

Appendix
Summary of Qualifications
for
Steven L. Estomin

STEVEN L. ESTOMIN

Dr. Estomin is a principal in Exeter Associates, Inc. He is a senior economist whose academic training and professional experience are in the areas of microeconomic applications, industry analysis, econometric modeling and environmental economics. At Exeter, Dr. Estomin specializes in power supply procurement, utility load forecasting, regulatory policy, options analysis, utility contract negotiation, and issues of competition, antitrust, and damage estimation.

Dr. Estomin has testified on issues related to load forecasting, statistical analysis, economic damage analysis, class cost-of-service, rate design, power supply procurement, and default electric service. He has prepared numerous electric load forecasts and has directed projects for state and federal regulatory agencies. Dr. Estomin has prepared reports on load forecasting, energy conservation, alternative power supply procurement, bulk power supply planning, and damage estimations for federal and state agencies and for private firms. He has also provided technical support to federal agencies in utility contract negotiations and in the development of requests for proposals for competitive power supply procurement.

Education:

B.A. (Economics) - University of Maryland, 1975.

M.A. (Economics) - University of Maryland, 1978.

Ph.D. (Economics) - University of Maryland, 1986.

Previous Employment:

1980-1981 - Faculty Researcher, Bureau of Business and Economic Research, University of Maryland, College Park, Maryland.

1976-1980 - Research/Teaching Assistant, and Instructor, University of Maryland, Department of Economics, College Park, Maryland.

1976-1978 - Economist, U.S. Department of Labor, Bureau of International Labor Affairs, Office of Trade Adjustment Assistance, Washington, D.C.

Professional Work:

At the Bureau of Business and Economic Research, Dr. Estomin supervised the development of an environmental pollution forecasting model which he linked to a county level regional economic model. This task included developing submodels for industrial/commercial activity, municipal wastes generation, and transportation and energy-related emissions. Several reports and estimations using the model were provided to the Bureau of Land Management (U.S. Department of the Interior) and were used to develop analyses of future development of the outer-continental shelf.

As a Graduate Teaching Assistant for the Department of Economics at the University of Maryland, Dr. Estomin was initially engaged in aiding senior faculty members in a variety of teaching-related tasks and later autonomously taught micro and macroeconomic theory courses. As an Instructor for the University, he taught upper-level courses in the economics of poverty and discrimination and the economics of American industry. As a Graduate Research Assistant, Dr. Estomin conducted extensive research in pollution abatement cost modeling.

At the U.S. Department of Labor, Dr. Estomin collected firm-specific data covering sales, inventory, employment, and production and used these data together with industry production, employment, and import data to analyze causes of employment reductions. Companies analyzed by Dr. Estomin include American Motors Corporation, Bethlehem Steel, and numerous smaller firms.

Major Publications and Reports:

“Long-Term Electricity Report for Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, December 2011 (with Sari Fink, Christina Mudd, and Michael Buckley of Exeter Associates, Inc.)

“Maryland Power Plants and the Environment: A Review of the Impacts of Power Plants and Transmission Lines on Maryland’s Natural Resources, Maryland Power Plant Research Program, PPRP-CEIR-15,” January 2010 (with Christina Mudd, Sari Fink, and Jennifer Rogers of Exeter Associates, Inc. and contributing authors from Versar, Inc. and Environmental Resources Management).

“Guidance for the Development of Renewable Energy Projects at Air Education and Training Command Bases,” prepared for the U.S. Air Force, Air Force Civil Engineer Support Center (Tyndall AFB, Florida) and the Air Education and Training Command (Randolph AFB, Texas), January 2010 (with Christina Mudd and Sari Fink).

“2009 Inventory of Renewable Energy Generators Eligible for the Maryland Renewable Energy Portfolio Standard,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, January 2010 (with Christina Mudd and Sari Fink of Exeter Associates, Inc. and contributing authors from BCS, Inc.)

- “Maryland Power Plants and the Environment: A Review of the Impacts of Power Plants and Transmission Lines on Maryland’s Natural Resources, Maryland Power Plant Research Program, PPRP-CEIR-14,” January 2008 (with Christina Mudd and Sari Fink of Exeter Associates, Inc. and contributing authors from Versar, Inc. and Environmental Resources Management).
- “Forecasted Electric Energy Consumption and Peak Demands in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, November 2006 (with David Chen and Michael P. Lee).
- “Maryland’s Options to Reduce and Stabilize Electric Power Prices Following Restructuring,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration, September 2006 (with Matthew I. Kahal).
- “The Potential for Biomass Co-Firing in Maryland,” prepared for the Maryland Department of Natural Resources, Power Plant Research Program, March 2006 (with Christina Mudd and Michael Lee).
- “Wind Power Options Assessment,” prepared for the Maryland Department of Natural Resources, Power Plant Research Program and the Maryland Energy Administration, January 2006 (with Matthew I. Kahal and Christina Mudd).
- “Electric Power Supply Options for Holloman Air Force Base, New Mexico,” prepared for the U.S. Air Force, Air Force Civil Engineer Support Agency, September 2005.
- “Forecast of Electric Energy Consumption and Peak Demands in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, May 2005.
- “Economic Analysis of a Power Plant Fueled by Poultry Litter to be Located on Maryland’s Eastern Shore,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, May 2005.
- “Yucca Mountain Project – Evaluating Alternative Electric Power Service Options,” prepared for the U.S. Department of Energy, Federal Energy Management Program, August 2004.
- “Short-term Steam Supply options for the Savannah River Site,” prepared for the U.S. Department of Energy, Federal Energy Management Program, June 2004.
- “Assessment of Economic Damages,” prepared for Supra Telecommunications and Information Systems, Inc., CPR Institute for Arbitral Tribunal, Supra Telecommunications and Information Systems v. BellSouth Telecommunications, Arbitration V, October 2003 (with Marvin H. Kahn).
- “Costs and Benefits for Overhead/Underground Utilities,” prepared for the Maryland State Highway Administration, October 2003 (with William H. Albeck).

