

STATE OF NEW HAMPSHIRE
BEFORE THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION
CITY OF NASHUA'S PETITION FOR VALUATION PURSUANT TO RSA 38:9
Docket No. DW04-048

DIRECT TESTIMONY OF GEORGE E. SANSOUCY

- Q. What is your name and what is your association with the City of Nashua?
- A. My name is George E. Sansoucy. I am a consultant and my firm, George E. Sansoucy, P.E., LLC, has been engaged by the City of Nashua to advise it on matters concerning the City's proceeding to acquire the water utility assets of Pennichuck.
- Q. What is your educational background and work experience?
- A. I am a registered professional engineer in the State of New Hampshire.
A resume of my qualifications is attached.
- Q. What experience do you have with the municipalization of water utilities?
- A. I was the principal technical advisor and negotiator for the Town of Hudson in its taking of the assets of Consumers New Hampshire Water Company and for Ashtabula County, Ohio, in its taking of assets of the Consumers Ohio Water Company's Ashtabula Division.
- Q. What is the purpose of your testimony?
- A. The purpose of my testimony is to describe the assets Nashua seeks to purchase from PWW, PEU and PAC; to describe the impact PWW's proposed capital investments will have on its future rate structure; to describe what the current financial status of PEU means for its future rate structure; to describe the impact on ratepayers if Nashua acquires all of the assets of PWW, PEU and PAC; and to describe the impact on rate payers if Nashua's acquisition is limited either to PWW or the so-called core system, which Nashua defines as all property and facilities hydraulically connected to the treatment plant. I will not attempt to discuss at this time the value of these assets, although for purposes of discussing

future rates, I have assumed an acquisition price of \$81 million, which is consistent with some recent sales of water systems in New England. A final determination of value will require discovery.

Q. Please elaborate on the assets being sought by the City in this proceeding.

A. For each of the utilities to be acquired, the City seeks generally to acquire all the assets (real and personal) of each utility that comprise a complete and functional public water system, or collection of water systems, with all the appurtenances, accessories and records that would be expected of facilities operated with good utility practices.

The following descriptions are illustrative but not necessarily exhaustive. Where specific assets are listed they are the result of examination of public records and subject to revision. The absence of any asset does not mean that the City does not wish to acquire that asset pursuant to this proceeding.¹

Pennichuck Water Works, Inc. Assets

Pennichuck Water Works, Inc. (PWW) consists of a water treatment plant, wells, interconnections and a water transmission and distribution system that services the City of Nashua and customers in neighboring communities. The system served by the water treatment plant is designated the “core” system. The systems not directly connected to the core system are the “satellite” systems that are identified by the following names:

System Name	Location
Amherst ²	Amherst
Ashley Commons	Milford
Atherton Commons	Amherst
Autumn Woods	Salem
Badger Hill ³	Milford

¹ Annual Reports to the NH PUC, PUC Orders, NH DES One-stop Database and the Pennichuck Corp. web site.

² Former Amherst Village District

³ NH PUC Docket No. DW 00-285

System Name	Location
Bedford Water Company	Bedford
Bon Terrain	Amherst
Cabot Preserve/Greenfield Farms	Bedford
Drew Woods/Bliss /Hubbard Hill/Birchfield	Derry
Dunlap Woods	Bedford
English Woods	Bedford
Glenn Ridge	Derry
Glennwoodlands	Epping
Great Bay	Newmarket
Great Brook	Milford
Hi-Lo Estates	Derry
Little Pond	Bedford
Maple Haven	Derry
Powder Hill	Bedford
Redfield Estates	Derry
Richardson	Derry
Sargent Woods	Newton
Soughegan Woods	Amherst
Sweet Hill	Plaistow
Twin Ridge/Rolling Hills	Plaistow
Valleyfield ⁴	Plaistow & Newton

The core system has over 400 miles of mains and five storage tanks as well as pumping stations and the water treatment plant.

The assets to be acquired are:

Water supply, treatment, transmission and distribution facilities

All the land, land rights, buildings and any other real property of the Company.

The water treatment plant with all of its associated supply ponds including the connection to the Merrimack River.

All wells for the core and each and every satellite system.

All pumps, pumping stations, pressure regulating devices, storage tanks, and treatment equipment.

⁴ NH PUC Docket No. DW01-001

All mains, pipes, services, hydrants, valves, and meters.

Records

All operating manuals, specification sheets, manufacturer's instructions both in electronic and written form for every component of the water supply, treatment, transmission and distribution facilities at the system level and every sublevel.

All continuing property records both in electronic and written form with all subsidiary records, ledgers, journals, and the like and supporting plans and specifications for every entry in the records.

All work orders, completed and open.

All repair and maintenance records.

All records of purchases of services and materials.

All hydrant, meter, service, valve and other similar records for all components of the facilities both in electronic and written form.

All customer account information including billing history both in electronic and written form.

All drawings, plans and specifications for every component of the water supply, treatment, transmission and distribution facilities.

All logs, data sheets, recordings and other records of every test performed on every component of the water supply, treatment, transmission and distribution facilities.

All engineering and/or design studies whether preliminary or final, complete or incomplete together with all supporting data, work papers, analyses, etc. related to every component of the water supply, treatment, transmission and distribution facilities.

Parts and equipment

All laboratory and testing equipment located within the water treatment plant and at any well site or pumping station.

All meter reading devices with associated hardware and software.

All tools, fixtures, equipment, materials and supplies used to operate or maintain any component of the water supply, treatment, transmission and distribution facilities, including, but not limited to, all equipment, devices, computers, programs and historical data for SCADA or similar systems.

Land and Buildings

All land, land rights, buildings and other real property specifically excluding any leasehold interest in the 25 Manchester Street, Merrimack, building.

Pennichuck East Utility, Inc. Assets

Pennichuck East Utility, Inc. consists of a group of smaller water systems, the majority of which were systems owned by Consumers New Hampshire Water Company when Consumers was acquired by the Town of Hudson who sold them to Pennichuck East Utility in 1998. The systems that make up Pennichuck East Utility are:

System Name	Location
Atkinson (Pioneer Commerce Park)	Atkinson
Avery Estates	Londonderry
Beaver Hollow	Sandown
Brook Park	Londonderry
Cohas Landing	Londonderry
East Derry/Farmstead	Derry
Gage Hill	Pelham
Green Hills	Raymond
Hardwood	Windham
Harvest Village	Londonderry
Hidden Valley	Windham
Liberty Tree	Raymond
Litchfield	Litchfield
Londonderry	Londonderry
Maple Hills	Derry

System Name	Location
Ministerial	Londonderry
Nesenkeag	Londonderry
Oakwood Terrace	Derry
Pelham	Pelham
Pine Haven	Derry
R&B	Londonderry
Rolling Hills	Plaistow
Sawmill	Litchfield
Shadybrook/Goldenbrook	Windham
Smythe Woods	Hooksett
Spring Wood	Derry
Stonegate/Williamsburg	Pelham
W&E/Artesian	Windham
WESCO	Hooksett
White Rock	Bow

In aggregate these systems have approximately 120 miles of transmission and distribution mains. Thirty miles of the mains are 10-inch diameter or larger.

The assets to be acquired are:

Water supply, treatment, transmission and distribution facilities

All the land, land rights, buildings and any other real property of the Company.

All wells, pumps, pumping stations, pressure regulating devices, storage tanks, and treatment equipment.

All mains, pipes, services, hydrants, valves, and meters.

Records

All operating manuals, specification sheets, manufacturer's instructions both in electronic and written form for every component of the water supply, treatment, transmission and distribution facilities at the system level and every sublevel.

All continuing property records both in electronic and written form with all subsidiary records, ledgers, journals, and the like and supporting plans and specifications for every entry in the records.

All work orders, completed and open.

All repair and maintenance records.

All records of purchases of services and materials.

All hydrant, meter, service, valve and other similar records for all components of the facilities both in electronic and written form.

All customer account information including billing history both in electronic and written form.

All drawings, plans and specifications for every component of the water supply, treatment, transmission and distribution facilities.

All logs, data sheets, recordings and other records of every test performed on every component of the water supply, treatment, transmission and distribution facilities.

All engineering and/or design studies whether preliminary or final, complete or incomplete together with all supporting data, work papers, analyses, etc. related to every component of the water supply, treatment, transmission and distribution facilities.

Parts and equipment

All laboratory and testing equipment located within the water treatment plant and at any well site or pumping station.

All meter reading devices with associated hardware and software.

All tools, fixtures, equipment, materials and supplies used to operate or maintain any component of the water supply, treatment, transmission and distribution facilities, including, but not limited to, all equipment, devices, computers, programs and historical data for SCADA or similar systems.

Land and Buildings

All land, land rights, buildings and other real property.

Pittsfield Aqueduct Company Assets

The Pittsfield Aqueduct Company consists of a supply pond, Berry Pond, a Microfloc Trimite® treatment plant installed in 1997 and approximately 13 miles of transmission and distribution mains. The Company is located entirely within the Town of Pittsfield and serves a single service area in and around the town center. The system is gravity fed from the pond through the treatment plant to customers.

The assets to be acquired are:

Water supply, treatment, transmission and distribution facilities

The water treatment plant with all of its associated supply ponds, easements and rights of way.

All mains, pipes, services, hydrants, valves, pressure regulating devices and meters.

Records

All operating manuals, specification sheets, manufacturer's instructions both in electronic and written form for every component of the water supply, treatment, transmission and distribution facilities at the system level and every sublevel.

All continuing property records both in electronic and written form with all subsidiary records, ledgers, journals, and the like and supporting plans and specifications for every entry in the records.

All work orders, completed and open.

All repair and maintenance records.

All records of purchases of services and materials.

All hydrant, meter, service, valve and other similar records for all components of the facilities both in electronic and written form.

All customer account information including billing history both in electronic and written form.

All drawings, plans and specifications for every component of the water supply, treatment, transmission and distribution facilities.

All logs, data sheets, recordings and other records of every test performed on every component of the water supply, treatment, transmission and distribution facilities.

All engineering and/or design studies whether preliminary or final, complete or incomplete together with all supporting data, work papers, analyses, etc. related to every component of the water supply, treatment, transmission and distribution facilities.

Parts and equipment

All laboratory and testing equipment located within the water treatment plant and at any well site or pumping station.

All meter reading devices with associated hardware and software.

All tools, fixtures, equipment, materials and supplies used to operate or maintain any component of the water supply, treatment, transmission and distribution facilities, including, but not limited to, all equipment, devices, computers, programs and historical data for SCADA or similar systems.

Land and Buildings

All land, land rights, buildings and other real property.

