting, change order management and communications.

## **City of Los Angeles – Bureau of Engineering Performance Benchmarking**

NorthStar conducted a performance benchmarking and operations review of the City of Los Angeles Bureau of Engineering. NorthStar also monitored implementation progress of recommendations. The review analyzed the Bureau's project management implementation practices, decision-making, and communications, and highlighted issues that impacted the effectiveness of the Bureau's performance. A benchmark analysis was also performed to compare the Bureau's processes and performance with other similar public agencies.

The review focused on the Bureau's organization and management including capital project implementation processes, performance benchmarking, the City's street reconstruction program, and cost recovery for services provided. A process review of the following areas was performed:

- Capital program and project planning, prioritization, and execution.
- Program and project management organization.
- Cost and schedule management practices and overall performance.
- Bureau internal and external communications and cooperation.

A final report was prepared that quantified potential savings based on improvements in the following areas:

- Organize the Bureau around key programs and within each, create a project management organization and improve accountability.
- Develop policies and procedures for effective client relationships.
- Reduce management layers and improve span of control.
- Develop an objective project prioritization system for the City.
- Develop a Bureau-wide project management and performance reporting system.

## **Additional Relevant Project Descriptions**

**Organization and Work Management Reviews** - NorthStar founder and Managing Director, Douglas Bennett, directed and performed work management improvement programs for numerous public utility clients including Oklahoma Gas & Electric Company,

Nevada Power Company, General Public Utilities, Public Service Company of New Mexico, and Columbus & Southern Ohio Electric. He also performed work management improvement programs for clients in the construction and mining industry. Areas included:

- Well-defined and efficient work management and control systems.
- Detailed job planning prior to assignment.
- Objective work priority methodologies.
- Improved scheduling and activity coordination among craft groups.
- Accurate measurement and reporting of job completion times, resource performance, and maintenance effectiveness.
- Comprehensive maintenance management information reporting.
- Improved preventive maintenance program execution and reporting.
- Increased supervisory time and workforce utilization.

**Glendale Public Utilities** – NorthStar Managing Director D. Bennett directed an organizational review of the City of Glendale’s Municipal Utility Division. The review focused on operations improvement in the areas of materials management, inventory control and warehousing, power supply planning, and electric distribution operations.

**East Bay Municipal Utilities** - NorthStar founder D. Bennett directed a management review to improve procurement, warehousing and material distribution for this water utility.

**WE Energies** - NorthStar completed a credit and collection performance benchmark and process re-engineering study for this large Midwest utility. NorthStar developed a survey of similarly situated utilities with the purpose of developing a better understanding of strategic credit and collection issues facing utilities. The survey included an examination of performance benchmarks and practices within the utility industry to determine if any widely applicable credit and collection “best practices” exist. The survey provided a basis to re-engineer processes currently utilized by the client with the objective of developing a “best in class” credit and collection function.

## NorthStar Consulting Group Client References

<b>Client:</b> Southern California Edison Company <b>Contact:</b> Mr. James Kelly Sr. Vice President - TDBU 2244 Walnut Grove Rosemead, CA 91770 (626) 302-2284	<b>Client:</b> City of Los Angeles- Controller' Office <b>Contact:</b> Mr. Farid Saffar Director of Auditing 200 North Main Street Suite 460 Los Angeles, CA 90012 (213) 978-7392
<b>Client:</b> City of Phoenix – Department of Aviation <b>Contact:</b> Mr. James H. Matteson, P.E. Director of Planning and Development (retired) 3424 Country Club Circle Show Low, AZ 85901 (928) 532-2948	<b>Client:</b> California Public Utility Commission <b>Contact:</b> Mr. Jack Fulcher Regulatory Analyst 505 Van Ness Avenue San Francisco, CA 94102 (415) 713-1711
<b>Client:</b> Lower Colorado River Authority <b>Contact:</b> Mr. Roger de la Garza Regulatory Analyst 3700 Lake Austin Boulevard Austin, TX 78703 (512) 473-3273	<b>Client:</b> City of Los Angeles- Harbor Department <b>Contact:</b> Mr. Bill Stein Director of Administration (Retired) 28325 Lunada Ridge Drive Rancho Palos Verdes, CA 90275 (310) 377-5648