“Economic Assessment of Damages,” prepared for Supra Telecommunications and Information Systems, Inc., U.S. District Court, Southern District of Florida, Case No. 99-1706, March 2003 (with Marvin H. Kahn).

“Forecasted Electric Energy Consumption and Peak Demand in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, October 2002.

“The Technical Potential for Electric Energy Conservation in Maine,” prepared for the Maine Office of Consumer Advocate, September 2002.

“Energy Conservation and Efficiency Baseline,” prepared for Governor Paris N. Glendening’s Task Force on Energy Conservation and Efficiency, the Maryland Energy Administration, and the Maryland Department of Natural Resources, December 2001 (with Allan R. Evans and Michael P. Lee).

“Alternative Electricity and Natural Gas Procurement Strategies for U.S. Department of Defense Installations,” prepared for the U.S. Department of Defense, Defense Logistics Agency, Defense Energy Support Center, July 2001 (with Richard A. Galligan).

“Electricity in Maryland Fact Book,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, January 2001.

“Steam Supply Options Analysis for the Savannah River Site,” prepared for the U.S. Department of Energy, March 2000.

“The Feasibility of a Renewables Portfolio Standard in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration, January 2000.

“Undergrounding Electric Utility Lines in Maryland,” prepared for the Maryland Energy Administration and the Power Plant Research Program, Maryland Department of Natural Resources for the Governor’s Task Force on Utility Preparedness, December 1999.

“Nevada Test Site Utility Options Study,” prepared for the U.S. Department of Energy, June 1999.

“Spallation Neutron Source Electrical Facilities Study,” prepared for the U.S. Department of Energy, April 1999.

“Forecasted Electric Power Demands for the Delmarva Power and Light Company,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, December 1998 (with Andrés Escalante).

- “Assessment of DOD Electric Power Supply Options, Strategies, and Costs under Retail Open Access,” prepared for the U.S. Department of Defense, Office of the Deputy Under Secretary of Defense, February 1998.
- “The Engineering and Economic Feasibility of Using Poultry Litter as a Fuel to Generate Electric Power at Maryland’s Eastern Correctional Institute,” prepared for the Maryland Environmental Service, February 1998 (with Gary Walters).
- “Power Supply and Cogeneration Options for the Eastern Correctional Institute,” prepared for the Maryland Environmental Service,” April 1997 (with Thomas King, P.E.)
- “Cooperative Integrated Resource Plan for U.S. Department of Energy Installations Having Power Allocations from the Western Area Power Administration,” prepared for the U.S. Department of Energy, June 1997.
- “Cooperative Integrated Resource Plan for U.S. Navy Installations Having Power Allocations from the Western Area Power Administration,” prepared for the U.S. Navy, SOUTHWESTNAVFACENGDIV, June 1997.
- “Cooperative Integrated Resource Plan for U.S. Air Force Installations Having Power Allocations from the Western Area Power Administration,” prepared for HQ AFCESA/CESE (Tyndall Air Force Base, Florida), June 1997.
- “Analysis of Service Reliability -- Duquesne Light Company,” prepared for the Pennsylvania Office of Consumer Advocate, June 1997.
- “Estimated Power Supply Costs for the Accelerator Production of Tritium Project,” prepared for the U.S. Department of Energy, Office of Project and Fixed Asset Management, October 1996.
- “Customized Energy Conservation and Demand-Side Management Agreements between U.S. Air Force Bases and Utility Service Suppliers,” prepared for HQ AFCESA/CESE (Tyndall Air Force Base, Florida), January 1996 (with Richard I. Chais).
- “Evaluating and Implementing Privatization of Utility Distribution Systems at U.S. Air Force Bases,” prepared for HQ AFCESA/CESE (Tyndall Air Force Base, Florida), December 1995 (with Richard I. Chais).
- “Power Supply Options Study for Vandenberg Air Force Base,” prepared for HQ AFCESA/CESE (Tyndall Air Force Base), December 1995 (with Richard Zumwalt, P.E.).
- “U.S. Department of Energy Savannah River Site Power System Privatization Study,” prepared for the U.S. Department of Energy, February 1995 (with Richard Zumwalt, P.E.).

“Technical Report: Special Study of the MacDill Cogeneration Project,” prepared for the Department of the Air Force, Headquarters Air Combat Command, May 1994.

“The Feasibility of Centralized Purchase of Electric Utility Service,” prepared for the Department of the Air Force, March 1994.

“Long Range Energy Requirements for Charleston Air Force Base,” (two volumes), prepared for the Department of the Air Force, July 1994.

“Long Range Energy Requirements for Wright-Patterson Air Force Base,” (three volumes) prepared for the Department of the Air Force, Headquarters Air Force Logistics Command, April 1993.

“Forecasted Electric Power Demands for the Potomac Electric Power Company,” (two volumes), prepared for the Power Plant Research Division, Maryland Department of Natural Resources, March 1992 (with John E. Beach).

“Optimal Allocation of Western Area Power Administration (Billings Area) Federal Preference Power Among Ellsworth, Minot, and Offutt Air Force Bases,” prepared for the U.S. Air Force, November 1991.

“Impacts of Missile Site Deactivation on Electric Power Costs,” *Environmental Impact Statement -- Deactivation of the Minuteman II Missile Wing at Ellsworth Air Force Base, South Dakota*, prepared for the Department of the Air Force, Headquarters Strategic Air Command, October 1991.

“Forecasted Electric Power Demands for the Baltimore Gas and Electric Company,” (two volumes), prepared for the Power Plant and Environmental Review Division, Maryland Department of Natural Resources, May 1991 (with John E. Beach).