Q. Are you familiar with the Pennichuck Water Works (PWW) rate case DW 04-056 now pending at the PUC?

A. Yes, I am. This request for rate increases is driven by the capital investments that PWW has made in the past few years. These investments have not been revenue producing in the sense that they would generate additional income as a result of added investment. These investments are in part due to new drinking water regulations and in part to replace aging infrastructure. For some years, PWW's parent and sole shareholder, Pennichuck Corporation, has paid dividends rather than make investments in the PWW system which, because of its lack of growth, would have been largely non-revenue producing.

As an investor owned utility, it is PWW's duty to its investors to seek to earn an acceptable return on investments. PWW is allowed to earn approximately 8.6% on its investments but PWW is earning only a little over 6%. For this reason, PWW this spring requested approval from the NHPUC (Docket DW 04-056) for an an increase of 16% in its total charges to customers over the rates approved by the PUC on March 1, 2002 in Docket No. DW 01-0181.

Q. What are the long-term implications of the information filed in the current case?

A. The information filed by Pennichuck indicates that three years from now (2006) PWW would require a rate increase of approximately 50% over the amount being requested in DW 04-056 assuming the factors determining net operating income (O&M costs, etc.) remain the same as in the test year for the current rate case. An extrapolation from historical data and the rate case indicate that additional rate cases can be anticipated approximately every three years.

This increase is a simple consequence of the need- to make capital investments that will double their rate base in the next three years with virtually no growth in the amount of water sold, especially in the core system. These calculations are shown in Exhibit GES-1.

Q. What did you conclude about possible rate increases for Pennichuck East Utilities and Pittsfield Aqueduct Company?

A. At the present time, PEU appears to be earning about 4.7% on rate base which is less than the 8.58% rate of return allowed PWW in its temporary rates and less than the 6.2% rate of return that triggered PWW's current request to increase rates.

Using the logic of the case being argued in DW 04-056, it appears that Pennichuck would have been justified in requesting a rate increase of 41% based on a 2003 test year or would be justified in asking for a rate increase of 65% in 2006 as illustrated in Exhibit GES-2, with additional increases in subsequent years. Pennichuck's intentions with regard to PEU are not known.

The 2003 return on rate base for PAC is estimated to be 5.1% which is lower than the 6.2% that triggered the current PWW rate increase request. As shown in Exhibit GES-3 a rate increase of approximately 58% would be justified in 2006 followed by modest increases in subsequent years.

Q. Will the management of Pennichuck Corporation attempt to sell the company again and if so, why?

A. At the 2004 annual meeting of the stockholders of the Pennichuck Corporation, the company said that it was still in its best interest to become affiliated with a much larger company.

Even without the statement, it is obvious that the corporation needs to be sold. For the period 2004 to 2007, Pennichuck has identified the need to make approximately \$48 million in investments in PWW alone for plant that will not generate revenue from new customers. This is approximately equal to the net book value of at the beginning of 2004. It will be difficult for the Company to fund these improvements without diluting the equity of its shareholders.

- Q. What are the implications of new ownership on the rates of Pennichuck Water Works, Pennichuck East Utilities and Pittsfield Aqueduct Company?
- A. New owners of Pennichuck Corporation would almost certainly be companies located outside of New Hampshire and probably outside of the United States. Pennichuck clearly has been pursuing a strategy of allowing revenues from PWW to generate almost all of the dividends needed to meet its plans to avoid having to increase the legitimate but high rates in PEU.
- A more distant owner might not have that same concern.
- If Pennichuck was acquired by one of the large water utility companies, the new owner would be able to infuse new equity capital into the utilities more easily than Pennichuck Corporation could on its own. A shift to a larger portion of equity over debt, however, would tend to bias the weighted average cost of capital upwards with consequent increases in revenue requirements and rates. That calculation is too speculative to quantify at the present time.
- Q. What will be the impact on rate payers if Nashua acquires all of the assets it is requesting?
- A. The increase in rates will be significantly less than the likely future rate increases that will have to be charged by the Pennichuck utilities to maintain the systems and replace aging infrastructure. Moreover, in the long run, the community will benefit from ownership that focuses on quality of service and preservation of assets rather than on return to shareholders.
- The impact can be best demonstrated by comparing the rates required from a financial plan for the Water utilities under municipal ownership with the likely rates that will have to be obtained by the Pennichuck utilities.
- Q. Please describe the financial plan developed by the City of Nashua for the operation of the systems.
- A. The financial plan begins with examination of the historic revenues and expenses of the Pennichuck utilities. Exhibits GES-4 through GES-6 were derived from

data taken from the annual reports to the N. H. Public Utilities Commission for 1999 through 2003 for PWW, 1998 through 2003 for PEU and 2000 through 2003 for PAC. Pennichuck acquired PEU in 1998 and there have been no rate increases for it under Pennichuck ownership. PAC was acquired by Pennichuck in 1998 while PAC was in the midst of constructing its first water treatment plant and revenues and expenses were not stable until 2000. There has been no rate increase for PAC. Rate increases were effective for PWW in 1999 and in 2002. In Exhibits GES-4 through GES-6 the amounts in the column headed "Trend to 2006" are a straight- line trend of the actual data (excluding 1998 PEU) that is used to select a "proforma" estimate for 2006.

Of particular importance is the fact that water consumption in PWW is declining while the number of customers is slowly growing. The net impact is that the only increases in metered water sale revenues come from rate increases. Likewise, water sales are flat for PAC.

With the information developed above, we created the Revenues portion of the Financial Plan shown in Exhibit GES-7 ("Consolidated Systems"), which is the summation of data in Exhibits GES-8 through GES-10 (PWW, PEU and PAC, respectively). Each system is modeled independently to recognize their different characteristics.

Operation and maintenance expense is projected to 2006 and is set at 80% of the amounts that would have been spent by the three utilities. The reduction is possible because of the elimination of corporate and regulatory expenses and by the fact that the work will be performed by skilled operating and management companies that have an incentive to reduce cost. It has been my experience, in both Hudson and Ashtabula, that by contracting out operation and maintenance, as the City intends to do, the cost savings are even greater than we have projected. For example, in Ashtabula, operation and maintenance expense was reduced by approximately 30%.

Provision is made for payments in lieu of taxes (PILOT's) to local governments at the same level that we anticipate would be paid by the Pennichuck utilities.

Consolidating the Capital Budget in PWW's current rate case, reviewing historical investment patterns and considering historic depreciation rates provides a basis for estimating capital repairs. For PWW, in Exhibit GES-11 we begin with the rate case capital budget for 2006 and 2007. The costs of the Water Treatment Plant Upgrade, UV Light Disinfection and the Fifield Tank will be paid with bond proceeds. Data processing will be contracted to the O&M Contractor and not require capital investment on the part of the City.

A review (see Exhibit GES-12) of historic capital investments by the three utilities is used to estimate going forward capital repair budgets.

The City's initial investment in the system will consist of debt for acquisition and startup costs and a \$30 million bond for the upgrade of the Water Treatment Plant and the construction of the Fifield Tank proposed by PWW. The acquisition price for the systems is assumed to be \$81 million plus issuance costs plus initial capital expenses for a total of \$87 million.

The acquisition price of \$81 million is based on an analysis of several recent sales in Massachusetts and New Hampshire that suggest that the market has paid about \$2,700 per customer for going concern water utilities and an estimate that the three utilities will have about 30,000 customers at the time of closing. It is also consistent with our earlier review of the value of these companies. A more comprehensive analysis and determination of value of the Pennichuck utilities will be made after we obtain discovery from them of documents and information not presently available to us in public filings with regulators and the SEC. For example, we will want to examine such things as the companies' continuing property records and financial information from which we can determine current earnings before interest (income), taxes, depreciation and amortization (EBITDA) and current net book value less contributions in aid of construction (CIAC), both of which are useful in establishing ratios which are indicators of value. For

purposes of this analysis, however, a value of \$81 million is as fair a determination of value as we can make with the information available to us.

It is apparent from this analysis that although rates will increase under municipal ownership they will not increase to the extent they would under continued ownership by Pennichuck. For example, through 2015, rates under municipal ownership of PWW we project would increase a total of 36.2 % (GES-8), while under Pennichuck ownership they are projected to increase a total of 77.44% (GES-1). For PEU the difference is a rate increase under municipal ownership of 77% (GES-9) and under continued Pennichuck ownership of 117.25% (GES-2); and for PAC 40% (GES-10) versus 71.11% (GES-3)

- Q. Please describe what will happen to rates for the Pennichuck utilities if they continue to be owned by an investor-owned utility.
- A. We have developed a set of likely scenarios of rate increases that Pennichuck would require if it were to pursue the same level of capital investment as is contemplated by the Municipal Financial Plan. These are attached as Exhibits GES-1 through GES-3. The most significant assumptions in these scenarios is that the Operation and Maintenance costs for Pennichuck would increase at the same rate at they would under municipal ownership and changes in CIAC and CIAC amortizations can be ignored because they are wash items in the analysis. It is assumed that the rate base and other data presented to the NH.PUC by PWW in its current rate case are correct and are used as a starting point. Our analysis assumes that Pennichuck will be allowed a return on rate base of 8.68%, its cost of debt will be 6.5% and total debt will be 55% of rate base.
- Extrapolated as they are from publicly available information and being projections that are subject to change from future events, these scenarios are presented for the purpose of demonstrating that, all things being equal, the cost to ratepayers under municipal ownership is significantly less than under continued ownership by Pennichuck.

- Q. What is the impact if Nashua is restricted to the acquisition of just Pennichuck Water Works?
- A. Each of the Pennichuck Corporation's subsidiaries is a physically independent utility. Implicit in utility rate making is the principle that no group of rate-payers should subsidize another group of rate-payers and certainly no utility should subsidize another utility. I have been advised by counsel that because there is no connection between the companies, there is no issue of severance damages in the event that Nashua cannot acquire PEU and PAC. However, even if PEU and PAC were entitled to damages for the loss of operating efficiencies, they would not have a significant impact on the overall cost of acquiring PWW. An examination of Exhibits GES-1 and GES-8 shows again that under City ownership while rates would have to increase they would not rise as much as under continued Pennichuck ownership.

The fiduciary responsibility of the Board of Directors and management of the Pennichuck Corporation is to maximize the wealth of its shareholders. It appears that Pennichuck believed it could meet a goal of a regular increase in dividends and a steady stock price while accepting lower rates of return from PEU and PAC than it could legitimately claim from the NHPUC. One impact of this policy is that a disproportionate share of the cash that could have been invested in PWW infrastructure was being diverted to dividend payout.

