

Michael L. Mosher, P.E.
Vice President - Regulatory Affairs



November 8, 2012

Honorable Jaclyn Brilling, Secretary
New York Department of Public Service
3 Empire State Plaza
Albany, NY 12223

Case 09-M-0764
Comprehensive Management Audit of
Central Hudson Gas & Electric Corporation's Electric and Gas Businesses
November 2012 Update and Progress Report

Dear Secretary Brilling:

Central Hudson Gas & Electric Corporation ("Central Hudson" or "Company") filed its Audit Implementation Plan outlining its program to implement the recommendations set forth in the Management Audit Report issued in the above referenced proceeding on July 1, 2011. In accordance with the Commission's May 20, 2011 Order Directing the Submission of an Implementation Plan in this proceeding, the Company submits its fourth update of implementation progress for the period July 1, 2012 through November 1, 2012.

To date, Central Hudson has reported that it has completed a total of seven of the 20 audit recommendations: Recommendations 2, 3, 4, 5, 8, 11 and 18. Recommendation 1, which is related to the makeup of Central Hudson's Board of Directors, had previously been reported as complete, but has been assigned a re-opened status, as a result of the proposed acquisition of CH Energy Group, Inc. by Fortis Inc under review by the PSC in Case 12-M-0192. Central Hudson continues to work with the Public Service Commission Staff and other parties to the proceeding on obtaining regulatory approval for the merger transaction. Following the October 18, 2012 PSC session, the Commission Staff reported that it has accepted six of the Company's seven completed recommendations. The remaining recommendation, Recommendation 10-Supply Procurement, is currently under review by the PSC Staff. Central Hudson reports the completion of Recommendation 10-Gas Load Forecasting, Recommendation 6 – Strategic Planning Process and Recommendation 7-Strategic Planning Process Performance Management System in this update filing.

Central Hudson provided a Mid Point Audit Presentation to Staff on September 24, 2012 in the PSC Albany offices with an update on the current status and progress on each of the 13 remaining open recommendations. In addition to the Mid Point Update report, the Company also provided a more detailed presentation on our implementation progress related to strategic planning process and performance management.

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The Company has made minor changes to the implementation schedules for Recommendation 9 (Electric Peak Model), Recommendations 12 and 13 (System Planning and Planning Function and Responsibilities) and Recommendation 17 (Project Management Performance Measures) to allow additional time for further analysis and internal review. The schedule for the remaining work plan for Recommendation 16 – Project Prioritization's implementation calls for the development of a draft qualitative model and another 2-day project prioritization workshop. Both of these activities' targeted completion dates have been moved out to 2013 and are expected to be complete by the end of the first quarter. The changes to the schedule should still allow time for inclusion of the results in the 2014-2018 capital planning cycle as originally intended.

The Company continues to work on trying to demonstrate meaningful benefits associated with each recommendation. We expect the dialogue regarding cost benefit analysis to continue and remain committed to resolving the issue with Staff.

Central Hudson will continue to work diligently on implementation of the remaining recommendations.

Yours Very Truly;

A handwritten signature in black ink, appearing to read "M. L. Mord", written in a cursive style.

Central Hudson Gas and Electric Corporation

Case 09-M-0764

**Comprehensive Management Audit of
Central Hudson Gas & Electric Corporation's
Electric and Gas Businesses**

Management Audit Implementation Plan

November 8, 2012 Filing

Update and Progress Report

I. Response to Recommendation 1

Recommendation

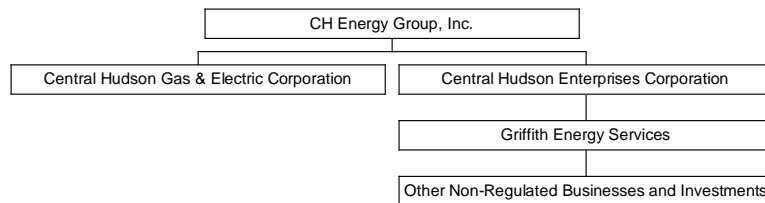
Have a director who resides in CH's territory and another member of senior management [sic] to the CHEG BOD. (Refers to Finding III-1).

Recommendation Implementation Team

Executive Sponsor & Team Lead	Paul A. Colbert, Associate General Counsel-Regulatory Affairs
Team Members	Steve V. Lant, Chairman of the Board & CEO John E. Gould, EVP & General Counsel

Description of Scope and Plan

Central Hudson is a wholly owned subsidiary of CH Energy Group, Inc. ("CHEG"). CHEG is also the parent of Central Hudson Enterprises Corporation ("CHEC"). The makeup of CHEG's Board of Directors ("BOD") is a matter of judgment for the CHEG BOD and its shareholders. CHEG is in compliance with part of the recommendation as it has a Director who lives in the service territory. When a vacancy occurs on the CHEG BOD, CHEG will consider filling the vacant director's position with a qualified independent director who resides in Central Hudson's service territory and/or is a member of CHEG's senior management team.



The CHEG BOD, in addition to considering whether a potential director lives in Central Hudson's service territory and/or is a member of CHEG's senior management, and consistent with CHEG's Corporate Governance, will consider the potential Director's: (1) competency, honesty and integrity; (2) reputation for high standards and values in their professional and personal activities; (3) experience as a successful executive with a for-profit organization; (4) relevant strategic decision making responsibility for operational, technological, marketing, financial, human resources and organizational development; (5) communication and interpersonal skills; (6) diversity of background experience and skills; (7) demonstrated ability to provide objective analysis, practical wisdom and sound judgment; (8) appearance of, or actual conflict of interest; and (9) independence in accordance with Section 303A.02 of the Listed Company Manual of the New York Stock Exchange. A Director must have leadership qualities, be able to make difficult decisions, work with people and build consensus, learn and listen with an open mind, engage in constructive criticism, disagree in a manner that adds substance, and endure private and public criticism. It is CHEG's policy not to consider candidates for Director that serve on

more than two other significant BODs or that are currently an executive with an entity with significant operations in the energy or utility industry.

Central Hudson will report on the makeup of the CHEG BOD to the next Management Auditor and as part of its periodic Implementation Plan reports.

Narrative Including Schedule/Milestones

Start Date: Immediately

Adopted, modified or rejected recommendation: Modified

Priority: C¹

Estimated Completion Date: Ongoing. The makeup of the CHEG BOD is determined by annual shareholder election. There currently are nine members of the CHEG BOD. CHEG has transitioned from a system where three Directors are elected each year for a three year term to a system where all Directors are elected annually for a one year term. Elections occur at CHEG's annual meeting which is scheduled on the fourth Tuesday of April each year. CHEG's next annual meeting is scheduled for April 24, 2012. All nine Directors will be up for reelection on April 24, 2012. It is unknown when the next vacancy on the BOD will occur but, pursuant to CHEG's By-Laws, a Director may not seek another term after they have reached the age of 72. None of the current Directors are within three years of this age.

Actual Progress: Progress is measured by CHEG's ability to fill BOD vacancies with the strongest candidate available after consideration of the criteria listed above.

Summary of Cost/Benefit Inputs

Costs: CHEG Directors are compensated pursuant to Section 2.9 of its By-Laws. Direct costs change from time to time as necessary for CHEG to retain and attract qualified directors. As direct costs change there may be incremental direct costs associated with this recommendation. Incremental direct costs will remain unknown until a vacancy is filled.

CHEG will use its judgment to determine whether to fill a vacancy on the BOD and, if it does fill the vacancy, to properly balance the criteria when selecting a Director to fill a vacancy on the BOD.

Benefits: The auditor did not identify any direct benefits associated with its recommendation. Central Hudson is unaware of any direct benefits.

¹ Central Hudson will assign a priority to each recommendation using the same criteria proposed by NorthStar at II-8-9 of its Report. Low cost, high benefit recommendations receive an A, while high cost, low benefit recommendations receive a C. Where benefits are unquantifiable or difficult to quantify Central Hudson has downgraded the assigned priority. Central Hudson believes, however that all of the recommendations provide Central Hudson with an opportunity to improve and Central Hudson will approach each recommendation seriously.

The auditor identified two potential indirect benefits. First ratepayers may benefit from having an independent Director that can represent the interests of the service territory. Second, the BOD may benefit from input from a second member of management, particularly as it relates to planning for management succession. Central Hudson notes that each Director has a fiduciary duty to exercise business judgment according to what he or she believes to be in the best interest of CHEG, particularly the long term interest of its shareholders. Pursuant to CHEG's Corporate Governance, part of that duty already includes "earning the respect, trust and confidence of employees, customers, suppliers, governmental authorities and the public at large." It is unclear whether a director residing in Central Hudson's service territory and/or that is a member of senior management will add incremental value to a mission that already takes into account customer interests.

Results/Measures of Success

That portion of the recommendation that suggests that the CHEG BOD have a Director that resides in the service territory is complete. The CHEG CEO is a Director who lives in Central Hudson's service territory. Successful compliance with this recommendation means ongoing consideration of qualified Directors that reside in Central Hudson's service territory and/or are members of CHEG's senior management to fill vacancies that may occur on the CHEG BOD.

Update and Progress Report as of October 15, 2011

Central Hudson has responded to all Staff Data and Data Reference Requests issued to date related to Recommendation 1. Central Hudson has also requested CHEG's BOD's Governance and Nominating Committee to consider amending its Governance Guidelines to enable consideration of qualified candidates that are members of CHEG's senior management team and/or that live in Central Hudson's service territory. Central Hudson will make this request such that the Governance and Nominating Committee consider the issue at its December 15, 2011 meeting.

Central Hudson cannot predict the action that the CHEG BOD Governance and Nominating Committee may take with respect to the proposed amendment to the Governance Guidelines. There are no incremental costs to customers and no measurable benefits associated with the implementation of Recommendation 1.

Update and Progress Report as of June 1, 2012

At the December 15, 2011 meeting of the Board of Directors of the CH Energy Group, the Company's Corporate Governance Policy was modified to state the policy is not intended to limit the Company from considering candidates for the BOD as qualified because they are a member of the Company's senior management or reside within the Central Hudson Gas & Electric service territory.

On February 21, 2012 the CH Energy Group announced that it had entered into a definitive merger agreement with Fortis Inc. subject to shareholder and regulatory approvals. Upon receipt of all approvals and closing, the Corporate Governance and Board of Directors will transition under the new Fortis ownership. On April 20, 2012 CH Energy Group and Fortis Inc. filed their Joint Petition for approval of the merger transaction before the Commission and filed testimony in support of the Petition. At page 16 of the petition and page 26 of the testimony the applicants committed to appointing a Board of Directors for Central Hudson made up primarily of independent directors residing in New York with an emphasis on selecting candidates that reside, conduct business, or work in Central Hudson's service territory. We expect additional developments associated with this recommendation will be made during the twelve month period subsequent to the Commission's approval of the merger transaction and closing of the transaction.

Update and Progress Report as of November 1, 2012

No changes or updates for Recommendation 1 for this update filing.

VI. Response to Recommendation 6

Recommendation

Develop and implement processes and guidelines for a comprehensive, integrated strategic plan for both electric and natural gas regulated operations, covering both near term and long term (10-15 years). The processes should reflect internal and external factors, including, for example, trends in technology, physical system conditions, energy efficiency, renewable energy sources and regulatory factors, and should ensure that long-term initiatives, near term operating activities, capital programs and budgets, tactical implementation plans, O&M budgets, goals, and performance metrics are integrated and aligned, and are fully supportive of the regulated utility's overall mission and strategies. (Refers to Findings III-10, III-13, III-14 and III-17-19).

Recommendation Implementation Team

Executive Sponsor	Stacey Renner, Treasurer
Team Lead	Joe Hally, Director-Strategic Planning
Team Members	Strategic Planning Committee members Strategic planning support staff Group Heads Others specific to individual implementation plan steps

Description and Scope of Plan

In NorthStar's review of Central Hudson's corporate mission, objectives, goals and planning, NorthStar found Central Hudson's mission is well-articulated in its Mission Statement and Central Hudson's overall focus is appropriate. NorthStar also found that Central Hudson sets reasonable goals that are generally achieved. NorthStar concluded that Central Hudson does not have an integrated strategic planning process that links regulatory requirements and near term operating improvements but simply attempts to maintain business as usual while using cost reductions to meet regulatory restrictions. NorthStar noted that Central Hudson's processes used to develop and approve the financial plans and budgets were not explicitly linked to strategic and operating initiatives, regulatory requirements, or effects on customer rates. NorthStar found that individual department tactical plans were not used to develop a comprehensive implementation plan and there was no clear link between those plans and strategic objectives.

NorthStar observed that Central Hudson's principal planning vehicles are the July Management retreat and the September CHEG Board Retreat with Senior Management, where the overall corporate direction, goals, and plans were discussed. While the retreats have evolved over the three most recent years evaluated by NorthStar to include more substantive discussion and increased focus on setting strategic direction, NorthStar found that the overlapping duties of Central Hudson and CHEG made it difficult for NorthStar

to separate Central Hudson's planning and budgeting for regulated activities from CHEG's non-regulated activities.

The CHEG BOD recognized weakness in the existing strategic planning process. The CHEG BOD encouraged the Chairman to identify future opportunities and threats by improving the planning processes. With the establishment of a Strategic Planning Committee, supported by a small staff reporting to the Treasurer's office, NorthStar acknowledged Central Hudson's good start toward improving its strategic planning process. CHEG focused its improved strategic planning process evaluated by NorthStar on long-term and corporate value-building initiatives. NorthStar found that CHEG's new strategic planning process did not incorporate near-term operational initiatives and did not provide sufficient focus on utility operations and opportunities. For example, the Bridge to Excellence continuous improvement program ("B2E") was established outside of the strategic planning process and CHEG did not coordinate the initial B2E focus areas with any strategic planning efforts. NorthStar concluded that the new strategic planning process was not yet integrated with other corporate planning activities, though improvements, such as links to the Enterprise Risk Management Committee, were planned for 2011.

As NorthStar stated at the Strategic Planning Collaborative on September 16, 2010, a strategic planning process:

- Outlines an organization's overall direction, philosophy and purpose;
- Examines its current status in terms of strength, weaknesses, opportunities and threats;
- Sets long-term objectives; and
- Formulates short-term tactics to reach those long-term objectives.

Since NorthStar conducted its audit of the planning process, Central Hudson has continued to improve its process to address identified shortcomings. Central Hudson's corporate planning has been redefined to recognize and integrate strategic planning, business planning and budgets, and performance management. This process is shown graphically in Figure 6.1.

Figure 6.1 Corporate Planning Process



This implementation plan focuses on the strategic planning components of the corporate planning process. The implementation plan for Recommendation seven focuses on performance management. Notably, Central Hudson’s comprehensive Business Plan, which is new for 2011, is integral to the implementation plans addressing both Recommendations six and seven.