“Forecasted Electric Power Demands for the Delmarva Power and Light Company,” (two volumes), prepared for the Power Plant and Environmental Review Division, Maryland Department of Natural Resources, September 1990 (with John E. Beach).

“Year 2000 Power Supply Reliability Assessment: SERC and SPP Regions,” prepared for the U.S. Air Force, August 1990 (with Dennis Goins).

“Market and Regulatory Effects of the Elimination of the Manufacturing Restriction on the Regional Bell Operating Companies,” prepared for the Telecommunications Committee of the National Association of State Utility Consumer Advocates (NASUCA), November 1989.

“Alternative Electric Power Supply Sources for Onizuka Air Force Base, California,” prepared for the U.S. Air Force, June 1989.

- “Vandenberg Air Force Base Power Supply Study,” prepared for the U.S. Air Force, March 1989.
- “Forecasted Electric Power Demands for the Potomac Electric Power Company,” (two volumes), prepared for the Power Plant Research Program, Maryland Department of Natural Resources, July 1988 (with Walter Asmuth, III).
- “Economic Damage Estimation -- Pittcon Industries, Inc.,” Exeter Associates, Inc., prepared for Pittcon Industries, Inc., February 1988 (with Marvin H. Kahn).
- “Report and Recommendations of the U.S. Air Force on Adjustments to the Mather AFB Surcharge,” prepared for the U.S. Air Force for submission to the Board of Directors of the Sacramento Municipal Utility District, August 1987.
- “Preliminary Assessment of Options Available to the U.S. Air Force to Reduce Electric Power and Energy Costs to the Northern California Air Force Bases,” Exeter Associates, Inc., prepared for the U.S. Air Force, March 1987.
- “An Analysis of the Optimal Allocation of Available Western Area Power Administration Preference Power Among the Northern California Air Force Bases,” Exeter Associates, Inc., prepared for the U.S. Air Force, March 1987.
- “A Survey of Methods Used to Estimate Conservation Potential,” Exeter Associates, Inc., prepared for the Power Plant Research Program, Maryland State Department of Natural Resources, February 1987.
- “End-Use Forecasting,” presentation at the Power Plant Research Program Load Forecasting Workshop, Annapolis, Maryland, January 1987 (published in proceedings volume).
- “Survey and Analysis of End-Use Modeling Practices,” Exeter Associates, Inc., prepared for the Power Plant Research Program, Maryland State Department of Natural Resources, October 1986.
- “Economic Damage Estimation -- Yacht Buyers Group,” Exeter Associates, Inc., prepared for Yacht Buyers Group, Inc., August 1986 (with Marvin H. Kahn).
- “Updated Load Forecast of Energy and Peak Demand for the Allegheny Power System,” Exeter Associates, Inc., prepared for the Power Plant Research Program, Maryland State Department of Natural Resources, June 1986 (with Matthew I. Kahal).
- The Determinants of Profitability and Premiums in Conglomerate Mergers*, Ph.D. dissertation, University of Maryland, 1986.
- “Updated Load Forecast of Energy and Peak Demand on the Delmarva Peninsula,” Exeter Associates, Inc., prepared for the Power Plant Siting Program, Maryland State Department of Natural Resources, February 1986 (with Matthew I. Kahal).

“Estimated Value of Experimental Breeder Reactor II Generation to the Idaho National Engineering Laboratory -- 1985 Through 1986,” Exeter Associates, Inc., prepared for the Idaho National Engineering Laboratory, U.S. Department of Energy, January 1986.

“An Economic Estimation of Electric Power Demands for the Baltimore Gas and Electric Company,” (two volumes), Exeter Associates, Inc., prepared for the Power Plant Siting Program, Maryland State Department of Natural Resources, April 1985 (with Matthew I. Kahal).

“An Assessment of the State-of-the-Art of Gas Utility Load Forecasting,” (with Thomas Bacon, Jr. and Matthew I. Kahal) published in the *Proceedings of the Fourth NARUC Biennial Regulatory Information Conference*, 1984.

“Projected Electric Power Demands for the Potomac Electric Power Company,” (three volumes), Exeter Associates, Inc., prepared for the Power Plant Siting Program, Maryland State Department of Natural Resources, March 1984 (with Matthew I. Kahal).

“Economic and Demographic Forecasts for the PEPCO Service Area,” Exeter Associates, Inc., prepared for the Power Plant Siting Program, Maryland State Department of Natural Resources, September 1982.

“The Behavior of Regulatory Agencies,” published in *Attacking Regulatory Problems: An Agenda for Research in the 1980's*. (Allen Furgeson, ed.), Ballinger Publishers, Cambridge, Massachusetts, 1981 (with Wes Magat).

“Report on the Environmental Impacts from Outer-Continental Shelf Development in the Baltimore Canyon,” Bureau of Business and Economic Research, University of Maryland, prepared for the Bureau of Land Management, U.S. Department of the Interior, September 1980 (with Virginia McConnell).

“The Environmental Systems Model,” Bureau of Business and Economic Research, University of Maryland, June 1980 (with Virginia McConnell).

“Economic-Environmental Models of Regional Development -- The U.S. Experience,” Department of Economics Working Paper 80-15, University of Maryland, November 1979 (with John H. Cumberland and Alan Krupnick).

Expert Testimony Presented:

Before the Pennsylvania Public Utility Commission in Docket Nos. P-2009-2135496 and G-2009-2135510, UGI Utilities, Inc., 2010, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-2009-2094494, PECO Energy Company, 2009, for the Pennsylvania Office of Consumer Advocate. Testified on acquisition of solar energy credits.