It is probable, therefore, that Pennichuck would seek rate increases for PEU and PAC as soon as it no longer owned PWW. It appears from data in the 2003 Annual Report to the Public Utilities Commission that a rate increase of 41% could have been justified based on that year as a test year. That increase would rise to 52% for a 2004 test year if PEU made \$1.2 million of capital investment in 2004 plus the construction at the Williamsburg/Stonegate system. If no increase in rates occurs prior to 2006, I have projected a total increase in rates for PEU under continued Pennichuck ownership of 117.25% and for PAC 71.11% during the period 2006-2019 (GES-2 and GES-3). Because rates would not increase for

PEU and PAC as much under City ownership, I believe it is in the public interest for the City to acquire their assets, notwithstanding their location outside Nashua.

Q. What is the impact if Nashua is restricted to the acquisition of just those facilities that are hydraulically connected to the Nashua Water Treatment Plant?

A. I have again been advised by counsel that because there is no physical connection between the core system and the balance of the PWW system, there is no issue of severance damages. However even if there was severance, the value of those portions of the PWW system that are not hydraulically connected to the treatment plant are minor so the impact would be similar to what I described in response to the previous Question.

Q. What will be the impact on the balance of the rate-payers if Nashua is restricted to acquisition of just those facilities that are hydraulically connected to the Nashua Water Treatment Plant?

A. Because we don't know what PWW would do with those portions of the system if they were not conveyed, we don't have enough information to answer this question. We do know that if they were incorporated into PEU, the impact on rates would be similar to what I described in response to the prior question relating to the acquisition of just PWW.

Q. Does this conclude your testimony?

A. Yes.

RESUME
GEORGE E. SANSOUCY, P.E.

For twenty-five (25) years, Mr. Sansoucy has served as a consulting engineer for private and public institutions on projects throughout the United States ranging from environmental, civil, and power engineering to real estate development, regulatory issues, and utility valuation.

Mr. Sansoucy graduated from the University of New Hampshire in 1974, with a Masters of Science Degree in Civil Engineering, with an emphasis on Sanitary Engineering. Immediately after leaving college, Mr. Sansoucy served as a Project Manager for the firm of Anderson-Nichols and Co., Inc., working in the municipal and industrial wastewater and water treatment fields, and planning and civil engineering. As a Project Manager, Mr. Sansoucy was responsible for all aspects of various civil engineering project design, construction, and economics, as well as considerable responsibility for the municipal clients at hand.

Since 1980 to the present time, Mr. Sansoucy managed his own consulting engineering and construction firm, developing hydroelectric plants throughout New England and New York State as well as development and construction of commercial and industrial real estate. Mr. Sansoucy has completed engineering assignments for municipalities, banks, individuals, attorneys, and private industry in the fields of utility valuation, energy planning and development, energy conservation and management, construction management, and design of roads, water, sewer, and other municipal facilities. He currently serves clients across the United States.

In his twenty-five years of experience, all levels of coordination have been accomplished not only on a local level, but also with federal and state agencies, such as the Federal Energy Regulatory Commission, the Environmental Protection Agency, OSHA, HUD, the New Hampshire Public Utilities Commission, the New Hampshire Water Resources Board, the New Hampshire Department of Environmental Services, as well as departments in other states. Also, input was provided to congressional committees developing regulation in the United States.

A more specific level of expertise includes:

- A. Appraisals and engineering cost valuations, support, and expert testimony for public utility property and private power related projects;
- B. Court preparation and expert testimony;
- C. Construction of power lines, substations, control facilities and other appurtenances necessary for the generation and distribution of electricity to the host utility;
- D. Civil design and construction for buildings, roads, foundations, drainage, utilities and controls;

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- E. Development of hydroelectric energy projects from inception to completion with successful operations; financing negotiations; contract for power negotiations; and management of small scale energy projects;
- F. Water, wastewater and industrial wastewater treatment facilities; alternative water and wastewater treatment facilities;
- G. Design and construction of pressure and gravity water and wastewater treatment conveyance systems;
- H. Environmental assessment and impact report management and preparation;
- I. Planning and executing public participation in the regulatory and environmental fields;
- J. Construction of projects in the design/build mode with fixed price requirements;
- K. Dam, canal and waterway renovations of existing structures;
- L. Renovation of buildings, both historic and non-historic to meet all current life safety, BOCA, state, federal and local codes;
- M. Hazardous waste evaluation, analysis, mitigation and remediation;
- N. Miscellaneous lesser projects with a varied experience and opportunity.

PROFESSIONAL QUALIFICATIONS:

B.S. Civil Engineering, University of NH, 1974
M.S. Civil, Sanitary Engineering, University of NH, 1974
I.A.A.O. Course 1 - Fundamentals of Real Property Appraisal
I.A.A.O. Course 2 - Income Approach to Valuation
NHA.A.O./D.R.A. State Statutes Course
Registered Professional Engineer, NH # 4175
Member, American Society of Civil Engineers
Certified New Hampshire Assessing Appraiser
Member, New Hampshire Association of Assessing Officers
Member, International Association of Assessing Officers
Town of Farmington, NH - Past Planning Board Member
Town of Farmington, NH - Past Capital Improvement Committee
Past Chairman of the Rochester Rotary Club Community Services Committee
Past Abanaki District Chairman of Daniel Webster Council - Boy Scouts
Past Vice-Chair of Solid Waste Task Force for City of Rochester, NH

TEACHING EXPERIENCE:

In 1999, on behalf of the Commonwealth of Massachusetts Department of Revenue, prepared draft guidelines for the valuation of utility property, as required by changes of law pursuant to deregulation in Massachusetts; presented courses throughout the state for town and city assessors in the valuation of utility property, as required by the Department of Revenue Administration.

In 1978, taught Advanced Wastewater Treatment for the Graduate Program at University of New Hampshire as replacement professor.

In 1973 and 1974, taught Photogrammetric classes for the Undergraduate Program at University of New Hampshire as professor's assistant.

Team leader for Destructive Structural Testing of single span box aluminum roof trusses in situ.

PUBLICATIONS AND SPEECHES:

Journal of American Water Works Association

Conference Proceedings, American Water Works Association

Proceedings, National Symposium on Land Treatment

1994 Status Report on the Valuation of Utility Property, Presented to the Annual Meeting of the Municipal Managers Association of New Hampshire and Vermont

1995 Overview of the Valuation of Utility Property, Presented to the Annual Summer Conference of the New York State Real Property Tax Directors Association

Massachusetts Department of Revenue - Preparation in 1998 of draft guidelines to be issued by the State for use by local governments in assessing electric company property. In conjunction with guidelines, co-authored and presented two courses on valuation of electric properties under deregulation to state and local government appraisers and assessors.

REPRESENTATIVE CURRENT AND PREVIOUS CLIENTS - PAST 10 YEARS:

1. Adams County, OH - Valuation of the Killen Generating Station, a 666 MW coal-fired generating facility and the J.M. Stuart Generating Station, a 2,440 MW coal-fired generating facility.
2. Town of Agawam, MA - Valuation of gas transmission facilities and a combined cycle, co-generation, electric plant.
3. Town of Alexandria, NH - Valuation of all public utility property including a wood-burning power plant.
4. Town of Allenstown, NH - Valuation of all public utility property in the Town and a new 400 foot MCI microwave telecommunications tower. Preparation of court-ready appraisal for tax abatement litigation brought by electric utility.
5. Town of Ashland, ME - Valuation of wood-fired electric generating plant.
6. Babcock Ultrapower - Valuation of wood-fired generation facility in Enfield, Maine for tax abatement request.

7. Bank of New Hampshire - Valuation of Pittsfield Aqueduct Company, a public utility in the Town of Pittsfield, NH, for financing purposes.
8. Berg and Laipson Law Firm, Worcester, Massachusetts - Preparation of eminent domain defense involving major gas transmission systems.
9. City of Berlin, NH - Revaluation of special purpose property owned by the Public Service Company of New Hampshire, James River Hydroelectric Company, New England Telephone, Warner Cable, and the James River Paper Company. Engineering consultant for purposes of the Town's intervention with the Federal Energy Regulatory Commission on the relicensing of hydroelectric plants owned by James River Hydroelectric Company and Public Service Company of New Hampshire and requests for exemption of property from *ad valorem* taxation filed by James River Paper Company.
10. Bethlehem, NY Industrial Authority - Development of a PILOT agreement for the construction of new electric generating facilities.
11. Town of Bethlehem, NY - Valuation of the Albany Steam Station, a 400 MW oil/gas-fired utility generation plant for property tax assessment. Valuation of the portion of the Town's water system located in New Scotland, NY, for property tax assessment appeal.
12. Town of Blackstone, MA - Valuation of a new 550 MW combined cycle gas-fired electric generating plant.
13. City of Boston, MA - Valuation of the New Boston oil/gas-fired electric generation station and related transmission and electric distribution property. Valuation of gas storage, transmission, and distribution systems.
14. Town of Bow, NH - Valuation of transmission facilities, the Merrimack Station, a 460 MW steam-fired coal central generation plant, a 12.1 MW hydroelectric plant, and 44 MW combustion turbines. Engineering consultation regarding power generation issues and site evaluation for a 600 ton per day paper mill.
15. Town of Carlisle, NY - Valuation of gas pipeline property.
16. City of Cambridge, MA - Valuation of five electric generating units that comprise the Kendall Generating Station.
17. Town of Canton, ME - Valuation of hydroelectric facilities.
18. Town of Chester, NH - Valuation of all public utility property.
19. Town of Cheektowaga, NY - Preliminary valuation of electrical transmission and distribution property.
20. China Mills, Thomas Hodgson and Sons, Allenstown, NH - Expert witness in lawsuit against upstream hydroelectric developer for improper dam construction and consequential flooding of mill facilities downstream.
21. City of Claremont, NH - Valuation of electric utility property for defense of abatement action by utilities to the New Hampshire Board of Tax and Land Appeals.
22. Town of Clay, NY - Valuation of the VerPlank Substation and Energy Management System.
23. City of Cleveland, Ohio Board of Education - Preparation in behalf of the Board of Education, and testimony before the City of Cleveland's Board of Revision regarding the value of First Energy's Lake Shore coal-fired electric generating plant.
24. City of Cohoes, NY - Valuation of a 40 MW hydroelectric facility.