Narrative Including Schedule/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: See Table 6.3 below

Priority: C

Central Hudson’s implementation plan is intended to achieve a planning process in a manner that reflects best practices. The plan reflects NorthStar’s assessment in September 2010. Completed elements of the plan through June 2011 are shown in the current status.

CHEG established the Strategic Planning Committee (SPC), comprised of senior management and supported by a dedicated staff of highly qualified employees, in 2009. The purpose of the new committee and staff is to add analytical rigor to CHEG’s corporate planning and decision-making process, and to improve its ability to respond promptly and effectively to changes in its business environment. The first major effort of the SPC was to develop a Strategic Plan for the period 2011 through 2015, which was completed and presented to the CHEG BOD in September 2010.

The 2011-2015 Strategic Plan was developed to formally communicate the strategies of CHEG and Central Hudson. It included a discussion of Central Hudson's strengths, opportunities, and threats, and introduced a framework that allows for successful strategy achievement. Additionally, the 2011-2015 Strategic Plan included a strategy statement for Central Hudson, which was published in order to provide employees, investors, and customers with a concise view of Central Hudson's strategy.

Central Hudson provided all employees with the 2011 Business Plan, which is aligned with the five-year strategic plan. The 2011 Business Plan formalized a rigorous planning process developed to communicate Key Performance Indicator ("KPI") targets, short-term goals, business initiatives, and resource plans. Each operating group was responsible for developing its components of the 2011 Business Plan. This was an important step in demonstrating accountability for KPIs and business initiatives across all operating groups and establishing the links between 2011 performance goals and Central Hudson's mission and strategy. Achieving the performance targets and completing the initiatives in the Business Plan is the focus of expanded monthly business results meetings and new quarterly group reviews with the SPC. All executives attend these meetings. These meetings provide ongoing review and feedback on operating performance and corrective actions and are an integral component of an initial performance management process meant to enable feedback in order to promptly address variations from plan and enhance the attainment of short-term goals.

Many of the new requirements in the performance management process will increase the level of Central Hudson's planning efforts. Developing a stronger linkage between business plans and resources requires a more comprehensive operational performance management system and may require changes to Central Hudson's support model in order to maximize the efficiency and effectiveness of the process. Additionally, in order to better anticipate future needs, threats, and opportunities we are currently working to expand the Business Plan to include a multi-year time horizon.

As shown in Table 6.1, Central Hudson has made significant progress in developing a more comprehensive Strategic Planning Process, which incorporates many of the components recommended by NorthStar and reviewed in the collaborative process. Table 6.1 also shows the remaining gaps in Central Hudson's Strategic Planning process and the recommendations to address those gaps.

Table 6.1 NorthStar's Strategic Planning Components

NorthStar's Strategic Planning Components	Sep 2010 NorthStar Assessment	June 2011 Central Hudson Assessment	Comments
<i>Overall Direction</i>			
Corporate Mission and Vision	Yes	Yes	Central Hudson's mission statement was updated after NorthStar's review as part of its strategic planning process. The updates affect style only—the components of the mission statement are unchanged.
<i>Qualitative Factors</i>			
Near-term: Tactical Plans	Partial	Yes	The 2011 Business Plan represents a significant improvement over past business plans and budgets by translating Central Hudson's strategy into measurable goals and action plans for each operating group.
Mid-term: <ul style="list-style-type: none"> • Likely challenges • Have-to and want-to activities • Multi-year projects 	No	Partial	The 2011-2015 Strategic Plan addressed a five-year time horizon and partially addressed these factors. The 2011 Business Plan, which had a more tactical focus, addressed a one-year time horizon. We recently instituted 5-year forecasts at the operating group level and are planning to extend the business plans to a multi-year format to address the factors in a more comprehensive manner.

Long-term: Horizon opportunities and threats	No	Yes	The process that resulted in the 2011-2015 Strategic Plan included an assessment of opportunities and threats. We have also: (i) begun to discuss opportunities and threats at all SPC meetings, (ii) linked strategic planning to the Enterprise Risk Management Committee and the biennial risk assessment, and (iii) begun soliciting threats and opportunities at the group level through the multi-year group expense forecast update process – financial evaluation of opportunities is one advantage of a centralized finance & planning function, which is being evaluated
<i>Quantitative Factors</i>			
Near-term: Operating Budgets	Yes	Yes	Operating budgets are part of a more comprehensive business planning process.
Mid-term: <ul style="list-style-type: none"> • 5-year capital budgets • Net income projections • Financing plans 	Yes	Yes	Detailed five-year forecasts reflect capital expenditure projections and financing needs, and include a Central Hudson income statement, balance sheet, and cash flow statements.
Long-term: Monitoring possible big needs	No	Yes	Forecasting capabilities allow Central Hudson to quantify long-term threats and opportunities listed above as qualitative factors.

<i>Performance metrics</i>			
Near-term: Tactical Plans	Partial	Yes	Performance indicators and targets are included in the 2011 Business Plan.
Mid-term: Measurable progress towards meeting mid-term objectives	No	No	We plan to expand our business plans to a multi-year time horizon to address this gap.
Long-term: Monitoring	No	Yes	Improved focus on performance indicators as the drivers for new business initiatives and operating plans is reflected in the business planning process (2011 Business Plan).

Table 6.2 lists NorthStar's preferred strategic planning practices and Central Hudson's completed improvements and plans to address the remaining gaps in its strategic planning practices.

Table 6.2 NorthStar's Strategic Planning – Preferred Practices

Preferred NorthStar Strategic Planning Practice	Sep 2010 NorthStar Assessment	June 2011 Central Hudson Assessment	Comments
Directed by executive team and CEO	Yes	Yes	SPC comprised of Central Hudson Board members.
Has significant senior management involvement	Yes	Yes	All executives participate in quarterly group reviews with the SPC and at the Executive Retreat.
Reviewed and approved by the Board	Yes	Yes	Indirectly through SPC and directly with formal Board approval of components of the process, including Business Plan and Budget.
Aligned with corporate mission/vision	Yes	Yes	Demonstrated clearly in the 2011 Business Plan.

Processes and responsibilities in the processes are well understood	Yes	Yes	Regular communications to the executive team and planning coordinators. Discussed in 2011-2015 Strategic Plan and 2011 Business Plan.
Process assures appropriate bottom-up input	Budget only	Yes	The Business Plan process, which includes the annual budgeting process is developed at the department level, consolidated at the group level, and then consolidated into a Central Hudson Business Plan. The annual one-year department budgets have been expanded to quarterly 5-year forecast updates, including risks and opportunities. Additionally, Quarterly reviews of the Business Plans are conducted with SPC. Finally, a B2E project was launched in May 2011 to seek further department level involvement and buy-in.
Addresses an appropriate and wide range of issues	No	Yes	2011-2015 Strategic Plan was the first comprehensive strategic plan, which included core competency and opportunities assessments. It was immediately followed by a comprehensive 2011 Business Plan, which included performance targets, action plans, and the associated resource plans.

Addresses both strategic and financial issues	No	Yes	2011-2015 Strategic Plan resulted in a change of strategy for CHEG. A formal strategy was adopted for Central Hudson.
Is responsive to dynamic changes in the operating environment	No	Partial	SPC meets regularly (not less than quarterly) to focus on strategic issues. All executives discuss on a quarterly basis the strategic implications of issues at the group level. Central Hudson will evaluate the support model for enhanced strategic planning and performance management processes, including: (i) the adequacy of current planning resources in the operating groups and (ii) the advantages of centralized finance & planning support for the groups.
Includes detailed functional and departmental performance goals	Budget only	Yes	The 2011 Business Plan reflected bottom-up budgets, performance indicators and targets, and action plans from the departments.

Links goal attainment to incentive compensation	Yes	Yes	All executives have Board-approved incentive compensation goals linked to the strategic and business plans. The 2011 Business Plan was also posted for all Central Hudson employees and used to assign individual performance goals to unclassified employees. Only executives have incentive compensation. Other unclassified employees are evaluated on performance for determination of annual salary increases.
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Listed below in Table 6.3, are the implementation plan milestones that show completed improvements and plans to address the remaining gaps in Central Hudson's performance management processes.

Table 6.3 – Central Hudson Milestones and Implementation Plan

Major Activities and Milestones	Estimated Completion Date	Actual Completion Date	Current Status
2011-2015 Strategic Plan	October 2010	October 2010	Completed
2011 Business Plan <ul style="list-style-type: none"> Targets address safety, reliability, and customer service. 	December 2010	December 2010	Completed
Expand monthly business reviews to include all performance indicators in order to identify and address deficiencies in a timely manner.	April 2011	April 2011	Completed
Quarterly Group reviews with SPC. All executives are included on a quarterly basis to discuss the strategic implications of issues at the Group level.	April 2011	May 2011	Completed – first quarterly meeting held May 11, 2011

Establish effective linkage between the Enterprise Risk Management Committee (ERMC) and the SPC.	October 2011		Partial Completion Currently the ERMC includes one member of the SPC and one member of SPC staff regularly attends ERMC meetings. Additionally, in the future a quarterly presentation of updates to the corporate risk assessment will be made to the SPC.
2012 Business Plan <ul style="list-style-type: none"> • Evaluate adding cost to the customer as a performance measure linked to selection of business initiatives and implement as needed in the 2012 Business Plan. • Modify KPIs to include more leading indicators and measures of efficiency and effectiveness. • Develop additional metrics for those organizations, which currently have no performance measures. • Evaluate the use of benchmarking in setting performance targets for KPIs. • Include multi-year KPI targets and budgets within 2012 Business Plan. • Provide more effective guidance to groups to develop business plans • Provide greater Group alignment and buy-in through Bridge-to-Excellence “Strategy and Vision Communication Project” • Improve the link between performance targets and individual employee objectives. 	December 2011 December 2011 December 2011 December 2011 December 2011 August 2011 December 2011 February 2012		Not yet started Ongoing---quarterly Group reviews Ongoing---quarterly Group reviews; Ongoing---quarterly Group reviews Ongoing A B2E team was convened in May 2011 to improve the communication of strategy and performance targets to employees to better align employee objectives and incentives with corporate objectives. S. Renner and S. Hamilton are co-leads of this team.
Evaluate the support model for the	April 2012		Will be done in

enhanced strategic planning and performance management processes, including: (i) the adequacy of current planning resources in the operating Groups and (ii) the advantages of centralized finance & planning support for the Groups, which will affect the ability to respond to dynamic changes in the operating environment, and the ability to evaluate the financial merits of potential opportunities and investments. Recommend improvements.			conjunction with Recommendation seven, which addresses performance management. Will also be partially addressed by the implementation plans for other audit recommendations.
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Summary of Cost/Benefit Inputs

NorthStar assigned a priority ranking of “A” to this recommendation, which in NorthStar’s opinion signifies that the recommendation “...when implemented, should provide significant benefits to ratepayers in terms of reduced costs and/or improved service and therefore should be addressed by Central Hudson as soon as practical.”

In Central Hudson’s assessment, the benefits ascribed directly to strategic planning are not verifiable because there is no control group or conditions, i.e., there will be no way to know whether Central Hudson’s performance is better as a result of this implementation plan or other factors. A comprehensive strategic planning process provides a framework for evaluating changes in the internal and external environment and evaluating new or different processes, strategies, and tactics. The changes to processes, strategies, and tactics cannot be known in advance and must be evaluated at the time proposed. Therefore based on NorthStar’s criteria for assigning priority ratings, we believe Recommendation six is a “C” since the benefits are inherently unknown and it is difficult to claim that they are immediate or verifiable. Nonetheless, Central Hudson agrees that improvements are warranted and, while not quantifiable, over the long-term a more effective strategic planning process should improve the likelihood of successful achievement of objectives at a moderate annual cost.

Table 6.4 below identifies expected costs and benefits associated with Recommendation six. Costs are split between opportunity costs, which are primarily a re-prioritization of existing resources from other activities to those identified in this plan, and incremental costs, which will require additional resources or spending. The incremental costs are comprised of: (1) \$300,000 per year for expanding the company’s financial planning resources (labor) to provide support to the groups; (2) \$183,000 every other year for studies by consultants as part of strategic planning; and \$25,000 per year for external benchmarking. The consulting costs are estimated based on our experience in developing the 2011-2015 Strategic Plan. Central Hudson’s preliminary estimate of incremental costs is higher than NorthStar’s and meets their definition of “moderate.” Note that these costs include those identified in response to recommendation seven and that no

commitment has yet been made to incur these incremental costs as further study is required.

Benefits associated with these recommendations include those discussed in Recommendation seven since improvements in performance management are a component of the overall strategic planning process. Better strategic planning and performance management should result in more timely and informed decision-making and attainment of performance objectives over the long-term. However, benefits would accrue to the individual decisions (with accompanying costs) on a case-by-case basis and can not be quantified and attributed directly to the planning and performance management processes and infrastructure. The table indicates relevant qualitative benefits that are expected from the planning and performance management improvements.

Table 6.4 – Costs and Benefits for Recommendations 6 and 7

<i>\$ Thousands</i>		2011	2012	2013	2014	2015
Opportunity Costs	Implementation Labor	111.5	0.0	0.0	0.0	0.0
	Implementation Non-Labor	7.0	7.0	7.0	7.0	7.0
	Ongoing Labor	95.0	96.7	96.7	96.7	96.7
	Ongoing Non-Labor	0.0	0.0	0.0	0.0	0.0
	Subtotal	213.5	103.6	103.6	103.6	103.6
Incremental Costs	Implementation Labor	0.0	0.0	0.0	0.0	0.0
	Implementation Non-Labor	0.0	0.0	0.0	0.0	0.0
	Ongoing Labor	0.0	300.0	300.0	300.0	300.0
	Ongoing Non-Labor	0.0	208.0	25.0	208.0	25.0
	Subtotal	0.0	508.0	325.0	508.0	325.0
Benefits - Avoided Cost	Labor Expense Savings	NQ	NQ	NQ	NQ	NQ
	Non-Labor Expense Savings	NQ	NQ	NQ	NQ	NQ
	Capital Cost Savings	NQ	NQ	NQ	NQ	NQ
	Subtotal	NQ	NQ	NQ	NQ	NQ
Benefits - Qualitative	Increased Reliability					
	Greater Flexibility					
	Coordinated Planning	X	X	X	X	X
	Closer Schedule Adherence					
	Improved Processes and Practices	X	X	X	X	X
	Other					

NQ = Not Quantifiable

Results/Measures of Success

Central Hudson will look at several measures of planning effectiveness in conjunction with planned 2012 Business Plan process improvements. Currently under consideration are annual assessments for: (1) The percentage of KPI targets achieved (successful execution); (2) The percentage of individual and/or department performance targets achieved (successful execution); (3) The ratio of individual and/or department performance targets achieved versus KPI targets (alignment); and (4) The percentage of individual performance goals aligned (sampling of performance appraisals, alignment).