Before the Pennsylvania Public Utility Commission in Docket No. P-2008-2022931, UGI Utilities, Inc., 2008, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Maryland Public Service Commission in Case No. 9117, Investigation of Investor-Owned Electric Companies' Standard Offer Service for Residential and Small Commercial Customers in Maryland, 2008, for the Maryland Energy Administration. Testified on Standard Offer Service issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-0072305, Pennsylvania Power Company, 2007, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Maryland Public Service Commission in Case No. 9099, Baltimore Gas and Electric Company, 2007, for the Maryland Department of Natural Resources. Testified on market-related issues, Standard Offer Service prices, and Standard Offer Service Procurement Issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-00662227, PPL Electric Utilities Corporation, 2006, for the Pennsylvania Office of Consumer Advocate. Testified of Provider of Last Resort service.

Before the Maryland Public Service Commission in Case No. 9063, Investigation into the Optimal Structure of the Electric Utility Industry in Maryland, 2006, for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration. Testified on standard offer service issues, customer choice, demand-side management and energy efficiency, and market-related issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-00052188, Pennsylvania Power Company, 2005, for the Pennsylvania Office of Consumer Advocate. Testified on Provider of Last Resort service.

Before the Maryland Public Service Commission in Case No. 9018, Potomac Edison Company, 2005, for the Maryland Department of Natural Resources, Power Plant Research Program. Testified on jurisdictional cost impacts of proposed transmission and distribution facilities.

Before the Maine Public Utilities Commission in Docket No. 2004-339, Central Maine Power Company, 2004, for the Maine Public Advocate. Testified on sales forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2002-770, Central Maine Power Company, 2003, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2001-239, Bangor Hydro Electric Company, 2001, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2001-232, Central Maine Power Company, 2001, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Kentucky Public Service Commission in Case No. 99-070, Western Kentucky Gas Company, 1999, for the Office of Rate Intervention of the Attorney General. Testified on functionalization of distribution system costs.

Before the Kentucky Public Service Commission in Case No. 99-176, Delta Natural Gas Company, Inc., 1999, for the Office of Rate Intervention of the Attorney General. Testified on functionalization of distribution system costs.

Before the Maine Public Utilities Commission in Docket No. 97-580, Central Maine Power Company, 1998, for the MPUC Staff. Testified on generation-related administrative and general expenses.

Before the Maine Public Utilities Commission in Docket No. 96-116, Bangor Hydro Electric Company, 1997, for the MPUC Staff. Testified on load forecasting issues.

Before the New Mexico Public Service Commission, El Paso Electric Company, 1996, for the U.S. Air Force. Testified on rate design issues.

Before the State of Rhode Island and Providence Plantation Public Utilities Commission in Docket No. 2290, Narragansett Electric Company, 1995, for the Division of Public Utilities and Carriers. Testified on load forecasting issues.

Before the Illinois Commerce Commission in Docket No. 94-0065, Commonwealth Edison Company, June 1994, for the U.S. Department of Energy. Testified on load forecasting.

Before the Federal Energy Regulatory Commission in Docket No. RP91-203, et al., Tennessee Gas Pipeline Company, May 1994, for the Tennessee Rate Design Customer Group. Testified on issues related to econometric analysis.

Before the Public Service Commission of the District of Columbia in Formal Case No. 926, Chesapeake and Potomac Telephone Company, September 1993, for the Office of People's Counsel. Testified on issues related to finance and statistical analysis.

Before the Public Service Commission of the District of Columbia in Formal Case No. 814, Phase III, Chesapeake and Potomac Telephone Company, October 1992, for the Office of People's Counsel. Testified on issues related to competition in the telecommunications industry.

Before the Maine Public Utilities Commission in Docket No. 92-101, Maine Public Service Company, September 1992, for the Commission Staff. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8413, Potomac Electric Power Company, March 1992, for the Maryland Power Plant Research Division. Testified on load forecasting.

Before the State of New Jersey Board of Regulatory Commissioners in Docket No. GF91081393J, New Jersey Natural Gas Company, March 1992, for the Division of Rate Counsel. Testified on weather normalization.

Before the State of Rhode Island and Providence Plantations Public Utilities Commission in Docket 2019, Narragansett Electric Company, November 1991, for the Division of Public Utilities and Carriers. Testified on load forecasting.

Before the Maine Public Utilities Commission in Docket No. 91-010, Bangor Hydro-Electric Company, June 1991, for the Maine Public Advocate. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8241, Phase II, Baltimore Gas and Electric Company, May 1991, for the Maryland Power Plant and Environmental Review Division. Testified on load forecasting.

Before the State of Rhode Island and Providence Plantations Public Utilities Commission in Docket 1976, Narragansett Electric Company, October 1990, for the Revision of Public Utilities and Carriers. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8201, Delmarva Power and Light Company, October 1990, for the Maryland Power Plant and Environmental Review Division. Testified on load forecasting.

Before the Maine Public Utilities Commission in Docket No. 90-076, Central Maine Power Company, September 1990, for the Maine Public Advocate. Testified on load forecasting.

Before the Public Service Commission of the District of Columbia in Formal Case No. 890, District of Columbia Natural Gas, February 1990, for the Office of People's Counsel of the District of Columbia. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8102, Southern Maryland Cooperative, July 1988, for the Maryland Power Plant Research Program. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8063 Phase II, Potomac Electric Power Company, July 1988, for the Maryland Power Plant Research Program. Testified on load forecasting.

Before the U.S. District Court for the Eastern District of Pennsylvania in Civil Action No. 87-0805, March 1988, for Pittcon Industries, Inc. Testified on economic damages.

Before the Sacramento Municipal Utility District Board, September 1987, for the U.S. Air Force. Testified on the applicability and appropriate calculation of a special surcharge.

Before the Sacramento Municipal Utility District Board, September 1987, for the U.S. Air Force. Testified on cost estimation and cost allocation.

Before the Sacramento Municipal Utility District Board, February 1987, for the U.S. Air Force. Testified on rate design and cogeneration.