25. Town of Colton, NY - Valuation of hydroelectric facilities, and transmission and distribution property.
26. Consolidated Waste Services of Maine, Norridgewock, ME - Consulting services for the complete energy master plan of a special waste disposal facility and negotiation for purchase of all utility-owned equipment within the site. Design and construction administration of new 3-phase distribution and transformer systems within the complex. Development of sales tax and *ad valorem* tax exemptions for pollution control facilities.
27. County of Coos, NH - Representation before the Public Utilities Commission as an intervenor in the Electric Utility Industry Restructuring Docket.
28. Town of Cortlandt, NY - Consulting and appraisal services for the valuation of the Indian Point Units 1 and 2 Nuclear Generating Plant. Testimony before the Nuclear Regulatory Commission and the Public Service Commission regarding the sale of assets
29. Town of Dalton, NH - Valuation of the Centennial Hydroelectric Project.
30. Town of Deerfield, NH - Valuation of all electric utility property.
31. Town of Deerfield, NY - Valuation of all substation and transmission property.
32. City of Detroit, MI - Valuation of the central underground steam heating system and power plants.
33. Town of Dighton, MA - Valuation of Dighton Power Project, a new modern combined cycle gas-fired 170 MW power plant.
34. Dover Water Company, Dover, Massachusetts - Valuation and strategic planning for the possible sale of the Dover Water Company.
35. Town of Dowagiac, MI - Consulting services for the development of a PILOT agreement for the construction of a new electric generation facility.
36. Town of Dracut, MA - Valuation of a 500 MW combined cycle generating plant, and consultation regarding development of a tax mitigation agreement.
37. Town of Dunbarton, NH - Valuation of all electric utility property, owned by three separate utility companies.
38. City of Elmira, NY - Valuation of street lighting system and purchase negotiation with utility.
39. Town of Epping, NH - Valuation of all public utility property.
40. Town of Errol, NH - Valuation of a hydroelectric facility.
41. Estate of Dr. John Finn, Norwood, MA - Valuation of general partnership interest in hydroelectric facility located in Bristol, NH
42. City of Franklin, NH - Valuation of all public utility property.
43. Town of Fremont, NH - Valuation of all public utility property.
44. Gallagher, Callahan & Gartrell - Expert witness for defense of U.S.F. & G. Insurance Company against a claim made by the owners of Ashuelot Dam in Winchester, NH for improper construction.
45. Town of Gorham, NH - Valuation of all special purpose utility property, including electric, hydroelectric, gas, cable television, telephone, and international oil pipeline facilities for town-wide revaluation. Valuation of watershed land owned by the Town of Gorham in the Town of Randolph, NH for tax abatement request. Engineering consultant for purposes of the Town's intervention with the Federal Energy Regulatory Commission on the re-licensing of hydroelectric plants owned by

- James River Hydroelectric Company and Public Service Company of New Hampshire. Engineering consultant regarding review of requests for exemption of property from *ad valorem* taxation filed by James River Paper Company.
46. Town of Greenfield, NH - Valuation of all public utility property.
 47. Town of Greenland, NH - Valuation of all taxable electric utility property.
 48. Town of Groton, NH - Valuation of all public utility property for town-wide revaluation.
 49. Hanover Water Company - Valuation of Hanover Water Company and strategic planning for possible purchase from Dartmouth College by the Town of Hanover, NH.
 50. Town of Haverhill, NH - Valuation of all public utility property for town-wide revaluation.
 51. Hendrick Hudson School District, Westchester County School Districts, NY - Representation before the Public Service Commission and the Nuclear Regulatory Commission on issues associated with deregulation of the electric industry and its impact on the Indian Point nuclear generating facilities.
 52. Town of Hinsdale, NH - Valuation of all public utility property, including the Vernon hydroelectric facility.
 53. City of Holyoke, Mass. - Valuation of all utility property and other property owned by Holyoke Water Company including the Hadley Falls hydroelectric facilities, the 160 MW coal-fired Mt. Tom Generation Plant, transmission, distribution, substations, canal systems, and related facilities.
 54. Town of Hopkinton, NH - Valuation of all public utility property.
 55. Town of Hudson, NH - Valuation of property owned by the Southern New Hampshire Water Company and Energy North, a gas distribution company. Preparation of testimony before the Public Utilities Commission regarding Southern New Hampshire Water Company's 1995 rate structure. Preparation of study to acquire the Southern New Hampshire Water Company property by eminent domain for conversion to a municipal-owned water system. Preparation and management operation and maintenance agreements, ordinances, and engineering support for the Town's successful takeover of the water system. Valuation of gas transmission pipeline owned by Tennessee Gas Pipeline Company.
 56. Town of Jaffrey, NH - Valuation of all public utility property.
 57. City of Keene, NH - Valuation of all public utility property, with the exception of telephone property.
 58. Lake County, OH - Valuation of real property at Perry Nuclear Power Plant and East Lake Generating Station (coal). Consultation and preparation of reports before the Federal Energy Regulatory Commission and the Ohio Department of Taxation.
 59. Town of Lancaster, NH - Valuation of all public utility property.
 60. City of Lebanon, NH - Valuation of hydroelectric facilities (Wilder Dam) and all public utility property.
 61. Town of Littleton, NH - Valuation of hydroelectric facilities (Moore Dam) and all public utility property.
 62. Town of Londonderry, NH - Consulting services for permitting and assessing of new combined cycle, gas-fired, co-generation plant and for municipalization of electric distribution system.

63. Town of Loudon, NH - Valuation of all public utility property.
64. Town of Lyonsdale, NY - Valuation of wood-fired generating plant and hydroelectric project.
65. Town of Marcy, NY - Valuation of electric transmission and substation property.
66. Town of Mason, NH - Valuation of all public utility property for town-wide revaluation.
67. Massachusetts Department of Revenue Administration - Provided training for state and local assessing officials on valuation of utility property and merchant electric power generating plants. Developed mass appraisal methodology and calculation forms for central assessment of telecommunications property.
68. Michigan Municipal League, City of Midland, MI - Prepared report and analysis of new multiplier tables proposed to the Michigan State Tax Commission to be used by assessors in the State of Michigan to determine the taxable value of personal electric and gas transmission and distribution property.
69. City of Midland, MI - Valuation of 1,500 MW gas combined cycle electric generating station which was converted from an unfinished nuclear generating plant.
70. Towns of Middletown, NY and Roxbury, NY - Valuation of wastewater treatment collection systems, pump stations, and treatment plants owned by the City of New York.
71. Town of Milford, NH - Valuation of all public utility property.
72. Town of Monroe, NH - Valuation of all public utility property, including two hydroelectric dams owned by New England Power Company and the Phase I and Phase II Hydro Quebec DC Converters.
73. Town of Montague, MA - Valuation of the Cabot Hydroelectric Station.
74. City of Nashua, NH - Valuation of property owned by Energy North, a gas distribution company. Valuation of all telephone and cable television property. Valuation of Public Service Company of New Hampshire and Pennichuck Water Company utility property.
75. New Hampshire Municipal Association - Representation before the Public Utilities Commission in the Electric Utility Industry Restructuring Docket.
76. New Richmond and Three Rivers School Districts, OH - Valuation of real property at Beckjord, Miami Fort and Zimmer Generating Stations.
77. Town of Newburgh, NY - Valuation of the Roseton and Danskammer central-fired oil and coal electric generation plants.
78. Town of Newington, NH - Valuation of the Newington Station, a 420 MW oil fired generation plant, transmission and distribution facilities, and the Newington Energy, a 540 MW gas-fired combined cycle generating station. Valuation of special purpose industrial properties including the Sprague Oil tank farm and refinery, the Simplex Wire and Cable Co., and other industrial facilities. Preparation before the Department of Environmental Services Agency regarding applications for tax exemption of pollution equipment.
79. City of Oswego, NY - Critique of preliminary appraisal for the 2,000 MW Oswego Steam Station for municipal tax abatement defense.
80. Town of Oxford, CT - Development of a long-term tax agreement for a gas-fired combined cycle plant.
81. Town of Pembroke, NH - Valuation of all public utility property.

82. Town of Pine Plains, NY - Valuation of the Pine Plains Water Company.
83. City of Pittsfield, MA - Valuation of a 180 MW gas-fired combined cycle cogeneration plant owned by U.S. Generating Company.
84. Town of Plattsburgh, NY - Valuation of hydroelectric facilities owned by New York State Electric & Gas Company.
85. Town of Raymond, NH - Valuation of all public utility property.
86. Town of Richmond, NH - Valuation of all public utility property.
87. Town of Rotterdam, NY - Valuation of General Electric steam turbine plant and a chemical manufacturing plant owned by Schenectady Chemicals.
88. Town of Rye, NH - Valuation of all public utility property.
89. Town of Sanbornton, NH - Valuation of all public utility property.
90. Town of Sand Lake, NY - Valuation of all telephone property.
91. City of Saratoga Springs, NY - Valuation of all electric and gas utility property owned by the Niagara Mohawk Power Corporation.
92. County of Schoharie, NY - Valuation of the gas transmission facilities and compressor stations owned by Iroquois Gas Pipeline.
93. Town of Seabrook, NH - Valuation of the Seabrook Nuclear Power Plant, a 1,200 MW nuclear generating facility. Negotiation of a tax agreement.
94. Town of Somerset, MA - Valuation of the Somerset Steam Plant, a 150 MW coal-fired generating facility.
95. Town of South Hadley, MA - Valuation of Hadley Falls Hydroelectric Dam.
96. Town of Sterling, MA - Valuation and consulting services for the sale of the Sterling Light Department to an investor-owned utility.
97. City of Tonawanda, NY - Valuation of the Indeck-Yerkes 56 MW gas-fired cogeneration facility.
98. Town of Torrey, NY - Valuation of the Greenidge Station, a coal-fired central steam plant.
99. Town of Troy, NH - Valuation of all public utility property.
100. City of Troy, NY - Valuation of the City's water utility reservoir located in Pittstown, NY.
101. Town of Union, NY - Valuation of the Goudey coal-fired electric generating plant.
102. United States Navy - Eastern Division - Valuation of the potable water and wastewater collection systems located at the Millington, Tennessee Naval Facility for the anticipated sale of the property.
103. United States Navy - Western Division - Valuation of utility property for the United States Navy in the San Francisco Bay area as part of the base closure process (1996 - 1999). Specific facilities valued as separate appraisals include the Alameda Naval Air Station, the Navy's portion of Hamilton Army Air Field, the Novato Housing in Novato, California, Treasure Island Naval Station, and the Oakland Naval Hospital.
104. Utah State Tax Commission - Valuation of PacifiCorp's total electric generation, transmission and distribution property holdings in the State of Utah.
105. State of Utah, IPA Project - Valuation of the Intermountain Power Agency's 1,700 MW coal-fired generating plant, substation, and transmission system in the State of Utah for Millard County *et al.* in preparation of testimony before the Utah State Tax Commission.
106. Town of Vernon, VT - Valuation of the Vermont Yankee Nuclear Power Station.