Update and Progress Report as of October 15, 2011

Table 6.5, shown below, is an update to Table 6.3 with all changes since the filing of the implementation plan highlighted in yellow.

Update and Progress Report as of March 1, 2012

Table 6.5, shown below, is an update to Table 6.3 with all changes since the October 15th update of the implementation plan highlighted in yellow.

Update and Progress Report as of July 1, 2012

Table 6.5, shown below, is an update to Table 6.3 with all changes since the March 1 update of the implementation plan highlighted in yellow.

Update and Progress Report as of November 1, 2012

Table 6.5, shown below, is an update to Table 6.3 with all changes since the July 1 update of the implementation plan highlighted in yellow.

Table 6.5 – Central Hudson Milestones and Implementation Plan

Major Activities and Milestones	Estimated Completion Date	Actual Completion Date	Current Status At November 1, 2012
2011-2015 Strategic Plan	October 2010	October 2010	Completed
2011 Business Plan <ul style="list-style-type: none">• Targets address safety, reliability, and customer service.	December 2010	December 2010	Completed
Expand monthly business reviews to include all performance indicators in order to identify and address deficiencies in a timely manner.	April 2011	April 2011	Completed
Quarterly Group reviews with SPC. All executives are included on a quarterly basis to discuss the	April 2011	May 2011	Completed <ul style="list-style-type: none">• first quarterly meeting held May 11, 2011• second meeting held

strategic implications of issues at the Group level.		April 2012	<p>July 11-15, 2011</p> <ul style="list-style-type: none"> • third meeting held October 7 and 11, 2011 <p>Update – Beginning 2Q’12, the frequent of the meetings were changed to monthly by combining them with the monthly business reviews.</p>
Establish effective linkage between the Enterprise Risk Management Committee (ERMC) and the SPC.	November 2012	November 2012	Complete. The ERMC includes two members of the SPC and one member of strategic planning staff regularly attends ERMC meetings. The ERMC has performed work to streamline the identification and reporting of significant risks and regular reports to the SPC are expected to occur by year-end. Reports will include details regarding emerging risks and updates on known risks.
<p>2012 Business Plan</p> <ul style="list-style-type: none"> • Evaluate adding cost to the customer as a performance measure linked to selection of business initiatives and implement as needed in the 2012 Business Plan. • Modify KPIs to include more leading indicators and measures of efficiency and effectiveness. • Develop additional metrics for those organizations, which currently have no performance measures. 	<p>December 2011</p> <p>December 2011</p> <p>December 2011</p>	<p>November 2011</p> <p>November 2011</p> <p>November 2011</p>	<p>Complete. “Affordability” has been included as a Key Performance Indicator in the 2012 Business Plan.</p> <p>Complete. 2012 Business Plan, which includes more leading indicators, was completed in 2012. Future planning efforts are expected to provide more leading indicators.</p> <p>Complete. 2012 Business Plan includes performance indicators for all Groups.</p>

<ul style="list-style-type: none"> Evaluate the use of benchmarking in setting performance targets for KPIs. 	December 2011	November 2011	Complete. Department-level Business Plans include updated KPIs with consideration given to the use of benchmarking where appropriate. Efforts to further refine KPIs will continue as part of the ongoing Business Planning process.
<ul style="list-style-type: none"> Include multi-year KPI targets and budgets within 2012 Business Plan. Provide more effective guidance to groups to develop business plans 	December 2011 August 2011	November 2011 August 2011	Complete. 2012 Business Plan includes multi-year KPI targets. Complete. Process Documentation and a revised Business Plan Template were created and made available to facilitate Business Plan development. Interactive Workshops were held to discuss the purpose of developing business plans, provide training, and answer questions from departments.
<ul style="list-style-type: none"> Provide greater Group alignment and buy-in through Bridge-to-Excellence “Strategy and Vision Communication Project” 	December 2011	January 2012	Complete. A team was convened in May 2011 to improve communication of strategy and performance targets to employees and better align employee objectives and incentives with corporate objectives. Communication of the business plan process and Central Hudson’s strategy was bolstered through presentations at Quarterly Management Meetings, a Strategic Planning intranet page, intranet “blogs” from the Chairman of CH Energy Group, and interactive training

<ul style="list-style-type: none"> Improve the link between performance targets and individual employee objectives. 	February 2012	February 2012	<p>sessions. Additionally, the 2012 Business Plan was the focus of Central Hudson's Annual Management Meeting Held in January 2012. The communication effort will be a permanent component of Business Planning process.</p> <p>Complete. The Group and Department Initiatives within the 2012 Business Plan were utilized to develop individual employee goals February 2012.</p>
Evaluate the support model for the enhanced strategic planning and performance management processes, including: (i) the adequacy of current planning resources in the operating Groups and (ii) the advantages of centralized finance & planning support for the Groups, which will affect the ability to respond to dynamic changes in the operating environment, and the ability to evaluate the financial merits of potential opportunities and investments. Recommend improvements.	April 2012	April 2012	Complete - Centralized Finance & Planning team providing support for Group Business Planning, monthly budget and projection variance analysis and financial analysis.

Central Hudson's implementation of this recommendation is complete. Following NorthStar's assessment of Central Hudson's planning process in September of 2012, Central Hudson developed an implementation plan intended to achieve a planning process inclusive of best practices. At this time, Central Hudson has achieved all of the significant milestones identified within the implementation plan. These milestones set forth in table 6.5 above fulfill all of Northstar's recommendations and have greatly improved the planning processes of Central Hudson.

VII. Response to Recommendation 7

Recommendation

Develop and implement a more comprehensive operational performance management system. (Refers to Findings IV-3 to IV-7, IV-11 and IV-12).

Implementation Team

Executive Sponsor	Stacey Renner, Treasurer
Team Lead	Joe Hally, Director-Strategic Planning
Team Members	Strategic planning support staff Group Heads Others specific to individual implementation plan steps

Description of Scope and Plan

In its review of Central Hudson's performance and results management, NorthStar found that CHEG BOD involvement in goal development and monitoring was appropriate and that executive compensation and performance measurements were effectively linked. However, in NorthStar's opinion, non-executive compensation and performance measures were not effectively linked.

NorthStar determined that Central Hudson's corporate goals were largely financial and not effectively linked to Central Hudson's mission. At the operating group level, NorthStar found that KPIs were used throughout the organization, but not all operations were using them effectively and the KPIs were predominantly lagging indicators with targets based on historical trends or PSC requirements.

Finally, NorthStar determined that Central Hudson's performance and results management did not reflect effective use of feedback on performance and lacked a formal continuous improvement process.

NorthStar acknowledged that Central Hudson significantly improved its corporate goals and performance reporting in 2010. Central Hudson has indeed been focused on improving its performance and supporting continuous improvement through its performance management processes. In 2010, Central Hudson launched its formal continuous improvement process program—B2E—with plans to train every employee of the Company on the basics of Lean Six Sigma. Teams engaged in several improvement projects immediately to galvanize support from the employee population and additional projects and smaller improvement efforts have followed. For 2011, a formal "Business Plan" was adopted and published to all employees. This was an important step in demonstrating accountability for KPIs and business initiatives across all operating groups. The Business Plan also established links between 2011 performance goals and Central Hudson's mission and strategy. Achieving the performance targets and completing the initiatives in the Business Plan is the focus of expanded monthly business results meetings and new quarterly Group reviews with the SPC to discuss business

results. All executives attend these meetings. These meetings provide ongoing review and feedback on operating performance and corrective actions.

Many of the improvements in the performance management process will increase the level of Central Hudson's planning efforts. Accordingly, Central Hudson will need to assess each group's ability to meet the requirements of a more comprehensive operational performance management system and potentially make changes to our support model in order to maximize the efficiency and effectiveness of the process.

Narrative Including Schedule/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: December 2012, ongoing.

Priority: C

This implementation plan seeks to build on recent progress establishing a systematic approach to performance management that: (1) continually refines operating and financial measurements to focus on the best indicators for improving performance; (2) improves the process for effective gathering and use of performance feedback to prioritize improvement efforts and set meaningful targets; and (3) firmly aligns and integrates performance management with medium to long-range strategic planning, the annual business plan, and individual employee performance and compensation.

The table below lists the specific recommendations made by NorthStar and a current assessment of the progress made through June 2011.

NorthStar's Recommendations	June 2011 Central Hudson Assessment	Comments
Future initiatives and process improvements should tie directly to the strategy objectives and have relevant performance measures. Additional key metrics to consider include cost to the customer.	Partial	The 2011 Business Plan represents a significant improvement over past business plans and budgets by translating Central Hudson's strategy into measurable goals and action plans. We plan to continue building on this process and will evaluate adding cost to the customer as one of the decision criteria for initiatives in the 2012 Business Plan. We still need to establish a clear link for process improvement efforts. An initiative launched this month by the B2E Steering Committee is seeking to align continuous improvement with strategic objectives by integrating the selection

		and implementation processes with Group planning activities.
Corporate targets should continue to address safety, reliability and customer service.	Yes	As core components of Central Hudson's mission and strategy, these targets are clearly addressed in the 2011 Business Plan.
Modify existing operational metrics and Key Performance Indicators to include more leading indicators and measures of efficiency and effectiveness.	Partial	An updated set of performance indicators was included in the 2011 Business Plan. Each executive with responsibility for the performance indicators participates in quarterly Group reviews with the Strategic Planning Committee ("SPC"). These reviews will include continually questioning the relevance and effectiveness of performance indicators. Revisions would be made for the 2012 Business plan.
Develop additional metrics for those organizations which currently have no performance measures.	Partial	As noted above, quarterly Group reviews will include performance indicator assessment and revisions (including additions) reflected in the next Business Plan.
Ensure performance deficiencies are identified and addressed in a timely manner.	Yes	The performance indicators are distributed each month for a business results meeting with the executive team. Deficiencies are identified at that meeting and addressed as needed.
Revise the information and level of detail provided to the Board of Directors to ensure focus on those key measures tied to the corporate strategy and goals.	Yes	Completed for the 2011 Business Plan. KPIs are called "Team Goals" and reported at every Board meeting. Will be revised continuously as performance indicators evolve through the planning process.
Factor benchmarking into the target setting process on a more pro-active basis.	No	As noted above, quarterly Group reviews will include performance indicators and revisions (including additions) will be made for the next Business Plan. No specific focus on expanding the use of benchmarking has been introduced as of June 2011.

Listed below are the implementation plan milestones that show completed improvements and plans to address the remaining gaps in Central Hudson's performance management processes.

Major Activities and Milestones	Estimated Completion Date	Actual Completion Date	Current Status
2011 Business Plan <ul style="list-style-type: none"> • Targets address safety, reliability, and customer service. 	December 2010	December 2010	Completed
Expand monthly business reviews to include all performance indicators in order to identify and address deficiencies in a timely manner.	April 2011	April 2011	Completed
Align B2E process with corporate planning such that selection of improvements supports strategy and goals.	December 2012		Implementation started June 2011 under the oversight of B2E Steering Committee. J. Hally will participate.
2012 Business Plan <ul style="list-style-type: none"> • Evaluate adding cost to the customer as a performance measure linked to selection of business initiatives and implement as needed in the 2012 Business Plan. • Modify performance measurements to include more leading indicators and measures of efficiency and effectiveness. • Develop additional metrics for those organizations which currently have no performance measurements. • Evaluate the use of benchmarking in setting targets for performance indicators. • Improve the link between performance targets and individual employee objectives. 	December 2011 December 2011 December 2011 December 2011 February 2012 (for 2012 employee performance)		Not yet started Ongoing---quarterly Group reviews Ongoing---quarterly Group reviews; Ongoing---quarterly Group reviews A B2E team was convened in May 2011 to improve the communication of strategy and

	objectives)		performance targets to individual employees for the purpose of better aligning employee objectives and incentives with corporate objectives. S. Renner and S. Hamilton are co-leads of this team.
Evaluate the support model for the enhanced performance management process, including: (i) the adequacy of current planning resources in the operating Groups and (ii) the advantages of centralized finance & planning support for the Groups. Recommend improvements.	April 2012		Will be done in conjunction with Recommendation six, which addresses strategic planning. Will also be partially addressed by the implementation plans for other audit recommendations.

Summary of Cost/Benefit Inputs

NorthStar assigned a priority ranking of “B” to this recommendation, positioning it between “A,” which indicates an expectation by NorthStar to provide significant benefits to ratepayers and should be addressed as soon as possible, and “C,” indicating an expectation by NorthStar that while the recommendation is important, implementation is unlikely to provide immediate or verifiable benefits and should be considered far less important than “A” and “B” rated recommendations.

Consistent with our assessment for Recommendation six, the benefits ascribed directly to performance management are not verifiable because there is no control group or conditions, i.e., there will be no way to know whether Central Hudson’s performance is better as a result of this implementation plan or other factors. Based on NorthStar’s criteria for assigning priority ratings, we believe Recommendation seven is a “C” since it is difficult to claim that the benefits are immediate or verifiable. Nonetheless, Central Hudson agrees that improvements are warranted in our performance management process and, while not quantifiable, over the long-term a more effective performance management process should improve the likelihood of successful achievement of objectives at a moderate annual cost.

Many of the steps in our implementation plan address gaps in both strategic planning and performance management and the costs can not be identified separately. The table presented for Recommendation six includes the costs and benefits for both Recommendations six and seven.

Benefits associated with these recommendations are not quantifiable and are similar to those discussed in Recommendation six. The improvements in performance management

in the implementation plan address the basic planning infrastructure and performance management. The better performance monitoring expected by addressing NorthStar's recommendations should result in more timely and informed performance-related decision-making and attainment of performance objectives over the long-term. Benefits would accrue to the individual decisions (with accompanying costs) on a case-by-case basis and can not be attributed directly to the performance management processes and infrastructure.

Results/Measures of Success

Central Hudson will be looking at several measures of planning effectiveness in conjunction with planned 2012 Business Plan process improvements. Currently under consideration are annual assessments for: (1) The percentage of KPI targets achieved (successful execution); (2) The percentage of individual and/or department performance targets achieved (successful execution); (3) The ratio of individual and/or department performance targets achieved versus KPI targets (alignment); and (4) The percentage of individual performance goals aligned (sampling of performance appraisals, alignment).

Update and Progress Report as of October 15, 2011

The table shown below is an update to initial activities and milestones, with all changes since the filing of the implementation plan highlighted in yellow.

Update and Progress Report as of March 1, 2012

Table 6.5, shown below, is an update to Table 6.3 with all changes since the October 15th update of the implementation plan highlighted in yellow.

Update and Progress Report as of July 1, 2012

Table 6.5, shown below, is an update to Table 6.3 with all changes since the March 1, 2012 update of the implementation plan highlighted in yellow.

Update and Progress Report as of November 1, 2012

Table 6.5, shown below, is an update to Table 6.3 with all changes since the July 1, 2012 update of the implementation plan highlighted in yellow.