Before the Vermont Public Service Board in Docket No. 4661, Green Mountain Power Corporation, November 1982, for the Vermont Department of Public Service. Testified on production planning, fuel costs, and maintenance scheduling for nuclear plant on behalf of the Vermont Public Service Board.

OCA EXHIBIT SLE-1

Public Service Company of New Hampshire
Docket No. 11-216

Data Request OCA-03
Dated: 08/03/2012
Q-OCA-003
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Witness: Frederick White
Request from: Office of Consumer Advocate

Question:

Please state whether the Company has considered or would consider the use of financial hedges to mitigate the risks of the proposed ADE rate to other (i.e., non-ADE) customers.

- a. If not, please explain why not.
- b. If yes, please provide any studies, analyses or other documents prepared by or for the Company addressing the potential use of hedging instruments.

Response:

Yes, and the primary financial hedges utilized by PSNH are forward contracts for energy and Financial Transmission Rights. Additionally, the approximately 1 c/kWh adder (based on the non-operating cost of the scrubber) serves the dual purpose of hedging against market price increases and providing contribution to fixed costs. Load served under rate ADE will not be managed as an individual load asset but rather will be managed along with all other default energy service load. As such hedging decisions would be based on the position of PSNH's overall default energy service portfolio, which includes PSNH-owned generating assets and additional supply resources. Management of PSNH's default energy service portfolio is guided by internal regulated wholesale marketing policies, procedures, and guidance documents; primarily Wholesale Marketing Policy - PSNH Load Asset Management, RWM-1- Power Supply Planning and Development, RWM-2 - Portfolio Management, and Guidance for PSNH ES Rate Supplemental Energy Needs dated August 19, 2011. See attached documents.

In Order No. 25,061 dated December 31, 2009, in Docket No. DE 09-180, the Commission has previously granted confidential treatment of the redacted information contained in the attachment. Pursuant to Rule Puc 203.08 (d), PSNH states that it has a good-faith basis for seeking confidential treatment of the redacted information and that it intends to submit a motion for confidential treatment regarding such information at or before the commencement of the hearing.



**Northeast
Utilities System**

**Wholesale Marketing
Policy**

PSNH Load Asset Management

Approved By:



Gary A. Long
President & Chief Operating Officer - PSNH

Effective Date: November 10, 2011

Revision: 3

1 Overview

- 1.1 The Regulated Wholesale Marketing ("RWM" or also known as Wholesale Power Contracts) Department's Policies and Procedures (P&P) will ensure a level of oversight and control which is commensurate with the business undertakings and risks associated with a regulated electric utility company.

2 Departmental Policies and Procedures

- 2.1 RWM will maintain detailed and accessible procedures to control and manage the work process. The RWM Policies and Procedures (P&P) will be maintained as a controlled document. Each procedure will have a designated process owner who will be responsible for maintaining such procedure. Procedures can be incorporated by reference into the RWM P&P.
- 2.2 The Director – Wholesale Power Contracts will be responsible for obtaining approval for P&P. Policies will be approved by the PSNH President. Procedures will be approved by the Director – Wholesale Power Contracts.
- 2.3 RWM Procedures will include:
 - Regulated Wholesale Marketing's Role in PSNH's Energy Service Associated with Power Supply Planning and Development (RWM-1)
 - Annual power supply portfolio planning process
 - PSNH Portfolio Management (RWM-2)
 - Planning process for load obligation fulfillment.
 - Hedging, including Financial Transmission Rights (FTR)
 - Bidding and Scheduling of load/generation
 - Contract Administration (RWM-3)
 - Details for the development, approval and administration of contracts with marketing and trading counterparties

- Transaction Execution, Confirmation and Reporting for Power Related Products (RWM-4)
 - Transaction execution
 - Deal capture, accounting designation and reporting
 - Controls, including independent confirmation
 - Exceptions
- Congestion Management (RWM-12)
- Forward Capacity Market (RWM-14)

3 Authorized Activities

3.1 RWM is authorized to conduct activities associated with power related products in support of PSNH generation and Energy Service ("ES") load obligation activities as well as Renewable Energy Certificate (REC) purchases and sales. The conduct and scope of these activities is limited to the ISO-NE power pool and adjoining power pools. Adjoining power pools include New York ISO, New Brunswick and Hydro-Quebec.

3.2



3.3 Power related products are defined as:

- Energy (Day Ahead spot market, Real Time spot market and bilateral contracts).
- Capacity (including products available bilaterally and through the ISO-NE administered Forward Capacity Market).
- Ancillary services, such as operating reserves, regulation and the forward reserve market.
- Structured products (ex. Financial Transmission Rights, Generation Outage Insurance, Put Options, Call Options, Transmission wheeling arrangements, etc.)

- Renewable Energy Certificates

4 Departmental Policies and Procedures

4.1 Transactional limits are based on PSNH power supply strategy (Annual, Monthly, Day to Day).

- Annual – An annual evaluation of power supply requirements will be performed as part of the PSNH Energy Service (ES) filing. Transactions associated with this annual review will require written authorization from the President – PSNH. These transactions will include energy, capacity and other power related products.
- Monthly – Transactions which were not addressed in the annual ES evaluation and which may be of duration [REDACTED] will require written authorization from the President- PSNH.
- Day to Day – Transactions of [REDACTED] will require authorization from Manager – Wholesale Power or designee, or the Director –Wholesale Power Contracts, or the President-PSNH. Manager – Wholesale Power is authorized to enter into transactions of this duration up to a dollar limit of [REDACTED]. If the transaction value will exceed this limit, authorization is required from Director –Wholesale Power Contracts. Additionally, [REDACTED] must be approved by Director – Wholesale Power Contracts.
- Once authorization for the transaction(s) is received the Manager – Wholesale Power, or designee, will be responsible to ensure that transactions are executed in accordance with RWM P&P.