107. Town of Walpole, NH - Valuation of all public utility property, including the Bellows Falls Hydroelectric Generating Facility.
108. Waste Management of New Hampshire, Inc., Rochester, NH - Valuation of the 1,100 acre integrated landfill facility, including all buildings, landfill cells, site improvements, roads, wastewater treatment plants, methane gas recovery systems, and electrical generation plants, and other infrastructure for the purposes of a tax abatement request filed with the City of Rochester, NH. Preparation of request for tax exemption of certain property. Engineering consultation and representation concerning financial and operating disclosure docket before the Public Utilities Commission under the 1992 Federal Energy Policy Act. Complete energy master plan and energy infrastructure analysis for an integrated 1,100-acre landfill facility. Negotiation of power contracts for the sale of energy to New England Power Company and the New Hampshire Electric Cooperative. Designed and supervised the construction of a high voltage transmission line to connect the operations to the existing gas generation plant. Negotiated interconnection agreements and assisted in plant startup and testing.
109. Town of Webb, NY - Valuation of hydroelectric plant, distribution, transmission and substation property.
110. City of Westfield, MA - Consulting services for permitting and assessing of new combined cycle, gas-fired, co-generation plant.
111. Town of Wiscasset, ME - Consulting services for valuation of Maine Yankee Nuclear Power Plant.
112. Town of Whitefield, NH - Valuation of all public utility property.
113. Town of Windham, NH - Valuation of all public utility property.
114. Town of Yarmouth, ME - Valuation of the Wyman Generating Station, an 846 MW oil-fired generation plant. Appraisal of all property owned by Central Maine Power Company including distribution systems, transmission systems, substations, land and rights of way. Valuation of the 846 MW oil-fired generation plant owned by Central Maine Power and a consortium of utilities in New England.
115. Association of Fourteen Communities in the State of New York - Valuation of the Empire State Pipeline from Buffalo, New York to Syracuse, New York.
116. Counties of Wayne, Oakland and Macomb and Cities of Detroit, Dearborn, Livonia, Taylor and others in the State of Michigan - Expert witness to detail the flaws in multiplier tables issued by the Michigan State Tax Commission to be used in every taxing jurisdiction in Michigan to determine the taxable value of electric transmission and distribution and natural gas distribution properties. Testimony before the Michigan Tax Tribunal.

(Other Previous Clients in the areas of civil, water, and wastewater engineering; design/build construction consulting; hydroelectric projects; expert testimony in litigation matters; and other miscellaneous engineering assignments will be provided upon request.)

OTHER REPRESENTATIVE ENERGY RELATED PROJECTS:

- A. Transformer interconnection rebuild at Thomas Hodgson and Sons, Suncook, NH
- B. Energy use analysis for plant at Thomas Hodgson and Sons.

- C. Substation design and construction for interconnection with Wolfeboro Municipal Light and Public Service Company of NH
- D. Hydro analysis and court settlement between Franklin Falls Hydro and the State of New Hampshire.
- E. Energy analysis for Days Inns and Sheraton Hotels.
- F. Emergency turbine/generator repairs for Hartford Steam Boiler Company.
- G. Power contract negotiation and project management for Waste Management of North America in their development of methane gas electrical generation facilities.
- H. Valuation of hydroelectric facility for Bank of New Hampshire, N.A.
- I. Development of complete energy feasibility analysis for generation of electricity from landfill gas at the Hunt Road Landfill in Amesbury, MA. Preparation and final competitive bid documents to New England Power Company.

REPRESENTATIVE HYDROELECTRIC PROJECTS:
(Licensing, Engineering and/or Construction)

- A. Tolles Energy Resources (50 KW)
- B. Hoague Sprague Hydroelectric (500 KW)
- C. Pioneer Hydro (1390 KW)
- D. Suncook Leather Board (380 KW)
- E. Diamond Power Corp. (2400 KW)
- F. Suncook Power Corp. (1890 KW)
- G. Woodsville Hydro (370 KW)
- H. Wyandotte Hydro (120 KW)
- I. Somersworth Hydro (1280 KW)
- J. Kelley's Falls Hydro (550 KW)
- K. Hollingsworth & Voss Paper Co. (3400 KW)
- L. Marcal Paper (1100 KW)
- M. Town of Sunapee, NH (555 KW)
- N. Milton Leather Board (600 KW)
- O. Milton Three Ponds (120 KW)
- P. Weare Reservoir (100 KW)
- Q. Walden Power Corp. (2400 KW)
- R. Montgomery Worsted Mills (200 KW)
- S. Shelton Power Co. (3400 KW)
- T. Gonic Sawmill Dams (600 KW)
- U. Cumberland Power Corp. (1200 KW)
- V. Noones Mill Hydro (400 KW)
- W. Tioga Brook Hydro (70 KW)
- X. Newfound Hydro (1400 KW)
- Y. Steels Pond Hydro (600 KW)
- Z. Chase Manufacturing (130 KW)
- AA. China Mills Dam (500 KW)
- AB. Minnewawa Brook (1000 KW)
- AC. Thomas Hodgson and Sons (400 KW)

Exhibit GES-1 **Projection of Future Revenues Required by Pennichuck Water Works**

	Multipliers	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Calculation of Rate Base											
Rate Base requested in DW 04-056		44,627,473									
Capital Additions 2004-2006		44,808,000									
3 year dept on 2003 UPIs		(7,583,991)									
2006 Rate Base		81,851,482									
Prior Year Rate Base			81,851,482	81,924,669	82,008,959	82,208,471	82,526,129	82,965,858	83,531,577	84,227,205	85,056,659
Depreciation on 2003 Assets			(2,527,997)	(2,527,997)	(2,527,997)	(2,527,997)	(2,527,997)	(2,527,997)	(2,527,997)	(2,527,997)	(2,527,997)
Depreciation on 2004-2006 Adds.			(1,209,816)	(1,209,816)	(1,209,816)	(1,209,816)	(1,209,816)	(1,209,816)	(1,209,816)	(1,209,816)	(1,209,816)
Capital Plan Additions			3,811,000	3,925,000	4,043,000	4,164,000	4,289,000	4,418,000	4,551,000	4,688,000	4,829,000
Deprec. On Capital Plan Adds.	2.7%			(802,897)	(803,675)	(808,528)	(811,459)	(814,468)	(817,559)	(820,733)	(823,993)
New Rate Base		81,851,482	81,924,669	82,008,959	82,208,471	82,526,129	82,965,858	83,531,577	84,227,205	85,056,659	86,023,853
Revenue Requirement	8.68%	7,104,709	7,111,061	7,118,378	7,135,695	7,163,268	7,201,436	7,250,541	7,310,921	7,382,918	7,466,870
Calculation of Revenues											
2006 Revenue from DW 04-056		18,301,000									
Current Year Base Water Revenue			27,415,060	27,415,060	27,415,060	30,524,280	30,524,280	30,524,280	32,825,026	32,825,026	32,825,026
Rate Increase		9,114,060	0	0	3,309,220	0	0	2,300,746	0	0	2,896,918
Water Revenue		27,415,060	27,415,060	27,415,060	30,524,280	30,524,280	30,524,280	32,825,026	32,825,026	32,825,026	35,721,944
Jobbing/Other Revenue	3%	1,015,000	1,045,450	1,076,814	1,109,118	1,142,391	1,176,663	1,211,963	1,248,322	1,285,772	1,324,345
Total Water Operating Revenue		28,430,060	28,460,510	28,491,874	31,633,398	31,666,671	31,700,943	34,036,989	34,073,348	34,110,798	37,046,289
Op. & Maint. Expense	6%	8,400,000	8,904,000	9,438,240	10,004,534	10,604,806	11,241,095	11,915,561	12,630,494	13,388,324	14,161,623
Depreciation		2,527,997	3,737,813	3,840,710	3,843,488	3,846,341	3,849,272	3,852,281	3,855,372	3,858,546	3,861,806
Amort. Of CIAC	0%	(350,000)	(350,000)	(350,000)	(350,000)	(350,000)	(350,000)	(350,000)	(350,000)	(350,000)	(350,000)
Amort of Acq. Adjustment	0%	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)
Other Amort. Expense	0%	275,000	275,000	275,000	275,000	275,000	275,000	275,000	275,000	275,000	275,000
Taxes Other than Income	3%	2,000,000	2,060,000	2,121,800	2,185,454	2,251,018	2,318,548	2,388,105	2,459,748	2,533,540	2,609,546
Jobbing Expense & Other Income	3%	335,000	345,050	355,402	366,064	377,045	388,357	400,008	412,008	424,368	437,099
Operating Expense		13,147,997	14,931,863	15,641,152	16,284,540	16,964,211	17,682,272	18,440,954	19,242,621	20,089,778	20,985,074
Net Income before Interest & FIT		15,282,063	13,528,647	12,850,722	15,348,858	14,702,460	14,018,672	15,596,035	14,830,727	14,021,020	16,061,214
Interest Expense	6.5%	2,926,190	2,928,807	2,931,820	2,938,953	2,950,309	2,966,029	2,986,254	3,011,123	3,040,776	3,075,353
Taxable Income		12,355,873	10,599,840	9,918,902	12,409,905	11,752,151	11,052,642	12,609,782	11,819,604	10,980,244	12,985,862
Income Taxes	42.5%	5,251,246	4,504,932	4,215,533	5,274,210	4,994,664	4,697,373	5,359,157	5,023,332	4,666,604	5,518,991
Net Income		7,104,627	6,094,908	5,703,369	7,135,695	6,757,487	6,355,269	7,250,624	6,796,272	6,313,640	7,466,870
Return on Rate Base		8.68%	7.44%	6.95%	8.68%	8.19%	7.66%	8.68%	8.07%	7.42%	8.68%
Required Rate Increase		49.80%			11.34%			7.5%			8.8%
Total from rate increases 2006-2015		125,005,042									

Exhibit GES-2 **Projection of Future Revenues Required by Pennichuck East Utility**