Major Activities and Milestones	Estimated Completion Date	Actual Completion Date	Current Status At November 1, 2012
2011 Business Plan <ul style="list-style-type: none"> Targets address safety, reliability, and customer service. 	December 2010	December 2010	Completed

Expand monthly business reviews to include all performance indicators in order to identify and address deficiencies in a timely manner.	April 2011	April 2011	Completed
Align B2E process with corporate planning such that selection of improvements supports strategy and goals.	December 2012	September 2011	B2E Process changed to decentralize prioritization of improvements. Now at the Group-level, the continuous improvement process is aligned with other corporate planning processes.
<p>2012 Business Plan</p> <ul style="list-style-type: none"> Evaluate adding cost to the customer as a performance measure linked to selection of business initiatives and implement as needed in the 2012 Business Plan. Modify KPIs to include more leading indicators and measures of efficiency and effectiveness. Develop additional metrics for those organizations, which currently have no performance measures. Evaluate the use of benchmarking in setting performance targets for KPIs. 	<p>December 2011</p> <p>December 2011</p> <p>December 2011</p> <p>December 2011</p>	<p>November 2011</p> <p>November 2011</p> <p>November 2011</p> <p>November 2011</p>	<p>Complete. “Affordability” has been included as a Key Performance Indicator in the 2012 Business Plan.</p> <p>Complete. 2012 Business Plan, includes leading indicators at the Group and Department level. Future planning efforts are expected to provide more leading indicators.</p> <p>Complete. 2012 Business Plan includes performance indicators for all Groups.</p> <p>Complete. Department-level Business Plans include updated KPIs with consideration given to the use of benchmarking where appropriate. Efforts to further refine KPIs will</p>

<ul style="list-style-type: none"> Improve the link between performance targets and individual employee objectives. 	February 2012	February 2012	<p>continue as part of the ongoing Business Planning process.</p> <p>Complete. The Group and Department Initiatives within the 2012 Business Plan were utilized to develop individual employee goals February 2012.</p>
Evaluate the support model for the enhanced performance management process, including: (i) the adequacy of current planning resources in the operating Groups and (ii) the advantages of centralized finance & planning support for the Groups. Recommend improvements.	April 2012	April 2012	<p>Complete - Centralized Finance & Planning team providing support for Group Business Planning, monthly budget and projection variance analysis and financial analysis.</p>

Central Hudson's implementation of this recommendation is complete. Following NorthStar's assessment of Central Hudson's planning process in September of 2012, Central Hudson developed an implementation plan intended to achieve a planning process inclusive of best practices. At this time, Central Hudson has achieved all of the significant milestones identified within the implementation plan. These milestones set forth in table 6.5 above fulfill all of Northstar's recommendations and have greatly improved the planning processes of Central Hudson.

IX. Response to Recommendation 9

Recommendation

Re-evaluate the variables utilized in the annual coincident (electric) peak demand model and determine if additional economic variables would provide a better statistical fit. (Refers to Finding V5).

Recommendation Implementation Team

Executive Sponsor	Michael L. Mosher, VP – Regulatory Affairs
Team Lead	Glynis Bunt, Senior Director – Cost, Rates & Forecasts
Team Members	Stacy Powers, Associate Cost & Rate Analyst Linda Van Etten, Associate Cost & Rate Analyst

Description of Scope and Plan

Central Hudson’s current methodology for forecasting coincident electric peak is a function of average residential non-heating customers, historical system load and average hourly temperature at the date of the historic annual system coincident peaks, with the forecast number of residential non-heating customers specified as a function of the number of households. Despite a good statistical fit ($R^2 = 98.7\%$), the accuracy of the model has decreased over the past three years, with the forecast exceeding actual load by over five percent. The audit indicates that this decrease in accuracy, which entails no short-term financial or operational impacts, appears to be correlated with the decline in the economy, which is not being adequately addressed by the household variable. As a result, the audit recommends that Central Hudson re-evaluate the variables utilized to determine if additional economic variables would provide a better statistical fit.

Central Hudson agrees that improving forecasting accuracy, particularly with respect to peak load forecasting, is a reasonable goal as evidenced by the Cost & Rate Group’s continual evaluation of its forecast models to improve their predictive ability. As a result, the Cost & Rate Group will continue to assess both model structure and additional variables for inclusion in the coincident electric peak forecast model in order to not only improve the statistical fit, but the forecast accuracy as well (statistical fit does not indicate, among other things, whether the selected variables are the true cause of the changes in the forecast, an omitted-variable bias exists and/or the most appropriate set of variables has been selected). With respect to additional variables for inclusion in the model, both aggregate output and employment variables, including, but not limited to such variables as GDP, total non-agricultural employment and total unemployment, will be assessed for inclusion in the model.

In addition to the model specification, the Cost & Rate Group proposes to also evaluate the normalization process which it uses to weather adjust the actual electric peak experienced to current design criterion for comparison to the forecast peak. This proposal is based on the work that the group performed in determining Central Hudson’s

2010 weather adjustment for the 2011 ICAP Forecast as coordinated and prepared by the NYISO, as well as current on-going work being performed by the NYISO regarding load forecast uncertainty and installed reserve margin.

The Cost & Rate Group proposes to utilize the revised model to produce a new electric peak forecast for 2011 and 2012 this year based on actual data through 2010, as well as a 2012 forecast based on actual data through 2011. The actual peak experienced for each year (2011 and 2012) would be weather adjusted to design criterion to allow for comparison to the forecast and final evaluation. A minimum of a two-year forecast window is believed to be required in order to have sufficient data/information for the formulation of a conclusion/recommendation.

Narrative Including Schedule/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: See chart below.

Priority: C

Summary of Cost/Benefit Inputs

There is no anticipated incremental cost associated with analyzing and revising either the model or the normalization process as the work will be performed with existing staff and additional economic variables can be drawn from the existing economic database subscription.

Improvement in the predictive ability of the electric peak load forecast will provide Engineering with a more accurate forecast for system planning considerations.

Implementation Schedule

Major Activities/ Milestones	Estimated Completion Date	Status
Evaluate variables and construct new model to develop 2011 and 2012 forecasts	August 31, 2011	Complete
Estimate 2011 weather adjustment	October 15, 2011	Complete
Evaluate results of model for 2011	October 31, 2011	Complete
Develop forecast for 2012	November 30, 2011	Complete
Estimate 2012 weather adjustment	November 15, 2012	
Evaluate results of model for 2012	November 30, 2012	
Conclusion/Recommendation	December 31, 2012	

Update and Progress Report as of October 15, 2011

An assessment of additional variables for inclusion in the coincident electric peak forecast model has been completed, with a GDP variable providing the best fit. Currently, three model variations are being reviewed: (1) GDP with an average temperature/customer interaction variable, (2) GDP without the interaction variable, and (3) low forecast of GDP without the interaction variable.

Estimation of the 2011 weather adjustment continues in conjunction with the weather normalization process required by the NYISO, on or before October 28, 2011, for the 2012 ICAP Forecast. Completion of this process will assist in the final selection of a model as well as evaluation of the results of the model.

Update and Progress Report as of March 1, 2012

The assessment of additional variables for inclusion in the coincident electric peak forecast model is complete. The model includes a GDP variable but now excludes the residential non-heating customer variable. The model was utilized to develop 2011 and 2012 forecasts.

The estimate of the 2011 weather adjustment is complete, with the estimation process revised to correspond more closely to the process utilized for NYISO Load Forecasting Task Force purposes. The weather adjustment is estimated as the difference between the predicted peak load under actual conditions and the predicted design day peak load, in contrast to the previous method which estimated the weather adjustment as the difference between actual peak load and the predicted design day peak load.

Analysis of energy efficiency impacts have spurred further review of the forecast process to determine if further revisions are required. Once this is complete, the evaluation of the results for 2011 will be finalized

Update and Progress Report as of July 1, 2012

Work continues on compiling energy efficiency data, which has also led to further review of the forecast methodology. This review is currently focused on the weather variable, either peak hour temperature or a composite of peak hour temperature and average temperature on the day of the peak, as well as the integration of a third-degree polynomial model, similar to the model utilized to perform the weather adjustment provided to the NYISO for ICAP purposes. The purpose of this latter review is to address the observed lower (or flatter) response per temperature unit at higher values of the temperature variable. It is anticipated that this analysis, and compilation of energy efficiency data, will be available to complete the final evaluation of 2011 results and provide an update to the preliminary 2012 forecast by July 31, 2012.

Update and Progress Report as of November 1, 2012

The remaining implementation plan milestone target dates for estimating the 2012 weather adjustment, evaluating the results of the model for 2012 and completing the final recommendation have all been delayed by a month to revise the schedule to fit within the timetable associated with the NYSIO process. Work continues on the forecast model as we are now working on the NYISO peak normalization for summer 2012. We expect to have this complete coincident with completion of the NYISO process in November.

X. Response to Recommendation 10

Recommendation

Investigate discrepancies in the day-ahead natural gas model and redesign model to provide a better daily send-out prediction. (Refers to Finding V-16).

Recommendation Implementation Team

Executive Sponsor	Michael L. Mosher, VP-Regulatory Affairs
Team Lead	Diane Seitz, Manager-Energy Resources
Team Members	Vito Cracchiolo, Fuels Buyer William Kyle, Fuels Buyer

Description of Scope and Plan

Central Hudson utilizes an internally developed spreadsheet model for forecasting day-ahead natural gas supply requirements. The forecast is based on base usage (use that is not weather sensitive) and heating usage (weather sensitive). Heating usage is calculated as the product of the forecast of effective degree days (“EDD”) (Effective Degree Days is a measurement designed to reflect the demand for energy needed to heat a home after taking wind and cloud cover into consideration) and usage per EDD. Usage per EDD is a regression analysis calculated from the three most recent winters of historical daily EDD and customer usage. Depending on the specific month in the heating season, and or weekday versus weekend, Energy Resources may make minor adjustments to the forecasted sendout. Energy Resources personnel are on call 24/7 and adjustments to the forecast are made as necessary. In addition, Central Hudson has the ability to make inter-day changes to the forecast, and requirements if necessary, due to changes in the weather.

The supply portion of the spreadsheet model is developed from retail and transport customer nominations per the Gas Transmission System (“GTS”), an internally developed system and electronic bulletin board, as well as storage withdrawals/injections, and daily/monthly/seasonal gas purchases. An updated five-day weather forecast is entered into GTS daily and as requirements change gas supplies are adjusted. Actual send outs and weather are input daily to track the accuracy of the forecast. Storage balances are recalculated in the model on a daily basis and periodically checked to the electronic pipeline bulletin boards.

Central Hudson continually evaluates this model to determine if the model can be improved to improve forecasting accuracy and limit supply risk for Central Hudson and customers. The audit found that the model does not appear to consistently forecast weekends differently than weekdays. NorthStar found that on some occasions, weekends and weekdays with the same EDD are forecasted to have the same send-out where typically weekends should be forecast with a lower send-out for the same EDD, because many gas consumers are closed on the weekends. The audit also noted that the inconsistency of the day-to-day forecast has no quantifiable negative effect on the cost or reliability of supply because CH has considerable flexibility through their storage contracts, and has the ability to retroactively adjust gas supply nominations up to two hours before

the end of the gas day. The results of a one-month review indicate that the send out versus the month ahead forecast was within one percent.

While the model used for forecasting day-ahead gas supply requirements is largely accurate, Central Hudson agrees that reducing send out forecast errors and improving forecasting accuracy is a reasonable goal. The Energy Resources Group will look to enhance the model by analyzing actual send outs on weekends versus weekdays. The analysis will be based on a three-year period during the winter months. Enhancements to the model will be made as appropriate. Energy Resources is also in the process of investigating commercially available forecasting models and have contacted other New York utilities for information about their forecasting models. In most instances utilities are using models built in-house. Central Hudson will seek to conduct a trial of a day ahead gas-forecasting model during the months of November through March 2012. The output will be evaluated and a determination will be made whether to purchase a replacement model at an appropriate time and cost if it can be demonstrated to be a suitable replacement.

Narrative Including Schedule/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: See chart below, ongoing.

Priority: C

Summary of Cost/Benefit Inputs

No incremental costs or savings would result from this recommendation. The benefits of purchasing a new model include providing opportunity for more analysis, improved supply planning, increased reliability and closer schedule adherence.

Results/Measures of Success

Major Activities/ Milestones	Estimated Completion Date	Status
Analyze actual send outs on weekends versus weekdays for a three year winter period	December 31, 2011	Complete
Investigate and evaluate available products	November 30, 2011	Complete
Trial Period	March 2012	Complete
Conclusion/Recommendation	May 31, 2012	Complete

Update and Progress Report as of October 15, 2011

Upon further review of this recommendation it has been determined that the recommendation was adopted as written and not modified.

Incremental costs or savings may result from this recommendation although they would be difficult to quantify. The Company will conduct this analysis and make efforts to quantify savings as further progress on this recommendation's implementation is completed.

Energy Resources is in the process of evaluating commercially available models.

Update and Progress Report as of March 1, 2012

Energy Resources completed an analysis of actual send outs on weekends versus weekdays for a three-year winter period. The same analysis was also completed for a ten-year period by the developers of GASDAY, a demand-forecasting tool. The results of both analysis show that there is no pronounced difference in weekends versus weekdays when looking at the total of heating load in the winter months and base load. To counteract what difference there may be, the supply purchase methodology of CH has considerable flexibility through storage contracts, and has the ability to retroactively adjust gas supply nominations up to two hours before the end of the gas day.

Update and Progress Report as of July 1, 2012

Energy Resources reviewed various commercially available daily gas forecasting models and selected the GasDay model developed by the Engineering Department at Marquette University for testing. The GasDay model was run concurrent with the Central Hudson excel model for the period January 13 – March 31, 2012. On average, during the test period the models produced very similar sendout forecasts (less than 1% variation). It is recommended that Central Hudson purchase the GasDay model and run it simultaneously on a daily basis parallel with the Central Hudson model. Of particular note is that the Central Hudson excel model is reliant on the gas analysts' experience and judgment to adjust the daily multiplier for the heating season usage component of the forecast. The GasDay model daily forecasts are produced using past weather patterns and sendout data along with the current weather data removing much of the subjectivity of the forecast. The GasDay model automatically adjusts for weekdays, weekend, special days, holidays, and days near holidays. GasDays' services are provided by advanced modeling technologies and provide a convenient, automated process. The workbooks containing gas flow summary and weather data also provide other various reports and tools for analyzing gas flow. The cost to purchase the GasDay model is \$16,000 for the initial purchase in year one and then \$11,200 for each year thereafter.

Update and Progress Report as of November 1, 2012

This recommendation is complete.

Central Hudson purchased the GasDay model in September 2012 at a cost of \$16,395. The annual maintenance fee for GasDay that will take effect in 2013 is \$10,500. The Company intends to run the GasDay model in parallel with the Central Hudson excel model.