4.2 Volumetric Limits

- ##### 4.2.1 Capacity – PSNH ES capacity needs are met thru owned generation resources and purchased from the ISO-NE. The ES costs associated with the provision of capacity are forecasted and incorporated into the ES rate filing approved by NH PUC. The ISO-NE has implemented a FERC approved Forward Capacity market where price is derived from an ISO-NE administered auction. [REDACTED]

[REDACTED] If RWM is unable

to execute bilateral contracts on terms considered favorable to PSNH customers, the ISO-NE auctions will be utilized for the net ES requirement.

- 4.2.2 Energy – RWM will limit [REDACTED] risk for daily ES customer load, through bilateral contracts, generator availability / utilization or other means. [REDACTED]

[REDACTED] The limits will be calculated for each time period by netting together the load requirements for such period with the available generation, bilateral purchases and bilateral sales for the period. If these volumetric energy limits are exceeded, approval must be given by Director – Wholesale Power Contracts.

Time Period	Volume Limit	
	% of total daily obligation for specific time period	
[REDACTED]	[REDACTED]	[REDACTED]

- 4.2.3 Resource to Load Congestion Cost – If applicable, the goal of RWM's congestion management for PSNH will be to limit congestion cost exposure from expected supply resource to ES load obligation by bidding in the ISO-NE Financial Transmission Rights (FTR) auction and/or bilateral purchases.

[REDACTED] For the strategic processes to achieve the objective, refer to Procedure RWM-12. Volumetric Limits will be established [REDACTED] terms by the Director, Wholesale Power Contracts. The limits will be based on expected supply resources and system conditions. [REDACTED] FTR and bilateral purchases will be approved by the Director, Wholesale Power Contracts. [REDACTED] FTR purchases exceeding [REDACTED] and bilateral purchases exceeding [REDACTED] require approval

from the President – PSNH. FTR and bilateral purchases for periods [REDACTED] require the President-PSNH approval.

- 4.2.4 Renewable Energy Certificates (“RECs”) purchased for ES rate needs – Commencing with Calendar Year 2008, the state of New Hampshire has implemented a Renewable Portfolio Standard (“RPS”) which requires that a portion of the power supply services provided to PSNH ES rate customers be derived from generation compliant with NH RPS. Compliance is exhibited annually through a filing to NHPUC and can be met with either NH compliant RECs or through an Alternate Compliance Payment (“ACP”). An ACP is provided in lieu of compliant RECs. RWM will coordinate REC procurement with PSNH in an attempt to reduce the ACP payments. The quantity of RECs procured annually will not exceed [REDACTED] [REDACTED] for NH RPS compliance without prior approval from President-PSNH or designee.

5 Renewable Energy Certificate Sales

- 5.1 RWM is authorized to sell RECs derived from PSNH owned and operated generation, in particular, Northern Wood Power Project, generation entitlement contracts and IPPs. [REDACTED]

[REDACTED] The following process will be utilized for control of REC sales transactions:

- 5.1.1 Strategy: [REDACTED]
[REDACTED] the Manager – Wholesale Power, or designee, will meet with PSNH staff (including Director – Business Planning and Customer Support Services) to discuss [REDACTED]
[REDACTED] This strategy will be reviewed and approved by President – PSNH.

- 5.1.2 REC Sales Transactions: Once a marketing and pricing strategy has been approved Manager – Wholesale Power or designee will be

responsible for the implementation of such in accordance with RWM
P&P. [REDACTED]

5.1.3 Sales Contract Signatures: Forward Sales contracts will be signed by President – PSNH, V.P. Generation – PSNH, or designee. In addition, inventory Sales contracts can be signed by Director – Wholesale Power Contracts or designee.

6 Credit and Contract Requirements

6.1 RWM shall transact all business activities in accordance with:

- Contract requirements as detailed in the RWM “Contract Administration” procedure. (RWM-3).
- Counterpart creditworthiness and controls as detailed in the “Credit Risk Management” procedure (RWM-9).

7 Reporting

7.1 RWM will be responsible to provide accurate and timely reporting of all transaction information in accordance with approved RWM P&P. As a minimum, RWM will participate in the development and/or report the following:

- [REDACTED]
- Year-to-date actual costs versus ES estimated costs, upon request of President – PSNH. This report will also include an assessment of expected ES power supply cost performance for the balance of year. The assessment

is based on current market conditions and includes the effect of existing RWM transactions.

- A periodic report of bilateral and FTR transactions when requested by the President- PSNH.

7.2 Additional [REDACTED] is not necessary for the transactions associated with PSNH load asset management activities.

8 Systems

8.1 Information Technology (IT) systems will be controlled in accordance with Corporate IT standards.

8.2 RWM critical business processes will be designed such that security of data, disaster recovery and business continuity have been addressed.

9 Revision History

Version Number	Date	Modified By	Revision Description
0	08/24/2004	P. Smith	First issuance.
1	12/22/05	P. Smith	Incorporated allowance for REC transactions.
2	04/01/2010	L. Harris M. Paquette P. Smith	Change Manager, Wholesale Marketing to Manager, Wholesale Power; Conforming changes
3	11/10/2011	P. Smith	Misc. conforming changes based on Wholesale Power review



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BUSINESS PROCEDURE

SUBJECT REGULATED WHOLESALE MARKETING'S ROLE IN PSNH'S ENERGY SERVICE ASSOCIATED WITH POWER SUPPLY PLANNING AND DEVELOPMENT		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 1
DATE APPROVED November 22, 2011	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Generation Resource Planning
REVISION 2	APPLICABLE TO PSNH	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

PURPOSE

This procedure documents Regulated Wholesale Marketing's role in PSNH's Energy Service ("ES") associated with the biannual review and development of the ES Rate and associated power supply planning.