	Multipliers	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Calculation of Rate Base											
2003 Rate Base		10,304,567									
Capital Additions 2004-2006		3,900,000									
3 year depr on 2003 UPIS		(1,561,701)									
2006 Rate Base		12,642,866									
Prior Year Rate Base			12,642,866	13,387,199	14,145,498	14,944,386	15,785,080	16,668,835	17,596,943	18,570,734	19,591,579
Depreciation on 2003 Assets			(520,567)	(520,567)	(520,567)	(520,567)	(520,567)	(520,567)	(520,567)	(520,567)	(520,567)
Depreciation on 2004-2006 Adds.											
Capital Plan Additions	3%		1,339,000	1,379,170	1,420,545	1,463,161	1,507,056	1,552,268	1,598,836	1,646,801	1,696,205
Deprec. On Capital Plan Adds.	1.9%			(26,204)	(26,990)	(27,800)	(28,634)	(29,493)	(30,378)	(31,289)	(32,228)
New Rate Base		12,642,866	13,387,199	14,145,498	14,944,386	15,785,080	16,668,835	17,596,943	18,570,734	19,591,579	20,660,889
Revenue Requirement	8.68%	1,097,401	1,162,009	1,227,829	1,297,173	1,370,145	1,446,855	1,527,415	1,611,940	1,700,549	1,793,365
Calculation of Revenues											
Current Year Base Water Revenue		3,009,000	4,970,095	4,970,095	4,970,095	5,908,218	5,908,218	5,908,218	6,888,669	6,888,669	6,888,669
Rate Increase		1,961,095	0	0	938,124	0	0	980,451	0	0	1,146,909
Water Revenue		4,970,095	4,970,095	4,970,095	5,908,218	5,908,218	5,908,218	6,888,669	6,888,669	6,888,669	8,035,579
Jobbing/Other Revenue	3%	62,000	63,860	65,776	67,749	69,782	71,875	74,031	76,252	78,540	80,896
Total Water Operating Revenue		5,032,095	5,033,955	5,035,870	5,975,967	5,978,000	5,980,093	6,962,700	6,964,921	6,967,209	8,116,475
Op. & Maint. Expense	6%	2,000,000	2,120,000	2,247,200	2,382,032	2,524,954	2,676,451	2,837,038	3,007,261	3,187,696	3,378,958
Depreciation		520,567	594,667	620,871	621,657	622,467	623,301	624,160	625,045	625,956	626,895
Amort. Of CIAC	0%	(89,000)	(89,000)	(89,000)	(89,000)	(89,000)	(89,000)	(89,000)	(89,000)	(89,000)	(89,000)
Amort of Acq. Adjustment	0%	(85,000)	(185,000)	(185,000)	(185,000)	(185,000)	(185,000)	(185,000)	(185,000)	(185,000)	(185,000)
Other Amort. Expense	0%	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
Taxes Other than Income	3%	332,000	341,960	352,219	362,785	373,669	384,879	396,425	408,318	420,568	433,185
Jobbing Expense & Other Income	3%	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914
Operating Expense		2,671,567	2,875,717	3,039,473	3,185,753	3,340,466	3,504,109	3,677,206	3,860,313	4,054,020	4,258,952
Net Income before Interest & FIT		2,360,528	2,158,238	1,996,398	2,790,214	2,637,533	2,475,984	3,285,495	3,104,608	2,913,189	3,857,523
Interest Expense	6.5%	451,982	478,592	505,702	534,262	564,317	595,911	629,091	663,904	700,399	738,627
Taxable Income		1,908,545	1,679,645	1,490,696	2,255,952	2,073,217	1,880,073	2,656,404	2,440,705	2,212,790	3,118,896
Income Taxes	42.5%	811,132	713,849	633,546	958,780	881,117	799,031	1,128,972	1,037,299	940,436	1,325,531
Net Income		1,097,413	965,796	857,150	1,297,173	1,192,100	1,081,042	1,527,432	1,403,405	1,272,354	1,793,365
Return on Rate Base		8.68%	7.21%	6.06%	8.68%	7.55%	6.49%	8.68%	7.56%	6.49%	8.68%
Required Rate Increase		65.17%			18.88%			16.6%			16.6%
Total from rate increases 2006-2015		31,246,524									

Exhibit GES-3 **Projection of Future Revenues Required by Pittsfield Aqueduct Company**

	Multipliers	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Calculation of Rate Base											
2003 Rate Base		1,657,664									
Capital Additions 2004-2006		240,000									
3 year depr on 2003 UPIS		(15,840)									
2006 Rate Base		1,881,824									
Prior Year Rate Base		1,881,824	1,883,687	1,886,292	1,886,292	1,891,699	1,899,995	1,912,264	1,925,596	1,943,084	1,963,821
Depreciation on 2003 Assets		(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)
Depreciation on 2004-2006 Add.		(15,837)	(15,837)	(15,837)	(15,837)	(15,837)	(15,837)	(15,837)	(15,837)	(15,837)	(15,837)
Capital Plan Additions	3%	92,700	95,481	98,345	98,345	101,296	104,335	107,465	110,689	114,009	117,430
Deprac. On Capital Plan Add.	2.2%		(2,039)	(2,101)	(2,164)	(2,229)	(2,295)	(2,364)	(2,435)	(2,508)	(2,588)
New Rate Base		1,881,824	1,883,687	1,886,292	1,891,699	1,899,995	1,912,264	1,925,596	1,943,084	1,963,821	1,987,905
Revenue Requirement	8.68%	163,342	163,504	163,730	164,200	164,920	165,898	167,142	168,660	170,460	172,550
Calculation of Revenues											
2006 Revenue from DW 04-056											
Current Year Base Water Revenue		442,000	698,852	698,852	698,852	698,852	740,761	740,761	740,761	740,761	792,926
Rate Increase		256,852	0	0	0	41,909	0	0	0	52,165	0
Water Revenue		698,852	698,852	698,852	698,852	740,761	740,761	740,761	740,761	792,926	792,926
Jobbing/Other Revenue	3%	40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191
Total Water Operating Revenue		738,852	740,052	741,288	742,561	785,781	787,132	788,523	789,956	843,597	845,117
Op. & Maint. Expense	3%	226,000	232,780	239,763	246,956	254,365	261,996	269,856	277,951	286,290	294,879
Depreciation		90,000	90,837	92,876	92,938	93,001	93,066	93,132	93,201	93,272	93,345
Amort. Of CIAC	0%	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)
Amort of Acq. Adjustment	0%	0	0	0	0	0	0	0	0	0	0
Other Amort. Expense	0%	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
Taxes Other than Income	3%	97,000	99,910	102,907	105,995	109,174	112,450	115,823	119,298	122,877	126,563
Jobbing Expense & Other Income	3%	0	0	0	0	0	0	0	0	0	0
Operating Expense		387,500	398,027	410,047	420,388	431,040	442,011	453,311	464,950	476,939	489,287
Net Income before Interest & FIT		351,352	342,025	331,241	322,173	354,741	345,121	335,212	325,005	366,658	355,830
Interest Expense	6.5%	67,275	67,342	67,435	67,628	67,925	68,328	68,840	69,465	70,207	71,068
Taxable Income		284,077	274,683	263,806	254,545	286,817	276,793	266,372	255,540	296,452	284,763
Income Taxes	42.5%	120,733	116,740	112,118	108,181	121,897	117,637	113,208	108,605	125,992	121,024
Net Income		163,344	157,943	151,688	146,363	164,920	159,156	153,164	146,936	170,460	163,738
Return on Rate Base		8.68%	8.38%	8.04%	7.74%	8.68%	8.33%	7.95%	7.56%	8.68%	8.24%
Required Rate Increase		58.11%				6.0%				7.0%	
Total from rate increases 2006-2015		2,924,305									

Exhibit GES-4

Trended Revenues and Expenses of Pennichuck Water Works

Acct #	Name	1	2	3	4	5	8	2006 Proforma Estimate	Annual Growth Rate
		1999	2000	2001	2002	2003	Trend to 2006		
	Water Operating Revenue								
461	Metered Sales	10,731,638	10,277,926	11,266,414	12,431,345	12,361,390	DW 04-056 Increase	12,400,000	
462	Fire Protection	2,128,067	2,170,685	2,244,120	2,275,725	2,308,687	2,458,597	2,400,000	2%
463	Sales for Resale	24,090	36	41,109	25,209	16,893	26,857	26,000	-7%
	Sales of Water	12,883,795	12,448,647	13,551,643	14,732,279	14,686,970	16,605,658	14,886,000	3%
471	Misc. Service Revenues	273,598	319,071	162,470	183,342	186,634	70,195	190,000	-7%
473	Unbilled Water	(68,019)	25,045	205,072	106,915	133,221	322,622	150,000	-214%
474	Other Water Revenues				70,698	72,269	76,982	75,000	1%
400	Total Water Operating Rev.	13,089,374	12,792,763	13,919,185	15,093,234	15,079,094	17,075,456	15,301,000	3%
401	Op. & Maint. Expense	5,606,261	5,917,251	6,324,243	6,324,437	7,490,402	8,420,253	8,400,000	6%
403	Depreciation	1,870,546	2,042,245	2,197,590	2,379,827	2,527,997	3,029,883	3,000,000	6%
405	Amortization of CIAC	(162,227)	(192,563)	(215,450)	(241,646)	(271,127)	(350,044)	(350,000)	11%
406	Amort. Of Acquisition Adj.	(11,052)	(15,708)	(38,808)	(24,949)	(24,949)	(41,611)	(40,000)	18%
407	Other Amort. Expense	82,692	92,709	124,553	177,267	213,763	311,547	275,000	21%
408	Taxes Other Than Income	1,626,831	1,733,340	1,712,601	1,675,829	1,890,773	1,963,061	2,000,000	3%
409	Income Taxes	1,005,312	713,800	954,413	1,333,303	695,890	940,873	1,000,000	-7%
	Total Operating Expense	10,018,363	10,291,074	11,059,142	11,624,068	12,522,749	14,273,962	14,285,000	5%
	Net Utility Operating Income	3,071,011	2,501,689	2,860,043	3,469,166	2,556,345	2,801,494	1,016,000	-4%
	Other Income/Deductions								
415	Jobbing Income	395,772	465,247	382,328	484,186	532,702	598,447	600,000	6%
416	Cost of Jobbing	(181,648)	(212,262)	(199,389)	(210,904)	(328,212)	(372,368)	(340,000)	13%
419	Interest & Dividend Income	258	651	2,100	163	38	178	300	-32%
421	Nonutility Income	0	2,851	77,520	48,096	54,933	114,236	115,000	
426	Misc. Nonutility Expense	(2,636)	(2,281)	(14,360)	(39,265)	(10,733)	(40,444)	(40,000)	32%
	Total Other Income	211,746	254,206	248,199	282,276	248,728	300,048	335,300	3%
	Interest Expense								
427	Interest Expense	1,613,389	1,536,942	1,538,259	1,580,439	1,605,391	1,588,635	1,585,000	0%
428	Amort. Of Debt Discount & Exp.	31,227	31,439	31,468	32,227	31,876	32,690	32,000	0%
	Total Interest Expense	1,644,616	1,568,381	1,569,727	1,612,666	1,637,267	1,621,325	1,617,000	0%
	Net Income	1,638,141	1,187,514	1,538,515	2,138,776	1,167,806	1,480,217	(265,700)	-7%
	Sources: Annual Reports to NH Public Utilities Commission. New rates effective for 1999.								
	Water Sold (Mg)	4,904.7	4,646.3	4,974.4	4,841.7	4,618.3	4,608.4	4,600.0	-1%
	(Ccf)	6,556,574	6,211,119	6,649,767	6,472,359	6,173,701	6,160,451	6,149,280	
	Customers	23,456	23,134	23,634	24,671	24,494	25,684	25,600	1%