XII. Response to Recommendation 12

Recommendation

Design and implement a program that provides formal mechanisms to assure that system planning activities and stakeholder communications are coordinated, integrated, and accomplished. (Refers to Findings VII-8, VII-9, VII-12 to VII-14 and VII-17).

Recommendation Implementation Team

Executive Sponsor	Paul Haering, VP-Engineering
Team Lead	John Borchert, Manager-Electric Engineering Services
Team Members	Eric Kiszkiel, Manager-Gas & Mechanical Engineering Pano Harpolis, Director-Electric System Planning Heather Adams, Engineer - Section Lead Electric Distribution Planning Richard Wright, Senior Engineer - Electric Transmission Planning Karl Reer, Section Engineer - Gas Distribution Engineering and Standards Jeff May, Director Electric System Design Larry Netto, Electric Operating Supervisor, System Construction

Background

In the auditor's opinion, while the Central Hudson T&D planning functions perform numerous system studies, there are no policies or procedures that require specific planning studies. Central Hudson transmission planning does not produce an integrated long-term system plan. The end product of the planning process is the five-year capital budget document. A five-year planning horizon is insufficient for transmission planning as the permitting and right-of-way issues require significantly longer horizons. Similarly, Central Hudson does not have an integrated long-term distribution system plan. Central Hudson system planning is largely an analysis of load-serving capability compared to projected load levels. Central Hudson does not have a comprehensive asset management program for its electric system and infrastructure related programs are not integrated into an overall system/asset plan.

Central Hudson's electric system plan is its annual capital and operations and maintenance (O&M) budgets. Electric system planning is largely informal and not well-documented. While system planning complies with NERC and PSC requirements, it may not be sufficiently robust to deal effectively with potential changes like:

- State-wide transmission reliability initiatives
- Renewable energy
- Electric car and solar initiatives

Narrative Including Schedule/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: March 31, 2013

Priority: B

Description of Scope and Plan

In order to improve this process, Central Hudson plans to document its current system planning process and to integrate system planning deliverables with project deliverable documentation for capital projects. Central Hudson will organize and document its planning policies and procedures to address the following:

- Mission goals and objectives of the planning function and process.
- Internal and external Transmission and Distribution system planning criteria.
- Technical specifications and standards.
- System Planning Deliverables and Schedules.
- Organizational support and stakeholder involvement in the planning process.
- Approval levels, monitoring and progress reporting requirements.

Central Hudson plans to integrate the system planning deliverables with the current project delivery documentation for capital projects to ensure that the planning process and capital work product are linked and that justification and system need dates for a project or group of projects is clearly understood by the project team.

Central Hudson will develop an integrated Transmission and Distribution System Plan (SP) which will cover a ten year timeframe and will be updated annually. The System Plan will be divided into two discrete time periods e.g. short term (0 to 5 years), and longer term (6 to 10 years). For electric and gas transmission, the need for a longer range plan and the frequency of updates to that plan will be evaluated to ensure the proper timing of projects with long design, right-of-way, and permitting requirements as well as to guide current decision making that could have long range effects on future plans and designs. Under current conditions, it can take more than 7 years to go from conception to in-service for a major transmission project. The SP will directly link the Company's mission and objectives through an executable system plan by evaluating the state of the current system and developing a short and long term vision for the system; identifying key drivers and influences that will affect our opportunity to enhance the overall system. While NorthStar may not have recognized the fact that longer range planning is performed at Central Hudson, as we discussed during our implementation plan meeting, as required by FERC as part of the NYISO Comprehensive System Planning Process each transmission owner, must present its local transmission plan. Central Hudson's local transmission plan was presented as part of the NYISO process and covers a ten year planning horizon.

The short term initiatives will focus on maintaining and improving system performance and reliability while the long-term plans will address broader trends recognizing that events may alter these trends as time passes. Accordingly, short term plans will be made with more specificity and clarity regarding impact to customers and long term plans will be more comprehensively designed. For example, the degree of confidence in any System Capacity & Performance projects will be lower in the long-term due to the range of uncertainties around changes in demand, sources of generation, and events currently unforeseeable; for example, a sudden decline in the world economy or increased load growth in certain geographic areas.

The outline for the documented system planning process will be developed by December 2011. The policies and procedures for this planning process will be developed and approved by March 2012 for implementation and use in the 2013 annual planning cycle and each year thereafter. As part of this process, gaps in the current planning process will be identified to be addressed in the future. The initial System Planning Process Manual will be developed and approved by March 2012.

This ongoing process will result in a SP that ensures Transmission and Distribution capacity, reliability and asset plans/programs are reviewed together and result in a single plan that suits the needs of our customers and stakeholders.

The SP will incorporate methods to use information derived from annual operational reports such as the Transmission System Reliability Performance Report and the Distribution Reliability Report or other such reports as the Company feels are appropriate in order to establish clear links to the drivers for the SP.

Additionally, the Company will consider a range of appropriate solutions to identified needs and evaluate which solutions provide the most efficient, long-term investment for the benefit of customers. Specifically, the SP will include information on reliability trends over the past three to five years. The Company will also include information from the transmission and distribution inspection process. As part of the SP, the Company will establish processes to improve through time the use of system trend data as inputs to asset health/strategy and recommended projects.

The annual SP will include an assessment of investments previously made, recognizing that in some cases the evaluation will focus on trending data. This evaluation will focus on reliability, capacity and asset specific initiatives. The annual SP will, where possible, also incorporate economic evaluations that will determine the relative efficiency of programs and explore alternative opportunities. The primary focus of this will be on system capacity and performance programs and asset condition programs as opposed to more non-discretionary investments like adding new customers onto the system.

Where possible, the economic evaluation of potential programs identified through the SP will include identification of the costs and benefits associated with the program. Identified improvements to process will also include an attempt to identify associated costs and benefits. If practicable, costs and benefits will be measured in dollars. For programs or processes measured in dollars Central Hudson will implement those programs and processes where the benefits exceed the costs. For programs and processes

where the costs and/or benefits are not measurable in dollars but are identifiable—i.e. soft costs or benefits—Central Hudson will use its judgment to determine whether benefits exceed costs. Central Hudson will communicate with Staff to determine which programs identified through the SP will be implemented.

Currently Central Hudson has infrastructure improvement initiatives which include Electric Transmission sag mitigation and pole replacements, substation breaker replacements, Electric Transmission line re-conductoring, electric distribution cut-out replacements and pole replacements, gas distribution cast-iron & bare steel replacement programs, and others. However, these infrastructure related programs are not integrated into an overall system/asset plan. While not formally documented the existing asset replacement strategies are coordinated with the system plans. As a result of this coordination projects such as breaker replacements are not planned for stations that are scheduled for retirement or rebuild.

As part of this Implementation Plan, additional asset management strategies will be developed beginning in March 2012. The plan will focus first on those asset strategies most impacting reliability and safety performance so as to best influence the short term opportunities incorporated into the short term SP. Longer term strategies will be reviewed and incorporated into the SP as required.

Schedule

Major Activities/Milestones	Estimated Start Date	Estimate Completion Date	Actual Completion Date	Current Status
Develop an outline of the System Planning process	3/1/2011	12/31/2011		Complete
Develop and/or revise Planning processes within the outline	9/1/2011	3/30/2012		Complete
Final System Planning Process Manual	9/1/2011	3/30/2012 11/30/2012	3/26/2012	Draft completed Final Draft under review
Develop Planning Resource Work Plan and resource needs to complete System Planning Process	2/15/2012	8/1/2012		In Progress Draft Completed Under Review
Utilize updated System Planning Process for the development of the 2013-2017 Capital Forecast	3/1/2012	8/1/2012		Complete Assessment Underway
Deliver Integrated Transmission and Distribution System Plan.	3/1/2012	3/1/2013		In Progress

Summary of Cost/Benefit Inputs

There is an estimated need for two additional Engineering FTEs for the completion of System Planning Recommendations twelve and thirteen. The benefits of the improved system planning process will be a more robust and justified plan and will provide a clear linkage to the capital plan development. This will ensure that the project scope, justification, and system need dates for a project or group of projects are clearly understood by the project team responsible for its implementation.

Results/Measures of Success

The formalization of the System Planning effort is expected to improve the development of the Corporate Capital Forecast, provide a more robust capital plan and reduce the number of unexpected or emergent projects that occur during the year due to unexpected growth or infrastructure issues. The first metric is the development and approval of the System Planning Guidelines and the approval of these guidelines.

The second metric is the implementation of the System Planning Guidelines and the development of the system planning deliverables and documents for the 2013 planning cycle.

The third metric is an evaluation of the effectiveness in implementation of the 2013 Corporate Capital Plan in both an improvement in completion of the projects as budgeted and scheduled as well as a reduction in the number of emergent or emergency replacement projects that develop throughout the year.

Update and Progress Report as of October 15, 2011

A draft outline of System Planning process has been developed and is under review by senior management. The outline is expected to be approved and finalized prior to December 2011. Work continues on developing of the sections within the outline. Work has begun on the Final System Planning Process Manual.

Update and Progress Report as of March 1, 2012

An outline of System Planning process has been completed and work continues on developing the sections within the outline and on the Final System Planning Process Manual. At this time, a majority of the System Planning Process Manual has been developed and is under review by management. A copy of the completed outline and manual tracking document is available for review and has been previously provided to DPS Staff in response to DRD29.

Update and Progress Report as of July 1, 2012

A Draft of the System Planning Process was completed on March 26, 2012 and routed for review and approval. The review and final System Planning Process is expected to be completed in July 2012.

The development of the 2013-2017 Capital Forecast is in progress following the process steps outlined in the System Planning Process Manual. The draft 2013-2017 Capital Forecast is expected to be final by June 29, 2012 for review by the Executive Team in July. A review of the process and how it was followed during the development of the Capital Forecast will be completed to assess if changes are needed.

Update and Progress Report as of November 1, 2012

The draft System Planning Process remains under review and is expected to be completed in November 2012.

The development of the 2013-2017 Capital Forecast has been completed following the process steps outlined in the System Planning Process Manual. A review of the process and how it was followed during the development of the Capital Forecast is in progress to assess if changes are needed.

The development of the Planning Resource Work Plan and resource needs to complete the System Planning Process has been completed as part of the 2013 Business Planning Process and is currently under review.

Development of the Integrated Transmission and Distribution System Plan has begun and the outline of the Plan Document has been developed and reviewed. The System Plan is on track for a March 2013 completion.

XIII. Response to Recommendation 13

Recommendation

Define roles and responsibilities for the planning function. (Refers to Findings VII-12 and VII-13).

Recommendation Implementation Team

Executive Sponsor	Paul Haering VP-Engineering
Team Lead	John Borchert, Manager-Electric Engineering Services
Team Members	Eric Kiszkiel, Manager-Gas & Mechanical Engineering Pano Harpolis, Director-Electric System Planning Heather Adams, Engineer - Section Lead Electric Distribution Planning Richard Wright, Senior Engineer - Electric Transmission Planning Karl Reer, Section Engineer - Gas Distribution Engineering and Standards Jeff May, Director-Electric System Design Larry Netto, Electric Operating Supervisor, System Construction

Description of Scope and Plan

In the auditor's opinion, while the Central Hudson T&D planning functions perform numerous system studies, there are no policies or procedures that require specific planning studies. Central Hudson transmission planning does not produce an integrated long-term system plan. The end product of the planning process is the five-year capital budget document. A five-year planning horizon is insufficient for transmission planning as the permitting and right-of-way issues require significantly longer horizons. Similarly, Central Hudson does not have an integrated long-term distribution system plan. Central Hudson system planning is largely an analysis of load-serving capability compared to projected load levels. Central Hudson does not have a comprehensive asset management program for its electric system and infrastructure related programs are not integrated into an overall system/asset plan.

CH's capital project approval process has a number of weaknesses and fails to clearly communicate what work scope is actually approved. CH project approval policies are inconsistent across business lines.

Narrative Including Schedule/Milestones

See the response to Recommendation twelve.

Summary of Cost/Benefit Inputs

See the response to Recommendation twelve.

Results/Measures of Success

See the response to Recommendation twelve.

Update and Progress Report as of October 15, 2011

A draft outline of System Planning process has been developed and is under review by senior management. The outline is expected to be approved and finalized prior to December 2011. Work continues on developing of the sections within the outline. Work has begun on the Final System Planning Process Manual.

Update and Progress Report as of March 1, 2012

An outline of System Planning process has been completed and work continues on developing the sections within the outline and on the Final System Planning Process Manual. At this time, a majority of the System Planning Process Manual has been developed and is under review by management. A copy of the completed outline and manual tracking document is available for review and has been previously provided to DPS Staff in response to DRD29.

Update and Progress Report as of July 1, 2012

A Draft of the System Planning Process was completed on March 26, 2012 and routed for review and approval. The review and final System Planning Process is expected to be completed in July 2012.

The development of the 2013-2017 Capital Forecast is in progress following the process steps outlined in the System Planning Process Manual. The draft 2013-2017 Capital Forecast is expected to be final by June 29, 2012 for review by the Executive Team in July. A review of the process and how it was followed during the development of the Capital Forecast will be completed to assess if changes are needed.

Update and Progress Report as of November 1, 2012

The draft System Planning Process remains under review and is expected to be completed in November 2012.

The development of the 2013-2017 Capital Forecast has been completed following the process steps outlined in the System Planning Process Manual. A review of the process and how it was followed during the development of the Capital Forecast is in progress to assess if changes are needed.

The development of the Planning Resource Work Plan and resource needs to complete the System Planning Process has been completed as part of the 2013 Business Planning Process and is currently under review.

Development of the Integrated Transmission and Distribution System Plan has begun and the outline of the Plan Document has been developed and reviewed. The System Plan is on track for a March 2013 completion.

XIV. Response to Recommendation 14

Recommendation

Update and implement policies and procedures for initiating, developing and executing capital projects. (Refers to Findings VIII-1 to VIII-8, VIII-11 to VIII-16 and IX-14).

Recommendation Implementation Team

Executive Sponsor	Paul Haering, VP-Engineering
Team Lead	John Borchert, Manager-Electric Engineering Services
Team Members	Eric Kiszkiel, Manager-Gas & Mechanical Engineering Jeff May, Director-Electric System Design Harold Turner, Manager-Operation Services

Background

In the auditor's opinion, CH does not adequately develop planning work products. Programs and projects are not prioritized in a consistent objective and systematic manner across all business units. While CH has several severity-based and risk-based priority schemes, they are not assigned to projects, and there is no common system that prioritizes work across CH.

CH's project management policies and procedures are not comprehensive or well-defined. CH has five policy documents that address project management. These documents define the roles and responsibilities of various parties, and outline procedures for contractor oversight and work authorization. While responsibilities are defined, there are no guidelines for implementation, the policies are not comprehensive, and there are conflicts and contradictions between policies. CH's project management policies and procedures are deficient in the areas of project organization, planning, authorization, execution, monitoring, and management control. Project management policies and procedures do not address how specific responsibilities are intended to be carried out.