GENERAL INFORMATION

PSNH's ES rates are based on a forecast of PSNH's actual costs incurred to serve load including both fixed and variable costs with IPPs valued at market rather than at rate order / contract prices. In setting the ES rate Wholesale Marketing is responsible for estimating the non-fixed cost portion of the actual costs expected to be incurred by PSNH in serving ES load (excluding NOx allowance costs).

PROCEDURE

This is a biannual process. The initial calculation is performed in late August, early September. The calculation is revised throughout the fall as additional information becomes available. The last revision is used to establish the ES Rate for at least the first six months of the ES Rate period (January through December of the following calendar year). This process is repeated over the months of April to June in order to permit the ES Rate to be reset in July, if necessary.

Primary inputs needed for each ES Rate cycle:

1. Forecasted hourly loads measured at the ISO-NE pool transmission facility (PTF) boundary. This load forecast will be provided by NUSCO Economic and Load Forecasting group and will be adjusted to take into account current and/or projected levels of customer migration.
2. List of generation resources owned or contracted to PSNH available to serve PSNH ES load.
3. Claimed capabilities of generation resources identified in item 2.
4. Heat rates for owned fossil steam generation resources.
5. Burner tip fuel prices for owned fossil steam generation resources (i.e., commodity, transportation, fuel adders, disposal costs, emission adders, etc.).
6. Target availability factors for owned fossil steam generation resources.
7. Planned annual maintenance schedules for owned generation



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- resources including time stamps (year, month, day, hour ending) for first hour and last hour out of service.
8. Other owned generation information as appropriate such as hot and cold start up costs, minimum run times, minimum shutdown times, minimum output levels, allowable number of cold starts and hot starts per year, any operating restrictions due to permits or physical conditions, non-primary fuel costs at units.
 9. Forecast purchases from resources contracted to PSNH including IPPs, Vermont Yankee and system purchases which were made to replace IPP purchase power agreements.
 10. Forecast hydro generation based on most recently available twenty years.
 11. Bilateral purchases and sales made to serve load and / or manage exposure to spot market.
 12. Historical hourly energy price relationships between various off peak subset periods.
 13. Historical hourly energy price patterns.
 14. Historical loss and congestion prices between power supply source locations and the New Hampshire load zone.
 15. PSNH's capacity requirements based on most recently available Installed Capacity Requirement values, NEPOOL load forecast and the Forward Capacity Market clearing price
 16. Forward market prices for energy.
 17. PSNH owned or contracted for resources which generate Renewable Energy Certificates ("RECs") that fulfill the NH Renewable Portfolio Standards ("RPS").
 18. Forward market price for NH qualified RECs.
 19. ISO and NEPOOL expenses and revenues associated administering the energy markets including VAR expense, Black Start expense, Schedule 2 and 3 ISO expense, NOATT expense, NEPOOL expense, Black Start revenues, VAR revenues, etc. that are allocated to energy load.
 20. Costs associated with non-energy, non-capacity ISO-NE power markets such as operating reserves, regulation and the Forward Reserve Market.

Modeling:

Public Service Company of New Hampshire
Docket No. DE 11-216
Data Request OCA-03
Dated: 8/3/12
Q-OCA-003
Attachment



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The above inputs are then used to develop four groupings of costs:

1. Energy

- Owned generation, the Vermont Yankee purchase, known bilateral purchases / sales and IPPs are utilized.
- Owned generation is modeled and dispatched at cost and in an economic manner, relative to forward market prices. The dispatch model uses appropriate inputs such as heat rates, burner tip fuel prices and start up charges.
- Vermont Yankee is included at its contract rates.
- IPP generation is priced based on forward energy market prices.
- Any bilateral purchases / sales are priced based on actual contract terms.
- Any ES power supply shortfall or excess is assumed to be purchased or sold, based on forward market prices, at the applicable modeled hourly energy clearing price
- Congestion and loss costs are calculated based on historical patterns adjusted by forward market energy prices.

2. Capacity

- Owned generation, Vermont Yankee and IPP capability converted to equivalent unforced capacity plus any HQ ICC credits are used to meet forecast obligation. Any shortfalls are met with either committed purchases cost at contract term or bought at the applicable Forward Capacity Market clearing prices.

3. Ancillary and ISO/NEPOOL Expenses

- Ancillary costs are made up of operating reserve costs, regulation costs, forward reserve market charges and any other markets, existing or new, that ISO-NE may require. These are developed based on historical prices, recent auction results, forward prices to the extent they influence costs and predictions (in the case of markets not yet implemented).
- ISO / NEPOOL expenses are anything on the ISO bills not charged to transmission and not covered by energy, capacity



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or ancillaries.

4. RPS Expenses

- Owned and contracted for NH RPS resources are used to meet the forecast obligation. Any surplus / shortfall is assumed to be purchased or sold based on forward market prices or, if a market deficiency of RECs is anticipated at the applicable Alternate Compliance Payment rate.

Output:

The costs developed in the model are summarized and passed on to Revenue Regulation and Load Resources for inclusion in their development of the ES Rate. The information is transmitted as a single tab spreadsheet.

REVISION HISTORY

Revision Number	Date	Modified By	Revision Description
1.0	6/1/08	P. Smith	Incorporates change in designation of Full Requirements to Energy Service
2.0	11/22/11	P. Smith	Misc. changes due to Wholesale Power review
3.0			



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BUSINESS PROCEDURE

SUBJECT PORTFOLIO MANAGEMENT		NAME & NUMBER REGULATED WHOLESALE MARKETING PROCEDURE RWM - 2
DATE APPROVED November 22, 2011	DATE EFFECTIVE October 1, 2004	PROCEDURE OWNER Manager, Wholesale Power
REVISION 3	APPLICABLE TO PSNH	APPROVED BY James R. Shuckerow Director, Wholesale Power Contracts

PURPOSE

This document defines Regulated Wholesale Marketing's ("RWM") procedures regarding the PSNH Load Management activities including:

- Planning process for load obligation fulfillment
- Hedging
- Bidding and Scheduling for PSNH Generation and Load Obligations

GENERAL INFORMATION

RWM, along with various PSNH functional groups, has an important role in the PSNH Energy Service ("ES") Rate development and management process. The Energy Service provides generation service to the PSNH customers who have not chosen a competitive retail supplier.