Exhibit GES-5 **Trended Revenues and Expenses of Pennichuck East Utility**

Acct #	Name	Ref Sch.	1 1998 (9 months)	2 1999	3 2000	4 2001	5 2002	6 2003	8 Trend to 2006	2006 Proforma Estimate	Annual Change
Water Operating Revenue											
461	Metered Sales	F-47	1,621,574	2,361,100	2,253,177	2,627,210	2,741,253	2,706,507	3,009,405	3,009,000	3%
462	Fire Protection	F-47	156,482	212,622	214,293	227,732	245,036	260,423	282,559	283,000	4%
463	Sales for Resale	F-47									
	Sales of Water		1,778,056	2,573,722	2,467,470	2,854,942	2,986,289	2,966,930	3,291,965	3,292,000	3%
471	Misc. Service Revenues	F-47	2,256	23,470	21,960	28,237	29,460	32,395	37,244	37,000	7%
474	Unbilled Water	F-47	150,000	8,000	(5,000)	11,937	81,830	(20,136)	27,549	25,000	
400	Total Water Operating Rev.		1,930,312	2,605,192	2,484,430	2,895,116	3,097,579	2,979,189	3,356,758	3,354,000	3%
401	Op. & Maint. Expense	F-48	868,304	1,174,809	1,256,192	1,394,348	1,564,662	1,716,654	1,978,197	2,000,000	8%
403	Depreciation	F-12	279,307	380,306	392,058	435,154	470,474	520,526	583,246	585,000	6%
405	Amortization of CIAC	F-46.4	(734)	(2,490)	(14,765)	(33,709)	(46,693)	(58,220)	(88,531)	(89,000)	88%
406	Amort. Of Acquisition Adj.	F-49	(150,852)	(203,414)	(198,757)	(198,756)	(195,996)	(191,412)	(186,961)	(185,000)	-1%
407	Other Amort. Expense	F-49	1,176	9,408	16,899	22,764	63,114	60,004	93,401	90,000	45%
408	Taxes Other Than Income	F-50	273,579	328,272	301,988	354,707	335,342	316,742	331,528	332,000	-1%
409	Income Taxes	F-50	173,425	253,282	184,561	254,066	249,226	102,628	114,095	114,000	-17%
	Total Operating Expense		1,444,205	1,940,173	1,938,176	2,228,574	2,440,129	2,466,922	2,824,975	2,847,000	5%
	Net Utility Operating Income		486,107	665,019	546,254	666,542	657,450	512,267	531,783	507,000	-5%
Other Income/Deductions											
415	Jobbing Income	F-53									
416	Cost of Jobbing	F-53		(89)	(19)	(9)					
419	Interest & Dividend Income	F-54	1,651	3,594	4,673	2,975				3,000	
426	Misc. Nonutility Expense	F-54						4,261			
	Total Other Income		1,651	3,505	4,654	2,966	0	4,261	0	3,000	4%
Interest Expense											
427	Interest Expense	F-35	213,275	268,464	257,077	273,623	269,505	321,527	325,461	325,000	4%
428	Amort. Of Debt Discount & Exp.	F-25	6,399	8,532	8,532	8,532	7,968	8,532	8,194	8,200	0%
			219,674	276,996	265,609	282,155	277,473	330,059	333,654	333,200	4%
	Net Income		268,084	391,528	285,299	387,353	379,977	186,469	198,129	176,800	-14%
Sources: Annual Reports to NH Public Utilities Commission											
	Water Sold (Mg)			332.7	387.3	357.7	373.5	371.1	389.6	390.0	2%
	(Ccf)			444,765.4	517,727.9	478,106.5	499,330.9	496,023.7	520,838.7	521,352	
	Customers			3,915	4,006	4,140	4,314	4,456	4,722	4,725	3%

Exhibit GES-6 **Trended Revenues and Expenses of Pittsfield Aqueduct Company**

Acct #	Name	2	3	4	5	8	2006 Proforma Estimate	Annual Change
	Water Operating Revenue							
461	Metered Sales	290,939	290,950	287,302	285,614	279,871	280,000	-0.4%
462	Fire Protection	118,712	120,367	120,254	120,468	122,270	122,000	0%
463	Sales for Resale							
	Sales of Water	409,651	411,317	407,556	406,082	402,141	402,000	0%
471	Misc. Service Revenues	25,818	3,212	4,975	4,683	(18,067)	5,000	-29%
474	Unbilled Water	(2,000)	0	(24,606)	36,157	42,827	35,000	-278%
400	Total Water Operating Rev.	433,469	414,529	387,925	446,922	426,901	442,000	1%
	Other Income/Deductions							
401	Op. & Maint. Expense	155,829	202,398	167,647	200,262	225,881	226,000	5%
403	Depreciation	58,279	64,835	71,026	74,570	91,956	90,000	5%
405	Amortization of CIAC	(15,867)	(20,898)	(25,929)	(25,929)	(38,003)	(38,000)	10%
406	Amort. Of Acquisition Adj.							
407	Other Amort. Expense	19,899	13,567	13,283	17,309	12,390	12,500	-3%
408	Taxes Other Than Income	65,300	69,638	77,611	80,200	96,890	97,000	4%
409	Income Taxes	30,795	9,049	11,057	15,532	(3,093)	15,000	-13%
	Total Operating Expense	314,235	338,589	314,695	361,944	386,021	402,500	3%
	Net Utility Operating Income	119,234	75,940	73,230	84,978	40,880	39,500	-7%
	Interest Expense							
415	Jobbing Income							
416	Cost of Jobbing	(89)						
419	Interest & Dividend Income							
421	Nonutility Income							
426	Misc. Nonutility Expense							
	Total Other Income	(89)	0			445	0	
	Net Income							
427	Interest Expense	70,615	61,218	55,449	60,371	45,488	50,000	-3%
428	Amort. Of Debt Discount & Exp.	927	926	926	927	927	1,000	0%
	Total Interest Expense	71,542	62,144	56,375	61,298	46,414	51,000	
	Net Income	47,603	13,796	16,855	23,680	(5,089)	(11,500)	
	Sources: Annual Reports to NH Public Utilities Commission. New rates effective 2000							
	Water Sold (Mg)	57.4	57.3	56.0	55.4	53.2	54.0	-1%
	(Ccf)	76,773.8	76,592.0	74,830.1	74,090.8	71,156.8	72,187	
	Customers	613	626	639	642	675	670	1%

Exhibit GES-7 **Consolidated Financial Plan for Acquired Pennichuck Utility Assets**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Revenues										
Metered Sales	20,766,338	21,429,870	22,116,662	22,851,909	23,587,930	24,349,994	25,139,109	25,989,757	26,836,162	27,712,898
Fire Protection	3,257,251	3,408,993	3,568,150	3,745,675	3,920,768	4,104,417	4,297,042	4,513,649	4,725,561	4,947,830
Sales for Resale	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000
Jobbing/Other	1,117,000	1,169,452	1,200,818	1,233,124	1,266,399	1,300,673	1,335,975	1,372,336	1,409,788	1,448,363
Total Revenue	25,166,589	26,034,315	26,911,630	27,856,708	28,801,097	29,781,085	30,798,126	31,901,742	32,997,511	34,135,091
Expenses										
Operation & Maint.	8,946,000	9,515,980	10,123,155	10,770,008	11,459,189	12,193,529	12,976,054	13,809,997	14,698,812	15,646,190
Debt Service	8,301,437	8,301,437	8,301,437	8,301,437	8,301,437	8,301,437	8,301,437	8,301,437	8,301,437	8,301,437
PILOT	2,429,000	2,501,870	2,576,926	2,654,234	2,733,862	2,815,878	2,900,353	2,987,364	3,076,985	3,169,294
Jobbing Expense	340,000	353,600	367,744	382,454	397,752	413,662	430,208	447,416	465,313	483,926
Capital Repairs	5,090,000	5,242,700	5,399,651	5,561,890	5,728,456	5,900,390	6,077,732	6,260,524	6,448,810	6,642,634
Total Expense	25,106,437	25,915,587	26,768,913	27,670,023	28,620,696	29,624,896	30,685,784	31,806,738	32,991,357	34,243,481
Net Income	60,152	118,728	142,717	186,685	180,401	156,189	112,342	95,004	6,154	(108,390)
Cumulative Income	60,152	178,879	321,596	508,281	688,682	844,871	957,213	1,052,217	1,058,371	949,981
Debt Service Calculations										
	Acquisition Debt Service A llocation									
Bond	87,000,000	30,000,000		PW W		85%				
Rate	5.0%	5.0%		PEU		13%				
Length	25	25		PAC		2%				
Annual Payment	6,172,864	2,128,574				100%				