## Confidentiality

Due to our experience in working with many clients in competitive industries, we are sensitive to the need for handling proprietary information in a confidential manner. Our PC-based network database system is secured through a series of passwords for each project. All confidential information received will be kept in locked file cabinets. Only authorized consultants have the ability to access the information in the database system or the locked file drawers where the information is stored. If required we will sign confidentiality agreement to ensure National Grid and the Department that documents and information are handled in a manner acceptable to their security requirements. Our systems assure that confidentiality of information will be maintained. NorthStar can further elaborate on our experience if selected as a finalist for this project.

## VIII. EXHIBITS

### Exhibit III-1 Initial Document and Data Request

No.	Data Request Description
1	Statements of corporate goals and objectives
2	Detailed organization charts
3	Mission and function statements for the corporation and each department and division
4	Description of the overall corporate performance management process from strategic planning through business planning, budgeting, performance reporting, issues management, individual performance plans and evaluations and incentive compensation
5	Most recent company strategic plan
6	Audited financial reports for past five years.
7	Description of financial planning models currently used.
8	List of key financial indicators used by management and five year trends of each
9	Systems planning studies prepared over the past five years
10	Recent short- and long-range demand forecasts used for planning purposes
11	Comparison of demand forecasts to actual demand for past five years
12	List of planned construction projects including cost and timing for the next three years.
13	List of construction projects completed in the last three years. The list should provide the final cost, the original cost estimate, the project start and complete dates for each project.
14	List of ongoing construction projects. The list should provide the original cost estimate, the project start and expected complete dates and percent completion for each project.
15	Project management and control procedures
16	Five-year comparison, actual to budgeted capital expenses
17	Management letters from outside auditors and responses for the past five years.
18	Biographies of all officers and Board members.
19	Examples of all reports regularly distributed to top management, division and department managers, and the Board of Directors including dashboard screen shots and all scorecards
20	Current organization charts showing all positions (including vacant positions) and current incumbents with as much information (location, position number and salary grade) on each position as is available
21	Description of all apprentice and technical training programs and a summary of participation over the last five years
22	Copies of all consulting, benchmarking and best practices studies and surveys for the last five years for the corporation and each division and department.
23	Description of the contracting and contractor management process
24	Description of all quality control or assurance programs
25	Example copies of all workforce management relevant reports, particularly those that address availability, utilization, efficiency, productivity, quality and effectiveness
26	Description of the performance management system and how it is relevant to workforce management and productivity
27	Description of all improvement initiatives (process improvement, information technology, new tools or equipment) over the last five years.
28	Description of the job classification program and compensation policies, procedures and ranges for each position