Deficiencies in CH's project management processes include:

- CH does not formally recognize the project life cycle and does not identify performance expectations for each step of a capital project.
- CH does not use a work breakdown structure (WBS) to manage major capital projects.
- Quality management is not a discrete formal element of CH's project management process.
- CH does not have sufficient formal project management information.
- CH does not maintain project management files as required by its policies and procedures.

CH's project cost management is ineffective. While CH's annual spending usually matches its budget, there are significant variations in where CH spends its capital. CH's poor project management performance is frequently due to inaccurate project cost

estimates. The Capital Asset Review and Evaluation (CARE) Committee approves major project expenditures, but does not monitor the cost and schedule performance of active projects. Further, CH does not have an effective process for managing contracts and change orders.

Narrative Including Schedule/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: May 2012

Priority: C

Description of Scope and Plan

Central Hudson recognizes that effective Project Management (PM) is critical to the effective execution of capital projects and other programs. Effective PM is based on establishing interrelated procedures to initiate, plan, execute, monitor and control and close projects throughout their life cycle. While Central Hudson has historically utilized PM resources within each operating group to execute capital projects, a more effective model especially for large complex projects would be a more centralized project management model. This model would allow for the assignment of specific project management duties to specific work groups. The fundamental elements of this strategy are proactive scope schedule and budget management across the full life cycle of a project to ensure effective completion.

Utilizing the principles of the Project Management Institute's Project Management Body of Knowledge (PMBOK Guide), Central Hudson will develop comprehensive Project Management policies and procedures. These policies and procedures will clearly articulate the deliverables required for each project phase as well as establish criteria for each phase. The procedures will provide detailed step-by step actions and associated roles and responsibilities for completing each phase.

It is currently conceived that the formal project request/ initiate phase would be integrated into the System Planning process and would address preliminary budget and scope requirements. In the planning phase, the cost, scope and schedule are further refined, permitting requirements, and internal and external stakeholder approvals are obtained and final engineering and material procurement is completed. Project costs will be benchmarked against pro-forma estimates during this phase. In the execution phase the actual physical construction work is completed, functional testing and project commissioning are completed and the project is placed into service. During the project monitoring and control phase, the project is evaluated against budget and schedule for variances. The monitoring and control will occur throughout the life cycle of the project. Any variances in budget and schedule are addressed throughout this phase. In the final phase, the project closeout phase the project team will assess the execution of the project as well as the performance of the project team. Best practices and lessons learned are captured for future projects and the project is formally closed out.

Central Hudson has evaluated the project management organizational structure and processes utilized by two other New York State utilities and will initiate the establishment of a Project Management department. The Company plans to recruit and hire a Director of Project Management with the responsibility of implementing improved project management processes across the organization, including an improved project estimating process. The Director of Project Management's duties will include: Develop and implement comprehensive Project Management policies and procedures consistent with the principles of the PMBOK Guide. Perform Project Management functions associated with major construction projects, primarily for the electric and gas system infrastructure. This includes planning, organizing, and directing all aspects of the project to assure completion on schedule and within budget, and in accordance with applicable specifications, drawings, safety, environmental and quality requirements. Direct major system expansion, upgrade and construction projects; this includes responsibility for providing oversight and leadership for implementation of the project, and providing monthly project progress and financial reports to the appropriate company personnel. Act as a liaison with all Company Departments during project implementation. Assure that all necessary permits fees and licenses are secured. Direct project activities and continually assess contractor and Company manpower requirements, budgets and schedules. Monitor project schedules and progress and cost control of work program components. Ensures potential community concerns associated with the project are addressed in conjunction with Engineering and Public Affairs. Use tools such as MS Project, as well as other Financial and Project Management tools used to manage construction projects.

This employee will lead Central Hudson's Project Management organization. His/her initial tasks will be to develop or update Central Hudson's policies for initiating, developing, and executing its capital projects. He/she will evaluate Central Hudson's current project tracking and reporting and develop recommendations. He/she will look at the current project management needs and develop a recommendation for the responsibilities of centralized project management, a resource plan to implement this recommendation, and the justification and metrics for this organization. It is currently proposed that the Project Management Procedures would be developed over the course of 2011 and 2012 and that they would begin implementation during 2012. It is recognized that effective project execution would benefit from these new procedures so that projects that are currently in progress will begin to utilize the new procedures from the phase they are currently in and will not be required to start back at the project initiation phase.

As discussed during our implementation plan meeting, Central Hudson has been utilizing an alternatives evaluation tool for larger electric and gas system projects. This tool quantifies the level of uncertainty for various project alternatives based on major cost elements. The output of the analysis provides the level of variability of cost for specific alternatives which allows for better decision making process and our ability to identify opportunities to mitigate risk. This process will be utilized as we move forward in improving our estimating process

With regard to the project management performance measures of cost and schedule, as discussed during the implementation plan meeting, Central Hudson reports on the status of major projects on a monthly basis in two ways. Central Hudson's Major Projects status report is provided to the Company's Board of Directors to keep them informed on the

cost and schedule of the Company's major capital projects. Additionally detailed project status reports are circulated to internal stakeholders and provide more detail as to the critical details about major projects. The existing reporting structure will be refined upon as part of the implementation of this recommendation.

Also, at the time of this audit, Central Hudson's policies and procedures were in a period of transition. Since that time, Central Hudson has initiated and completed a review of the policies and procedures to implement and monitor capital projects, the role of the Capital Asset Review and Evaluation ("CARE") committee, the role of the Major Project Review committee, and the role of the project managers.

Implementing the processes defined in the Bridge to Excellence program, Central Hudson's business process improvement program, the CARE committee process and policies were reviewed and streamlined in order to spend less time reviewing and discussing projects that were previously vetted through the Capital Budgeting process, or are consistent with pro-forma estimates. This allows the CARE committee to focus on major development plans or projects that are outside of scope, budget parameters, or authorization. The following recommendations were developed and implemented from this review:

- Develop a process to determine which projects were significant in dollars and variation and warranted a formal presentation before the CARE Committee.
- Develop a consent agenda process.
- Formalize the schedule to ensure adequate project review time.
- Electronically present project information for review.
- Formalized project approvals, recording of minutes, and made them available through the corporate WIKI site.

Schedule

Major Activities/Milestones	Estimated Start Date	Estimate Comp. Date	Actual Comp. Date	Current Status
Update the CARE process to formalize project initiation and approval	January 2011	March 2011	March 2011	Completed
Recruit and Hire Director Project Management	May 2011	August 2011	October 2011	Complete
Develop or Update Policies for Project Management	September 2011	December 2011	April 18, 2012 September 7, 2012	Work Order Authorizations Policy Approved Project Management Standard Operating Procedures Manual Completed

Develop Proposed Centralized Project Management Plan & Resource Needs	September 2011	March 2012	August 14, 2012	Final Completed
Develop a Corporate Target and Key Performance indicator to track project completion compared to initial project estimate and schedule	July 2011	December 2011	December 9, 2011	Completed and Tracked Monthly
Integrate project scope, costs, and schedule (work breakdown structure) into a performance and progress reporting mechanism for major projects	December 2011	December 2012		In Progress

Summary of Cost/Benefit Inputs

While it is difficult to quantify the benefits of establishing these Project Management policies and procedures it is recognized that improved project management will help to ensure cost effective and timely implementation of major capital projects. The Director of Project Management will communicate with Staff as process improvements with measurable costs and benefits are identified. It should also be noted that not all of the costs and benefits associated with this recommendation will be assigned to capital projects. Central Hudson will capitalize or expense costs and benefits as required by the applicable accounting requirements.

NorthStar recommended that initially 2 FTEs would be needed to implement these changes with 2 additional FTEs to follow later. Central Hudson will start more conservatively with 1 FTE with the hiring of the Director of Project Management and through this position will develop the recommended project management structure and the resources needed to implement that structure. Although the specific benefits of the implementation of a formalized or centralized project management structure are difficult to quantify, further analysis will be required to ensure that the benefits of centralized project management will outweigh the costs.

Results/Measures of Success

Projects execution will be measured through variance reporting with regard to total cost and individual cost elements as well as schedule when compared to the information developed in the project initiation and planning phases. Central Hudson will develop a key performance indicator and corporate target starting in 2012 for projects greater than \$100,000 that will track the project variance to cost and schedule as compared to its original estimate.

Update and Progress Report as of October 15, 2011

The CARE process was updated early in 2011 and is complete.

The Director of Project Management started as planned on October 1, 2011.

The review of the policies and procedures for project management has begun.

The development of a Centralized Project Management Plan & Resource Needs has begun.

The draft Key Performance indicators and targets regarding project completion have been developed and are included in the Draft 2012 Corporate Strategic Business Plan. The two Key Performance indicators are 1) % of projects completed within +/- 10% of approved project spending and 2) % of projects completed within +/- 2 months of the target completion date.

Update and Progress Report as of March 1, 2012

The review of the Work Order Authorizations and Revisions Policy has been completed and a draft of the new policy circulated for review and approval by the CARE committee. Also a copy of a new Project Management Standard Operating Procedures Manual has been developed in Draft and circulated for review, with certain sections still under development. The review of the manual was completed by the end of February and roll out of the new project management procedures along with review sessions with project managers and others involved in the capital program are planned for March and beyond.

On December 9, 2011 the 2012 Business Plan was completed and included the Key Performance Indicators of 1) 65% of projects completed within +/- 10% of approved project spending and 2) 65% of projects completed within +/- 2 months of the target completion date.

Work continues on the development of a Centralized Project Management and Resource Plan and the current expectation is that a draft proposal will be completed for consideration by March 2012.

Finally, work has begun on the development of a work breakdown structure, project reporting, and performance monitoring. This will eventually become part of the new Project Management Standard Operating Procedures Manual. This is on schedule and is expected to be completed by May 2012.

Update and Progress Report as of July 1, 2012

The development of a Centralized Project Management and Resource Plan was completed on June 8, 2012 and is under management review.

The work breakdown structure effort was finalized on April 10, 2012 and the files posted for use on the corporate intranet site.

The Project Management Key Performance Indicators have been refined to be a rolling 12 month KPI instead of a simple YTD. The KPI's have been tracked monthly since April. In addition, a Green Belt team is currently reviewing the project management KPI's to see what can be done to improve reporting and performance.

The draft of the Project Management Standard Operating Procedures was completed in March 2012 and has been routed for review and comment. The final draft of the Project Management Standard Operating Procedures Manual will be posted for review and approval by the CARE Committee in July 2012.

Update and Progress Report as of November 1, 2012

The final Centralized Project Management Organization and Resource Plan was completed on August 14, 2012.

The final draft Project Management Standard Operating Procedures was completed in September 2012. The final draft of the Project Management Standard Operating Procedures Manual was posted to the Company's wiki site for approval by the CARE Committee in October 2012.

XV. Response to Recommendation 15

Recommendation

Define deliverables required for each project phase and establish criteria for completing each project phase. Include all elements of a project life cycle from planning to closeout. (Refer to Findings VIII-4 through VIII-8, VIII-11 and VIII-20).

Recommendation Implementation Team

Executive Sponsor	Paul Haering, VP-Engineering
Team Lead	John Borchert, Manager-Electric Engineering Services
Team Members	Eric Kiszkiel, Manager-Gas & Mechanical Engineering Jeff May, Director-Electric System Design Harold Turner, Manager-Operation Services

Background

In the auditor's opinion Central Hudson does not produce all of the work products necessary to establish a capital project in a project's identification step. While CH performs these activities on its largest capital projects, smaller projects are approached informally.

Central Hudson does not formally recognize the project life cycle and does not identify performance expectations for each step of a capital project. CH does not divide capital projects into sequential steps to improve management control, provide links to coordinate organizational resources, and ensure proper execution of project deliverables.

CH assigns project work load within organizational units but does not assign project team members thereby limiting project-level coordination.

CH does not formalize a capital project's development step where a project moves from planning to engineering and the key project parameters of cost, scope, schedule and quality are further developed. This phase includes preliminary engineering, final engineering and design activities, and when cost, schedule, scope and quality are established for performance metrics. Most of the engineering occurs during this step, final design drawings are issued and materials are ordered. CH develops cost estimates for projects, but does not formalize schedule, scope or quality expectations.

CH recognizes a project's execution step, when the project is assigned for construction in the field, tested, commissioned and turned over to operations when it is ready to be put into service. As CH performs many of the prior activities in an informal manner, it relies on its construction resources to perform the project execution without the support of many work products associated with effective project management.

While CH performs some informal monitoring and control functions during project construction, it does not perform them throughout the entire life cycle of the project.

CH does not maintain project management files as required by its policies and procedures. Project management files do not contain documentation which supports the entire project life cycle. Project files vary in content based upon project complexity and timing but fundamental elements of project management are not present. Project construction documentation was minimal with few site-visit reports and few quality assurance reports. Project schedules were non-existent. There were numerous supplemental work order authorizations but no change orders.

CH does not use a work breakdown structure (WBS) to manage major capital projects. Project work is not planned in major work groupings or packages and successively subdivided into smaller work groupings to allow discrete measurement and management reporting. CH does not use a WBS for project costing and as a means to assess the effect of programmatic changes in funding levels, work content, schedules, and contractor resource requirements. Project cost information is limited to tracking project expenditures on a monthly frequency and their relationship to budgets/funding.

Description of Scope and Plan

Narrative Including Schedule/Milestones

See the response to Recommendation fourteen.

Summary of Cost/Benefit Inputs

See the response to Recommendation fourteen.

Results/Measures of Success

See the response to Recommendation fourteen.

Update and Progress Report as of October 15, 2011

The CARE process was updated early in 2011 and is complete.

The Director of Project Management started as planned on October 1, 2011.

The review of the policies and procedures for project management has begun.

The development of a Centralized Project Management Plan & Resource Needs has begun.

The draft Key Performance indicators and targets regarding project completion have been developed and are included in the Draft 2012 Corporate Strategic Business Plan. The two Key Performance indicators are 1) % of projects completed within +/- 10% of approved project spending and 2) % of projects completed within +/- 2 months of the target completion date.

Update and Progress Report as of March 1, 2012

The review of the Work Order Authorizations and Revisions Policy has been completed and a draft of the new policy circulated for review and approval by the CARE committee. Also a copy of a new Project Management Standard Operating Procedures Manual has been developed in Draft and circulated for review, with certain sections still under development. The review of the manual was completed by the end of February and roll out of the new project management procedures along with review sessions with project managers and others involved in the capital program are planned for March and beyond.

On December 9, 2011 the 2012 Business Plan was completed and included the Key Performance Indicators of 1) 65% of projects completed within +/- 10% of approved project spending and 2) 65% of projects completed within +/- 2 months of the target completion date.

Work continues on the development of a Centralized Project Management and Resource Plan and the current expectation is that a draft proposal will be completed for consideration by March 2012.