Exhibit GES-8 **Financial Plan for Acquired Pennichuck Water Works Assets**

	Inflation /Escal.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Revenues											
Beginning Metered Sales		14,800,000	16,428,000	16,887,984	17,360,848	17,846,951	18,346,666	18,860,373	19,388,463	19,931,340	20,489,417
Rate Increase		1,628,000	459,984	472,864	486,104	499,715	513,707	528,090	542,877	558,078	573,704
Metered Sales		16,428,000	16,887,984	17,360,848	17,846,951	18,346,666	18,860,373	19,388,463	19,931,340	20,489,417	21,063,121
Beginning Fire Protection		2,460,000	2,730,600	2,863,198	3,002,235	3,148,023	3,300,891	3,461,183	3,629,258	3,805,494	3,990,289
Rate Increase + Growth	2%	270,600	132,598	139,037	145,789	152,868	160,291	168,075	176,237	184,795	193,768
Fire Protection		2,730,600	2,863,198	3,002,235	3,148,023	3,300,891	3,461,183	3,629,258	3,805,494	3,990,289	4,184,058
Sales for Resale		26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000
Other Income	3%	1,015,000	1,045,450	1,076,814	1,109,118	1,142,391	1,176,663	1,211,963	1,248,322	1,285,772	1,324,345
Total Revenue		20,199,600	20,822,632	21,465,896	22,130,093	22,815,949	23,524,218	24,255,684	25,011,156	25,791,478	26,597,524
Expenses											
Operation & Maint.	6%	6,720,000	7,123,200	7,550,592	8,003,628	8,483,846	8,992,877	9,532,450	10,104,397	10,710,661	11,353,301
Debt Service											
Acquisition											
Tank & Plant Upgrades		5,246,934	5,246,934	5,246,934	5,246,934	5,246,934	5,246,934	5,246,934	5,246,934	5,246,934	5,246,934
		2,128,574	2,128,574	2,128,574	2,128,574	2,128,574	2,128,574	2,128,574	2,128,574	2,128,574	2,128,574
PILOT	3%	2,000,000	2,060,000	2,121,800	2,185,454	2,251,018	2,318,549	2,388,105	2,459,748	2,533,540	2,609,546
Jobbing Expense	4%	340,000	353,600	367,744	382,454	397,752	413,662	430,208	447,416	465,313	483,926
Capital Repairs		3,700,000	3,811,000	3,925,000	4,043,000	4,164,000	4,289,000	4,418,000	4,551,000	4,688,000	4,829,000
Total Expense		20,135,508	20,723,308	21,340,644	21,990,044	22,672,124	23,389,596	24,144,271	24,938,069	25,773,022	26,651,281
Net Income		64,092	99,324	125,252	140,049	143,825	134,622	111,413	73,087	18,456	(53,757)
Cumulative Income		64,092	163,416	288,668	428,716	572,541	707,163	818,576	891,664	910,120	856,363
Rate Increase		11.0%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
Base Trended Historic O&M		8,400,000									
Less: non-municipal expenses		20%									
Contracted O&M		6,720,000									
Rate Increases 2006-2015		48,118,392									

Exhibit GES-9 **Financial Plan for Acquired Pennichuck East Utility Assets**

	Inflation/Es cal.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Revenues											
Beginning Metered Sales		3,009,000	3,991,138	4,194,686	4,408,615	4,633,454	4,869,760	5,118,118	5,379,142	5,653,478	5,941,805
Rate Increase + Growth	2%	982,138	203,548	213,929	224,839	236,306	248,358	261,024	274,336	288,327	303,032
Metered Sales		3,991,138	4,194,686	4,408,615	4,633,454	4,869,760	5,118,118	5,379,142	5,653,478	5,941,805	6,244,838
Beginning Fire Protection		283,000	375,371	394,515	414,635	435,782	458,007	481,365	505,915	531,716	558,834
Rate Increase + Growth	2%	92,371	19,144	20,120	21,146	22,225	23,358	24,550	25,802	27,118	28,501
Fire Protection		375,371	394,515	414,635	435,782	458,007	481,365	505,915	531,716	558,834	587,334
Sales for Resale											
Other Income	3%	62,000	62,001	62,002	62,003	62,004	62,005	62,006	62,007	62,008	62,009
Total Revenue		4,428,509	4,651,202	4,885,252	5,131,239	5,389,771	5,661,488	5,947,062	6,247,201	6,562,647	6,894,181
Expenses											
Operation & Maint.	8%	2,000,000	2,160,000	2,332,800	2,519,424	2,720,978	2,938,656	3,173,748	3,427,648	3,701,860	3,998,009
Acquisition Debt Service		802,472	802,472	802,472	802,472	802,472	802,472	802,472	802,472	802,472	802,472
PILOT	3%	332,000	341,960	352,219	362,786	373,670	384,880	396,426	408,319	420,569	433,186
Jobbing Expense											
Capital Repairs	3%	1,300,000	1,339,000	1,379,170	1,420,545	1,463,161	1,507,056	1,552,268	1,598,836	1,646,801	1,696,205
Total Expense		4,434,472	4,643,432	4,866,661	5,105,227	5,360,281	5,633,064	5,924,914	6,237,275	6,571,702	6,929,872
Net Income		(5,963)	7,770	18,591	26,012	29,490	28,424	22,148	9,926	(9,055)	(35,691)
Cumulative Income		(5,963)	1,807	20,398	46,409	75,899	104,323	126,471	136,398	127,343	91,652
Rate Increase		32.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Base Trended Historic O&M		2,000,000									
Less: non-municipal expenses		20%									
Contracted O&M		1,600,000									
Rate Increases 2006-2015		22,258,507									

Exhibit GES-10 **Financial Plan for Acquired Pittsfield Aqueduct Company Assets**

	Inflation/Exc al.	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Revenues											
Beginning Metered Sales		280,000	347,200	347,200	347,200	371,504	371,504	371,504	371,504	404,939	404,939
Rate Increase + Growth	0%	67,200	0	0	24,304	0	0	0	33,435	0	0
Metered Sales		347,200	347,200	347,200	371,504	371,504	371,504	371,504	404,939	404,939	404,939
Beginning Fire Protection		122,000	151,280	151,280	151,280	161,870	161,870	161,870	161,870	176,438	176,438
Rate Increase + Growth	0%	29,280	0	0	10,590	0	0	0	14,568	0	0
Fire Protection		151,280	151,280	151,280	161,870	161,870	161,870	161,870	176,438	176,438	176,438
Sales for Resale											
Other Income	0%	40,000	62,001	62,002	62,003	62,004	62,005	62,006	62,007	62,008	62,009
Total Revenue		538,480	560,481	560,482	595,377	595,378	595,379	595,380	643,384	643,385	643,386
Expenses											
Operation & Maint.	3%	226,000	232,780	239,763	246,956	254,365	261,996	269,856	277,952	286,291	294,880
Acquisition Debt Service		123,457	123,457	123,457	123,457	123,457	123,457	123,457	123,457	123,457	123,457
PLOIT	3%	97,000	99,910	102,907	105,994	109,174	112,449	115,822	119,297	122,876	126,562
Jobbing Expense		0	0	0	0	0	0	0	0	0	0
Capital Repairs	3%	90,000	92,700	95,481	98,345	101,295	104,334	107,464	110,688	114,009	117,429
Total Expense		536,457	548,847	561,608	574,752	588,291	602,236	616,599	631,394	646,633	662,328
Net Income		2,023	11,634	(1,126)	20,625	7,087	(6,857)	(21,219)	11,990	(3,248)	(18,942)
Cumulative Income		2,023	13,657	12,531	33,156	40,242	33,385	12,165	24,156	20,908	1,966
Rate Increase		24%			7%				9%		
Base Trended Historic O&M		200,000									
Less: non-municipal expenses		10%									
Contracted O&M		180,000									
Rate Increases 2006-2015		1,353,066									

Exhibit GES-11
Capital Investment Plan for Pennichuck Water Works Assets
2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Pennichuck Water Works										
PWW's DW 04-056 Grand Total	18,768,000	8,108,000								
Deductions										
Debt Financed										
WTP	(14,000,000)									
UV Light Disinfection		(1,000,000)								
Fifield Tank #2		(2,050,000)								
Defer/Eliminate										
Data Processing	(750,000)	(750,000)								
Vulnerability Update	(200,000)									
IX Revenue Investment	(80,000)	(80,000)								
Subtotal Deductions	(15,030,000)	(3,880,000)								
Balance from Current Revenue	3,738,000	4,228,000								
PWW depreciation on original cost excluding WTP Upgrade										
			3,700,000	3,811,000	3,925,000	4,043,000	4,164,000	4,289,000	4,418,000	4,551,000
Inflation										
Nashua Capital Repairs for PWW	3,700,000	3,811,000	3,925,000	4,043,000	4,164,000	4,289,000	4,418,000	4,551,000	4,688,000	4,829,000

Exhibit GES-12

	Pennichuck Water Works				Pennichuck East Utilities				Pittsfield Aqueduct			
Year	F-8 Additions	Less: CIAC Additions	Less: Other	Net Capital Invest.	F-8 Additions	Less: CIAC Additions	Less: Other	Net Capital Invest.	F-8 Additions	Less: CIAC Additions	Less: Other	Net Capital Invest.
2003	5,437,939	1,343,459		4,094,480	3,339,738	697,925	917,257	1,724,556	82,216			5,901,252
2002	6,464,691	2,414,465		4,050,226	1,746,216	869,590		876,626	82,216			4,926,852
2001	5,672,950	826,072		4,846,878	2,086,458	844,660		1,241,798	554,487	507,962		6,135,201
2000	5,874,006	2,190,656	827,572	2,855,778	2,746,901	1,565,132		1,181,769	78,609			4,116,156
1999	6,270,146	1,743,747		4,526,399	571,785	199,891		371,894	98,714			4,997,007
1998	4,065,060	606,638		3,458,422	272,408	59,170		213,238	258,423	10,381	75,551	3,844,151
1997	5,195,776	101,666		5,094,110				0	11,251			5,094,110
1996	3,517,547	538,542		2,979,005				0	59,755			2,990,256
1995	2,045,174	1,373,377		671,797				0				731,552
	1995-2003 Average			3,619,677	2000-2003 Average			1,256,187	1998-2003 Average			Total of Averages
						PWW 1999 Additions	PWW 1998 Additions	PWW 1997 Additions				4,955,624
	PWW Core	5,874,006	4,024,938	5,011,739	3,110,943	1,746,379						
	Rich	2,617	225	11,475	13,507	807						
	Hill	35,754	6,187	22,556	17,781	928						
	Twin Ridge	52,557	169	5,113	11,966	5,283						
	Drew/Bliss/Hubbard	273,376	19,207	72,053	137,098	29,184						
	Glenn Ridge	5,964	6,429	15,601	12,492	1,323						
	Ashley	16,276	1,937	26,625	10,490	438						
	Bedford	3,969	2,340	5,438	176,257	3,287						
	Greatbrook	218		6,750		105,250						
	Maple Haven	2,042	3,628	13,841	14,396	4,581						
	Glennwoodlands	3,367		4,585	12,617	147,714						
		6,270,146	4,065,060	5,195,776	3,517,547	2,045,174						

Notes:

- Additions to utility plant from F-8 pages of annual report to NH PUC
- CIAC additions from F-1 (Balance Sheet) and F-46 pages
- 2000 PWW "Other" is a transfer of assets from PEU
- PAC CIAC of \$17,795 and \$371,967 were for NH DES grants toward Water Treatment Plant
- 1998 PAC "Other" are franchise and organizational fees.
- We don't have the 1997 PAC Annual Report. Pennichuck reported ownership for 1998
- 2003 PEU "Other" is Litchfield storage tank & booster station