No.	Data Request Description
29	Description of each engineering system utilized, such as, GIS, AM/FM, CAD, etc.
30	Description of each operations system used, such as, SCADA, computer aided dispatch, etc.
31	Description of each project management, maintenance management or work management system utilized
32	Description of all shifts (day, evening, graveyard, 24 X 7 coverage, and weekend coverage) utilized by each department and how they are applied to each work group.
33	Current and prior mission statements.
34	Current capital and operating budgets, including all budget assumptions
35	Copies of the most recent budget variance reports and explanations for each responsibility area
36	List of Key Performance Indicators (KPIs) for the corporation and each division and department. For each KPI, provide five-year trends (preferably in Excel) and the current target or control limits.
37	Description of any significant organizational changes that have occurred in the last five years
38	Copies of all audit reports and management responses completed during the past three years (internal and external).
39	Risk management policy.
40	Identification of allowed and prohibited energy trading transactions.
41	List of key financial indicators used by senior management.
42	Description of programs for conducting ground-line inspections of T&D wood poles.
43	Annual reliability data (SAIDI, SAIFI and CAIDI for 2006, 2007 and 2008 to date.
44	2006, 2007 and 2008 year-to-date forecast and actual electric system load.
45	Most recent reports used by m management to compare itself to other utilities.
46	Most recent systems planning studies for the electric business.
47	Most recent short and long range demand forecast used for planning purposes.
48	Amounts awarded to contractors for 2006, 2007 and 2008 to date.
49	Guidelines used to develop staffing requirements.
50	Copy of equipment replacement procedures used to determine whether to repair or replace equipment.
51	Documentation on project close-out, quality assurance, and post-audit feedback processes.
52	Documentation relative to the decision-making process for selecting in-house crews versus outside contractors.
53	Description of all computer models and software systems used for system demand forecasting.
54	The most recent energy conservation plans and policies.
55	Description of the overall corporate planning process.
56	Monthly reports of productivity tracking systems.
57	Five-year trends of the following data. (Preferred in Excel) <ul style="list-style-type: none"> <li>a. Total Expenditures</li> <li>b. O&amp;M Expenditures</li> <li>c. Capital Expenditures</li> <li>d. Gross and Net Plant</li> <li>e. Labor Expenditures</li> <li>f. Professional Services Expenditures</li> <li>g. Other Contracts Expenditures</li> <li>h. Non-labor Expenditures</li> <li>i. Positions at Year End</li> </ul>

No.	Data Request Description
	<ul style="list-style-type: none"> <li>j. Occupied and Vacant Positions at Year End</li> <li>k. Full Time Equivalent Employees For Each Year <ul style="list-style-type: none"> <li>- O&amp;M</li> <li>- Capital</li> </ul> </li> <li>l. Attrition <ul style="list-style-type: none"> <li>- Retirements</li> <li>- Other Voluntary</li> <li>- Non-Voluntary</li> </ul> </li> <li>m. New Hires</li> <li>n. Employee Costs <ul style="list-style-type: none"> <li>- Salaries and Wages</li> <li>- Overtime</li> <li>- Retirement</li> <li>- Health Insurance</li> <li>- Utilities Portion of Payroll Taxes</li> <li>- Other Benefits</li> <li>- Total Employee Cost</li> </ul> </li> <li>o. Activity Levels <ul style="list-style-type: none"> <li>- New Customers</li> <li>- New Services</li> <li>- Total Customers</li> <li>- Total Services</li> <li>- Customer Churn (Moved)</li> <li>- Throughput (MWH)</li> <li>- Capacity (MW)</li> <li>- Distribution Miles (circuit miles)</li> <li>- Capital additions</li> <li>- Total plant</li> </ul> </li> </ul>



**Exhibit III-2**  
**Initial Interview Request**

No.	Interview Request Description
1	Members of National Grid's Board of Directors
2	Chief Executive Officer
3	CFO Transmission
4	Executive Director Electric Distribution & Generation
5	Executive VP Electricity Distribution Operations
6	Executive Director Electric Transmission
7	Senior VP & COO US Transmission
8	Senior VP Energy Portfolio Management
9	VP Transmission Finance
10	VP Construction and Services
11	VP Operations
12	VP Regulation and Commercial
13	VP Transmission Asset Management
14	VP Procurement
15	VP Compensation & Benefits
16	VP Talent Management & Organizational Development
17	VP US Electric Distribution Operations Finance
18	VP US Transmission Finance
19	VP US Accounting Services
20	VP US Audit
21	VP of IS for Electricity Distribution & generation
22	VP Network Operations
23	VP Transmission Asset Management
24	VP Construction & Services
25	VP Project & Contract Management
26	VP Distribution Support
27	VP Asset Strategy & Investment Planning
28	VP Engineering
29	VP Operations NY - Eastern
30	VP Operations NY - Central
31	VP Operations NY - West
32	VP Energy Transactions
33	VP Safety
34	VP Environmental Services
35	VP Energy Efficiency
36	VP Energy Services Strategy

**Exhibit VI-1  
Detailed Project Schedule (2008-2009)**