Finally, work has begun on the development of a work breakdown structure, project reporting, and performance monitoring. This will eventually become part of the new Project Management Standard Operating Procedures Manual. This is on schedule and is expected to be completed by May 2012.

Update and Progress Report as of July 1, 2012

The development of a Centralized Project Management and Resource Plan was completed on June 8, 2012 and is under management review.

The work breakdown structure effort was finalized on April 10, 2012 and the files posted for use on the corporate intranet site.

The Project Management Key Performance Indicators have been refined to be a rolling 12 month KPI instead of a simple YTD. The KPI's have been tracked monthly since April. In addition, a Green Belt team is currently reviewing the project management KPI's to see what can be done to improve reporting and performance.

The draft of the Project Management Standard Operating Procedures was completed in March 2012 and has been routed for review and comment. The final draft of the Project Management Standard Operating Procedures Manual will be posted for review and approval by the CARE Committee in July 2012.

Update and Progress Report as of November 1, 2012

The final Centralized Project Management Organization and Resource Plan was completed on August 14, 2012.

The final draft Project Management Standard Operating Procedures was completed in September 2012. The final draft of the Project Management Standard Operating Procedures Manual was posted to the Company's wiki site for approval by the CARE Committee in October 2012.

XVI. Response to Recommendation 16

Recommendation

Implement a project prioritization system for the CH's capital program. (Refers to Findings VIII-10 and VIII-12 to VIII-16).

Recommendation Implementation Team

Executive Sponsor	Paul Haering, VP-Engineering
Team Lead	John Borchert, Manager-Electric Engineering Services
Team Members	Eric Kiszkiel, Manager-Gas and Mechanical Pete Harpolis, Director-Electric System Planning Jeff May, Director-Electric System Design Karl Reer, Section Engineer-Gas Distribution Engineering and Standards James Rioux, Section Engineer-Gas Engineering & Facilities

Background

In the auditor's opinion CH has several severity-based and risk-based priority schemes, they are not assigned to projects, and there is no common system that prioritizes work across CH. The system protection work plan identifies project prioritization as high, medium, and low. However the criteria for these subjective designations are unknown.

Project work prioritization is left to the electric and gas T&D operations groups and in many cases to the district supervisors who assign work.

CH cannot demonstrate that it has applied limited resources such as capital to the most important projects at any point in time.

Narrative Including Schedule/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: After October 2011

Priority: C

Description of Scope and Plan

Central Hudson currently prioritizes projects within the respective business units of electric, gas, and common categories. Criteria for prioritization include many of the factors listed in the recommendation above, and are sub-components of major "buckets" of non-discretionary, maintain system standards, and system enhancement within each category. In addition, there are other considerations used when aligning and prioritizing

projects. A high level summary of the Company's current prioritization methodology was presented and discussed during the implementation plan meeting.

Central Hudson agrees that project prioritization is a vital aspect for efficient administration of a capital expenditure program. While evaluation of projects enterprise-wide in a quantitative manner may appear practical, the approach for valuation of project benefits must be logical and can be difficult to tangibly assess. Prioritization tools available provide relative correlation between budget categories, but are not absolute, and have a degree of subjectivity.

Central Hudson has explored enterprise wide project prioritization in the industry and has initiated contact with a subject matter expert (SME), Lee Merkhofer, in this field. Prioritization methods vary, but in general fit into either a rules driven or trade-off logical model. These methods and models range from spreadsheet applications to intense complicated software applications, delivering varied benefits at different cost levels.

As discussed during the implementation plan meeting, Central Hudson proposes to engage the above referenced SME in a collaborative process with PSC Staff in the form of a ½ day or 1 day workshop to gain a better understanding and further education on the various project prioritization processes, evaluate what system or systems best fits the needs of the organization and provides the most value, and gauge the overall benefit of a system over the cost for implementation. Central Hudson believes that this type of engagement process, whereby agreement for the scope and schedule of the prioritization system to be implemented is agreed upon early in the process based on a reasonable cost / benefit analysis, would best suit all parties involved.

Schedule

Major Activities/Milestones	Estimated Start Date	Estimate Comp. Date	Actual Comp. Date	Current Status
Provide SME credentials and suggested syllabus for collaborative meeting to PSC Staff	June 10, 2011	June 30, 2011	July 25, 2011	Complete
Collaborative Meeting	August 2011	August 2011	August 25, 2011	Complete
Complete recommendation to move forward with improved capital prioritization implementation	August 2011	October 2011	November 29, 2011	Completed pilot process proposal
Project Implementation Schedule and Roadmap Completed		TBD		

Summary of Cost/Benefit Inputs

The cost/ benefit and risk analysis would be developed collaboratively with Staff as part of the recommendation milestone action plan step identified in the schedule section of this implementation plan.

Results/Measures of Success

The measures of success would be determined as part of the recommendation milestone action plan step identified in each scheduled section of this implementation plan.

September 15, 2011 Update

Finalized syllabus in July for collaborative meeting and the Collaborative meeting was held August 25 entitled Utility Project Prioritization –Theory, Methods, Costs and Benefits presentation by Lee Merkhofer with CHGE team members and PSC Staff SMEs in attendance.

CHGE team reviewing materials and developing a recommendation for capital prioritization implementation plan

October 15, 2011 Update

CHGE team continuing to develop a recommendation for capital prioritization implementation plan. The preliminary recommendation is to implement a pilot involving the Electric Substation and Distribution projects only. The plan would be to hold a 3 day session to develop the Prioritization Framework to identify how to organize project proposals and what information should we collect, develop the rules for defining and estimating the benefits, and how to compute project priorities based on estimated project benefits and costs.

Scheduled a call for October 24, 2011 with Lee Merkhofer to outline the proposed pilot and request a proposal.

Update and Progress Report as of March 1, 2012

On December 5, 6, and 7th, the CHG&E Team implemented through R&D a trial project prioritization system for Central Hudson's capital program. The first step in this process was to conduct a 3-day framing workshop that will enable Central Hudson to develop and apply methods to hopefully produce a practical and effective framework to improve the prioritizing of its capital projects. This framing workshop is a facilitated session wherein participants work together to create a logical and defensible framework or qualitative model that defines how project proposals are to be evaluated and prioritized.

The goal of the workshop is to develop an approach that will be applicable to all project types conducted by Central Hudson, but that the detailed assessment method to be designed will apply specifically to electric distribution and substation projects. Focusing on this subset of project types will enable Central Hudson to efficiently gain experience

with the project prioritization model-development process while allowing the model to be demonstrated and tested within the context of an important sub-class of projects.

Through the implementation of this trial, the qualitative model produced by the workshop is hoped to provide a logical, defensible way to systematically evaluate projects that compete for a share of limited capital resources. Creating the model forces a comprehensive consideration of all relevant factors and helps ensure that biases will not adversely affect conclusions. Participants should gain valuable understanding, create a common focus, and develop a shared commitment to action.

The next planned step in the process is that the qualitative model developed within the December workshop can be converted into a quantitative model and implemented as software that will support on-going decision making. At the conclusion of this process, we will be able to evaluate the effectiveness of these methods and make a recommendation as to whether this should be expanded across the entire capital program.

Schedule: December 5-7, 2011 3 Day Framing Workshop
March 2012 – Draft Qualitative Model
May 2012 – Second 2-Day Workshop

Update and Progress Report as of July 1, 2012

This project has been delayed with the shift in focus to the merger filing and the 2013-2017 Capital Expenditure forecast. This change in schedule should still allow for the development of the Pilot in time for the 2014-2018 Capital Planning cycle as originally conceived.

Revised Schedule: September 2012 – Draft Qualitative Model
November 2012 – Second 2-Day Workshop

Update and Progress Report as of November 1, 2012

Work continues on the development of our preliminary Draft Qualitative Model. The schedule has been further revised as follows:

Schedule:
2013: First Quarter– Draft Qualitative Model
– Second 2-Day Workshop

XVII. Response to Recommendation 17

Define project management performance measures to include the effectiveness of cost estimation and scheduling. Cost estimates and schedules developed for preliminary plans should be evaluated when a project is complete to determine where further enhancements to project estimating can be made. (Refers to Findings VIII-6 and VIII-13).

Recommendation Implementation Team

Executive Sponsor	Paul Haering, VP-Engineering
Team Lead	John Borchert, Manager-Electric Engineering Services
Team Members	Eric Kiszkiel, Manager-Gas & Mechanical Engineering Jeff May, Director-Electric System Design Harold Turner, Manager-Operation Services

Description of Scope and Plan

Program and project planning and management are of interest to executive management and regulators for many reasons, including:

- The potential adverse effects of poor project cost and schedule performance;
- The possibility of management being poorly informed and caught off guard regarding project issues and events;
- Problems arising from technical and managerial limitations or insufficient staff resources for successful project completion;
- Pressure from the public or politics relative to project selection; and
- The risks arising from the litigious environment.

Early program and project planning includes the fundamental decisions and processes that shape a project and determine its success. Performing adequate analyses, establishing initial project work plans, and considering various risk factors are critical for successful project execution. Project risks must be assessed and the process for prioritizing projects monitored to develop plans for financing and to identify potential resource requirements and limitations.

Capital projects represent an investment in the electric and gas systems to preserve assets, safeguard the system/people/environment, or expand operating capabilities. Project estimates provide the foundation for all economic aspects of project management. Defining resource requirements, quantities that will be needed, timing, and how much they will cost is necessary to demonstrate a viable solution for system needs. While uncertainty is involved in any project estimate, identification of known requirements, particular areas of uncertainty, risk and complexity is fundamental to demonstrating feasibility, analysis of alternatives and demonstration of overall project benefit. Economic evaluation compares the estimated development and operating costs to identified benefits enabling management to determine the project's feasibility. Effective program and project planning requires realistic cost estimates and schedules for capital

projects so that decisions concerning engineering, procurement, and construction can be made.

The full implication of many project management decisions cannot be known until project completion which means in some cases for a number of years in the future. Decisions made cannot be evaluated fairly without significant analysis of the contemporaneous project environment. The review of program and project management capabilities must therefore 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.

Narrative Including Schedule/Milestones

See the response to Recommendation fourteen.

Schedule

Major Activities/Milestones	Estimated Start Date	Estimate Completion Date	Actual Completion Date	Current Status
Identify All Existing Pro-forma or Project Cost Estimate Benchmarks Currently being used.	June 2011	December 2012		In Progress
Develop an annual update process for both project and pro-forma estimates	September 2011	January 2013		In Progress

Summary of Cost/Benefit Inputs

See the response to Recommendation fourteen.

Results/Measures of Success

See the response to Recommendation fourteen.

Update and Progress Report as of October 15, 2011

The identification of pro-forma and project cost benchmarks being used and the development of an annual update process is in progress.

Update and Progress Report as of March 1, 2012

No change.

Update and Progress Report as of July 1, 2012

No change.

Update and Progress Report as of November 1, 2012

The identification of proforma project cost estimates currently being used and development of an annual update process for estimates have been moved out to December 2012 and January 2013, respectively.

XIX. Response to Recommendation 19

Recommendation

Develop and implement a system to ensure that projects receive timely, appropriate review and authorization when expenditures exceed initial authorizations. Track approvals in such a manner that the authorizations can be readily associated with a project or work order number. (Refers to Findings IX-13 and IX-14).

Recommendation Implementation Team

Executive Sponsor	Paul Haering, VP-Engineering
Team Lead	John Borchert, Manager-Electric Engineering Services
Team Members	Eric Kiszkiel, Manager-Gas & Mechanical Engineering Jeff May, Director-Electric System Design Harold Turner, Manager-Operation Services

Background

In the auditor's opinion, Central Hudson's budgeting and review processes are not well-documented. There are gaps in the controls over project authorization, funding appropriation and budget status reporting. While CH manages total capital spending, individual project expenditures are not closely controlled. Capital project authorization and monitoring responsibilities do not reside within a single function.

While the CARE Committee was established to provide a consistent process for the review and authorization of major capital expenditures, it does not review all projects, and existing controls and documentation are inadequate. The CARE committee is responsible for monitoring overall budget expenditures and expenditures of individual budget categories, transfers among categories, and project sponsor requests for increased funding, but it does not monitor the cost and schedule performance of individual projects.

Although Central Hudson's policy requires monthly reporting for capital projects greater than \$500,000 and planned implementation or field construction duration of at least six months, a review of project files indicates this policy is not rigorously followed.

Narrative Including Schedule/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: May 2012

Priority: B

Description of Scope and Plan

At the time of this audit, Central Hudson's policies and procedures were in a period of transition. Since that time, Central Hudson has initiated and completed a review of the policies and procedures to implement and monitor capital projects, the role of the CARE committee, the role of the Major Project Review committee, and the role of the project managers.

Implementing the processes defined in the Bridge to Excellence program, Central Hudson's business process improvement program, the CARE committee process and policies were reviewed and streamlined in order to spend less time reviewing and discussing projects that were previously vetted through the Capital Budgeting process, or are consistent with pro-forma estimates. This allows the CARE committee to focus on major development plans or projects that are outside of scope, budget parameters, or authorization. The following recommendations were developed and implemented from this review:

- Develop a process to determine which projects were significant in dollars and variation and warranted a formal presentation before the CARE Committee.
- Develop a consent agenda process.
- Formalize the schedule to ensure adequate project review time.
- Electronically present project information for review.
- Formalized project approvals, recording of minutes, and made them available through the corporate WIKI site.

In addition to the recommendations above, the CARE committee will be re-evaluate its current process to track project authorizations, approvals, and additional authorizations required as part of the update to the project management guidelines.

Summary of Cost/Benefit Inputs

No Answer

Results/Measures of Success

See response to Recommendation fourteen.

Update and Progress Report as of October 15, 2011

The CARE process was updated early in 2011 and is complete.

The Director of Project Management started as planned on October 1, 2011.

The review of the policies and procedures for project management has begun.

The development of a Centralized Project Management Plan & Resource Needs has begun.

The draft Key Performance indicators and targets regarding project completion have been developed and are included in the Draft 2012 Corporate Strategic Business Plan. The two Key Performance indicators are 1) % of projects completed within +/- 10% of approved project spending and 2) % of projects completed within +/- 2 months of the target completion date.

Update and Progress Report as of March 1, 2012

The review of the Work Order Authorizations and Revisions Policy has been completed and a draft of the new policy circulated for review and approval by the CARE committee. Also a copy of a new Project Management Standard Operating Procedures Manual has been developed in Draft and circulated for review, with certain sections still under development. The review of the manual was completed by the end of February and roll out of the new project management procedures along with review sessions with project managers and others involved in the capital program are planned for March and beyond.

On December 9, 2011 the 2012 Business Plan was completed and included the Key Performance Indicators of 1) 65% of projects completed within +/- 10% of approved project spending and 2) 65% of projects completed within +/- 2 months of the target completion date.

Work continues on the development of a Centralized Project Management and Resource Plan and the current expectation is that a draft proposal will be completed for consideration by March 2012.

Finally, work has begun on the development of a work breakdown structure, project reporting, and performance monitoring. This will eventually become part of the new Project Management Standard Operating Procedures Manual. This is on schedule and is expected to be completed by May 2012.

Update and Progress Report as of July 1, 2012

The development of a Centralized Project Management and Resource Plan was completed on June 8, 2012 and is under management review.

The work breakdown structure effort was finalized on April 10, 2012 and the files posted for use on the corporate intranet site.

The Project Management Key Performance Indicators have been refined to be a rolling 12 month KPI instead of a simple YTD. The KPI's have been tracked monthly since April. In addition, a Green Belt team is currently reviewing the project management KPI's to see what can be done to improve reporting and performance.

The draft of the Project Management Standard Operating Procedures was completed in March 2012 and has been routed for review and comment. The final draft of the Project Management Standard Operating Procedures Manual will be posted for review and approval by the CARE Committee in July 2012.

Update and Progress Report as of November 1, 2012

The final Centralized Project Management Organization and Resource Plan was completed on August 14, 2012.

The final draft Project Management Standard Operating Procedures was completed in September 2012. The final draft of the Project Management Standard Operating Procedures Manual was posted on the Company's wiki site for approval by the CARE Committee in October 2012.

XX. Response to Recommendation 20

Recommendation

Develop and implement a work management system to manage the use of outside contractors and internal work force for O & M and capital work in the electric T & D areas which includes:

- Work time standards.
- Work planning and scheduling.
- Allowances for travel time.
- Reporting and comparing actual times to standards.

(Refers to Findings X-1 to X-3, X-7 and X-8).

Recommendation Implementation Team

Executive Sponsor	Charles A. Freni, Senior VP-Customer Services
Team Lead	Donald L. DuBois, Jr., Manager-Electric T & D
Team Members	Michael T. Torcello, Director-Electric District O&M Brian J. Fuoco, New Business Services Supervisor Timothy P. Scott, Director-Process & Productivity Support

Description of Scope and Plan

Central Hudson recognizes that effective Work Management is critical to the effective use of our internal resources as well as outside contractors to complete capital and expense work. Although we have effectively achieved performance goals for continuous productivity improvements, the lack of a work management program to measure the improvement at the task level has made it difficult to identify additional productivity improvement opportunities. NorthStar has noted that Central Hudson has developed goals for productivity improvement without establishing a baseline for current performance. Working harder to get more work completed with the same level of resources or completing the same level of work at reduced costs can be utilized to confirm productivity improvement but does not provide a sustainable means of meeting goals for continuous improvement. Being able to assign and measure task times for constant time, material issuance, and travel time, as well as wrench time would provide a means of identifying opportunities for improvement and assessing performance and results.

Based on the collaborative discussions with NorthStar and Staff in Albany on September 13, 2010, Electric T & D contacted Central Vermont Public Service regarding their work management system that they developed in-house. Central Vermont provided an overview of their system via a Web-ex/Conference Call. Although the discussions with Central Vermont were very informative, their system is more of a scheduling tool than a work management tool. They currently do not have a means of accurately measuring

crew productivity and are looking to develop a process for collecting the data needed to establish a baseline for shop time, material acquisition time, and travel time. Their system is very comprehensive relative to tracking a project from inception to completion and provides valuable feedback regarding the status of work in the stages prior to and during construction. Unfortunately, the solution to establishing a work management system is not going to be accomplished by benchmarking Central Vermont.

Narrative Including Schedules/Milestones

Adopted, modified or rejected recommendation: Modified

Estimated Completion Date: Ongoing

Priority: C

The Line Committee at Central Hudson is comprised of a cross section of linemen from all of the district headquarters as well as Project Construction. At the most recent two meetings, a LEAN facilitator assisted the Committee in developing a Value Stream Map of the current work management process to include crew assignment, accessing materials and equipment, travel time to the first assignment, wrench time, travel to subsequent assignments, end of the day travel back to the headquarters, and end of the day administrative tasks. The Committee identified a number of opportunities to improve the current process in the areas of preplanning, material availability and prepackaging, site preparation and coordination, equipment availability, and streamlining administrative duties and responsibilities. It is worth noting that the current practices applied to the larger scale projects assigned to the Project Construction crews have addressed the areas of opportunity identified for the district areas, although there is always room for improvement. The goal of the exercise was to identify opportunities to maximize value added time (wrench time), and minimize non-value added time (travel and shop time). The Committee recognized that an effective means of measuring the baseline task time for each activity in the process is not currently available and as a result it is difficult to establish a realistic goal and measure performance or productivity improvement.

The Value Stream Map has identified the tasks to be measured and identified areas to focus on to improve the current process. The existing Field Operations System (FOS) which is utilized for developing material lists and labor estimates for projects is based on assemblies which are a subset of our construction standards. Task times for work items including constant time (shop time), travel time, and wrench time have been previously established based on field observations and are contained in tables within FOS. There are a number of initiatives currently underway to improve the accuracy of FOS generated material lists and labor estimates. In particular, teams have been established to review the existing FOS assemblies for accuracy, completeness, and conformance with the associated construction standard. Material issued for projects needs to be accurate in type and quantity. Periodic review of the FOS assemblies is required to ensure the accuracy of the FOS generated material lists. In addition, adjustments have been made to some of the tables utilized for AP charges (ie. rock holes, flagging, and trimming) to improve the accuracy of the overall project estimate. A review of the other tables associated with task times, constant time, and travel time also needs to be conducted to reflect changes in

construction techniques, regulatory requirements, traffic patterns, and other external factors that over time have either improved or negatively impacted the task times utilized to generate the time required to complete a project. Ultimately a periodic review of the FOS tables to include updating based on actual data needs to be performed to reflect the dynamic rather than static nature of the work assigned to both Electric and Gas T & D crews.

As outlined above, Central Hudson recognizes the need to establish a work management system for the Electric and Gas T & D work groups. The tasks to be measured have been identified, the current process has been mapped and opportunities for improvement identified. The existing FOS system already contains task and material standards that are currently being reviewed and updated. Establishing task times for wrench time as well as the other activities that comprise a crew's eight hour day is important but an effective work management system needs to establish a means of measuring and comparing actual task times to established standards or expectations to manage the use of internal resources and outside contractors to complete capital as well as maintenance work in the T & D areas.

Since Central Hudson already utilizes the Mobility System and Obvient Strategies software to plan, schedule, and track the shorter duration work assignments and therefore have developed in-house expertise relative to the capabilities of the systems, it makes sense to leverage the existing systems and knowledge to collect the data necessary to establish baseline task times and productivity measurements for medium size projects. Central Hudson plans to expand the use of these systems to the remaining line crews and gas crews in the Newburgh District as a pilot to assess the potential benefits of establishing a work management system for district line and gas crews. It is anticipated that there will be some internal programming requirements to upload work assignments and the associated task times from FOS into Mobility and or Obvient. Although the functionality already exists within the existing Mobility software platform, there will be a need to modify the Obvient dashboards to provide an effective means of tracking the accuracy of task times as well as measure productivity impacts associated with implementation of process improvements. Obvient has indicated that they have an Operations Module designed to provide a more effective work management tool that Central Hudson may want to consider purchasing as a future enhancement.

Central Hudson believes that completing the review of the existing FOS assemblies and the task times associated with the wrench time, constant time, and travel time can be completed by July 1, 2012 by the existing teams assigned to the FOS assemblies (Phase 1). The installation and roll-out of mobile computing hardware to the Newburgh line and gas crews (Phase 2) can be accomplished utilizing existing internal resources with some contractor assistance to install the required hardware in the Newburgh District's line and gas trucks, the funding for this phase is not included in our current rate plan. Allocating the internal programming resources will be predicated on competing requests for programming services but the basic requirements to upload work could be completed in 2014, (Phase 3) the funding for this phase is not included in our current rate plan. The required changes to the existing Obvient software is a function of funding which has not been identified within the 2011 operating plan but may be justified based on anticipated improvements in productivity (Phase 4). Roll-out of the Mobility hardware to the

remaining line crews (Phase 5). Purchase of the Operating Module from Obvient is not required but will be considered based on the anticipated performance improvement following establishment of the baseline performance metrics (Phase 6).

Implementation Schedule

Major Activities/ Milestones	Estimated Completion Date	Status
Phase 1: Review and update existing FOS assemblies and task time tables.	July 1, 2012	Completed the review of the existing Electric FOS assemblies
Phase 2: Installation and roll-out of mobile computing hardware to the Newburgh line and gas crews.	December 31, 2013	Completed by the end of the 1 st quarter of 2012 for the Line Trucks in Newburgh. The remainder of the Line Trucks will be completed by June 30, 2012. The decision was made to install the mobile computing equipment in the Poughkeepsie gas trucks rather than Newburgh. This work will be completed during the 3 rd quarter of 2012.
Phase 3: Internal programming required to upload specific projects into the Mobility database.	July 1, 2014	It is anticipated that work on the internal programming will be completed in 2012. Programming by Oracle for the mobile application may carry into 2013.
Phase 4: Upgrade the existing Obvient software to track the new metrics.	December 31, 2014	
Phase 5: Installation and roll-out of Mobility hardware to the remaining line and gas crews.	July 1, 2015	

Phase 6: Purchase the Obvient Operations Module if cost justified.	Completed if justified, after Phases 1 through 5.	
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Summary of Cost/Benefit Inputs

Costs:

Phase 1: To review and update the existing FOS assemblies is already underway and review of the task time tables was already planned for 2011 so there is no anticipated incremental cost.

Phase 2: Provide the necessary hardware for the roll-out of mobile computing hardware to the 14 Newburgh District line crews (\$84,000) and three gas trucks (\$10,000).

Phase 3: The programming necessary to load specific projects into the Mobility database is estimated to require \$100,000 in internal resources.

Phase 4: The cost of the anticipated upgrades to the existing Obvient software to track the new metrics is estimated to be \$60,000.

Phase 5: Provide the necessary hardware for the roll-out of mobile computing hardware to the remaining 26 line crews (\$156,000) and remaining gas crews (\$30,000).

Phase 6: Purchase of the Obvient Operations Module has been estimated to cost \$80,000.

Benefits:

It is difficult to quantify the benefits associated with developing and implementing a work management system for Electric and Gas T & D until the baseline data has been established and the opportunity for future improvements to crew productivity can be assessed. Central Hudson believes that there are expected benefits that will justify completing Phase 1 and 2 as well as a portion of Phase 3. The decision to proceed with the remainder of Phase 3 and Phases 4 and 5 will be based on our assessment of the perceived benefits. The decision to proceed with Phase 6 will be based on our anticipated benefits associated with the additional module compared to the manual manipulation of data without the new module.

Results/Measures of Success

Metrics for Measuring

Central Hudson has already begun work on potential areas of improvement associated with updating FOS and will be utilizing the tasks identified in FOS as the basis for establishing the task times to be measured. There is some additional detail required in the constant time metric that Central Hudson plans to break down into crew assignments, accessing material, accessing equipment, and administrative duties. Ultimately the metric to be measured is crew productivity. It is anticipated that implementation of a work management system will provide the line and gas foremen with the information

required to develop more effective work plans which may result in the completion of more work without increasing resources. The actual impact of being able to develop more effective work plans will need to be measured and confirmed by comparing established task times to actual task times to assess the realized benefits of implementing a work management system.

Summary

In summary, Central Hudson recognizes the benefits of developing and implementing a Work Management Program to more effectively track and manage our use of internal resources as well as outside contractors to complete the identified T & D capital and maintenance work. The phased approach to implementation will provide Central Hudson with the opportunity to assess the benefits of the proposed system and make changes or enhancements based on synergies associated with existing Bridge to Excellence and/or LEAN initiatives.

Update and Progress Report as of October 15, 2011

The existing electric distribution FOS assemblies have been reviewed to identify material requirement changes that are needed to improve the accuracy of the bill of materials associated with electric work orders.

The next step is to compare the identified changes to the current electric construction standards to validate the material requirements and standard stock codes prior to making revisions to the FOS assemblies.

The GPS hardware and modems have been purchased for all of the line trucks. Installation of this equipment is expected to begin before the end of 2011 with the purchase of the associated Panasonic Toughbooks budgeted in 2012.

Update and Progress Report as of March 1, 2012

The GPS hardware and rocket modems have been installed in the Newburgh Line Trucks. The Panasonic Toughbooks for these vehicles have been purchased and are being configured by IT. Some of these computers have already been deployed into the field with the remainder to be completed by the end of March 2012. The work order to purchase the GPS hardware, rocket modems, and Panasonic Toughbooks for the line trucks in the remaining districts in 2012 was approved by the CARE Committee on Wednesday, February 22nd. It is anticipated that all line trucks will be equipped with the hardware before the end of 2012.

Preliminary discussions relative to the programming necessary to load specific projects into the Mobility database and then collect the data from a work management perspective have been held with IT. Creating the scoping documents for the required programming is also anticipated to be completed in 2012 so that an accurate estimate of the required programming resources can be developed and the project included in the IT work plan for 2013 and 2014.

Update and Progress Report as of July 1, 2012

The GPS hardware and rocket modems have been installed in all of the Electric T & D Line Trucks and the remainder of the Panasonic Toughbooks are being configured by IT. Installation of the GPS hardware, rocket modems, and Panasonic Toughbooks in the Poughkeepsie Gas Trucks is anticipated to be completed in the 3rd quarter of 2012.

A work order to purchase the required software and licenses for these additional installations was approved by the CARE Committee on Wednesday, May 23rd and also included authorization to complete the programming necessary to load longer duration (specific projects) into the Mobility database. This programming will also include some enhancements to the data being collected in the field to facilitate differentiating response time from repair or wrench time. It is anticipated that the internal programming required to load the specific projects into the Mobility database will be completed before the end of 2012. It is currently uncertain whether or not Oracle (the software provider) will be able to complete the programming required for the MWM application to accept the task times from FOS for these specific projects in 2012. This may delay complete roll-out until 2013.

Update and Progress Report as of November 1, 2012

The Panasonic Toughbooks have all been configured by IT and the required licenses have been acquired. Most of the districts have completed the training and the crews are logging on and utilizing some of the functionality of the mobile applications. Several crews have been receiving and closing trouble orders during storm restoration events as well. This has required revising their work schedules within Mobility manually. Automating this schedule change for storms and extended days is being reviewed with IT as a possible enhancement to the system. Internal programming remains on schedule to complete the enhancements to facilitate differentiating response time from repair or wrench time as well as the ability to load larger specific projects. The Oracle programming within MWM to accept task times from FOS for the specific projects and the associated internal testing of the programming changes will most likely not be completed this year. The complete roll-out of the required functionality will therefore be delayed until 2013 but the project remains twelve to eighteen months ahead of the original schedule.