PROCEDURE

Annual ES Strategy

Procedure RWM-1 entitled "Regulated Wholesale Marketing's Role in PSNH's Energy Service Associated with Power Supply Planning and Development," details the process of developing the annual PSNH ES rate. At an appropriate point in the development of the ES rate, a hedging strategy team will be assembled to explore options available to achieve greater price certainty in the area of power procurement. The strategy team must coordinate with PSNH Generation to ensure that the hedge plan incorporates the appropriate level of reliance on fossil-hydro generation. This team will develop a recommendation for power hedging activity to be utilized in the next ES rate year.

The recommended hedge plan should be discussed with PSNH Regulatory and PSNH Generation departments. Final submittal of the plan to President – PSNH is required to obtain authorization. Once authorization is received all transactions will be performed in accordance with applicable RWM Policies and Procedures.

ES Strategy Assessment

A periodic meeting to Review ES Performance vs Forecast will be conducted. Manager – Wholesale Power and Manager – Generation Resource Planning or designees will be responsible to facilitate the meetings. These meetings are designed to be at "the worker level" and to dig deeper into detailed variances that are driving performance. A brief



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summary of the results, as well as any variances of particular significance, will be forwarded to senior management. These meetings will also address expense control issues impacting subsequent months of the rate period (e.g. fuel inventory, bilateral purchase strategy, Newington utilization).

Additionally, it is recognized that market conditions and / or ES customer migration trends may change such that modifications to the annual hedge plan may be warranted. Any modifications to the annual hedging strategy (including energy purchases or sales) will be submitted to the appropriate entity for authorization prior to execution. Authorization and authorization limits will be in accordance with RWM Policies and Procedures.

Daily Strategy

From 6:00 AM until 9:00 AM the day prior, bidding and scheduling personnel will run the respective models to forecast ES load. Additionally, B/S personnel will contact the generating units to determine operating status.

By 9:00 AM the business day prior, bidding and scheduling personnel will meet with the Manager – Wholesale Power (“Mgr – WP”) or designee to discuss the day-ahead bidding strategy. B/S will assess the portfolio position by utilizing the forecasted load, available generation and known bilateral purchases or sales.

The bid strategy will be in accordance with the requirements of the PSNH Load Asset Management Policy. In order to develop a strategy, the Bidding Supervisor, or designee, will need to assimilate all appropriate and necessary information regarding load forecasts, estimated MCP’s, competitive intelligence, and generating unit characteristics. The B/S personnel will meet on a regular basis with the Manager – Wholesale Power (“Mgr – WP”) or designee to communicate market activity, fuel purchases, overnight activity, etc. B/S will contact the plants to determine operating status, as well as run the multiple regression/neural network models to forecast loads. Once all of this data has been gathered, the Bidding Supervisor, or designee, will evaluate the information and determine the bid strategy. Generation and load bid will be submitted in



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accordance with the timing requirements of the ISO-NE market rules.

The Bidding and Scheduling Log will document the current day's

Compliance with the volumetric energy limits identified in the PSNH Load Asset Management Policy will be noted and documented. If compliance will not be achieved Mgr – WP will be informed and additional bilateral purchases will be made. Items of significance will also be documented in the Log.

By 5:00 PM each day or within 1 hour of receiving information from ISO-NE, B/S will retrieve from ISO-NE and e-mail to each generating unit their day-ahead commitment for generation for the next day.

Energy Sales:

As a result of the periodic review of ES load needs and anticipated economic PSNH generation it may be determined that some energy resources will not be required to meet ES customer needs. In this event the appropriateness of a sale into the bilateral energy market will be considered. Such sale opportunity will consider risks associated with customer load (weather driven demand and customer ingress/egress) as well as any unplanned generation resource loss. Bilateral sales recommendations will be submitted to the appropriate entity for authorization prior to execution.

Contract Scheduling:

Contracts which require physical delivery (Energy, Capacity) will be scheduled in the appropriate Independent System Operator ("ISO") market system. These schedules must be submitted by one party (typically the seller) and approved by the other (typically the buyer). Mgr – WP or designee is responsible to schedule and confirm physical deliveries in the market system in accordance with the timing requirements of the applicable market rules.

Financial Transmission Rights

RWM will try to limit congestion cost exposure from expected generation



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resource to load obligation by bidding in the ISO-NE Financial Transmission Rights (FTR) auction and/or bilateral purchases supplied at the New Hampshire load zone. Refer to Regulated Wholesale Marketing Procedure RWM-4 and RWM-12 for additional information

REVISION HISTORY

Revision Number	Date	Modified By	Revision Description
1.0	6/1/08	P. Smith M. Paquette	Incorporates change in designation of Full Requirements to Energy Service; clarified FTR information by referencing Procedures RWM-4 and RWM-12
2.0	11/1/09	L. Harris M. Paquette	Update Procedure Owner to Manager, Wholesale Power; TS/DS updated to ES
3.0	11/22/11	P. Smith	Misc. editorial changes and added guidance on energy sales.

Proprietary and Confidential Business Information

Public Service Company of New Hampshire
Docket No. DE 11-216
Data Request OCA-03
Dated: 8/3/12
Q-OCA-003
Attachment

August 19, 2011

Preamble: This guidance document addresses settlement agreement recommendations reached in Docket DE 10-121, dated January 11, 2011, page 3, Section III.B.1, regarding supplemental purchases and sales; and per discussions with NH PUC Staff's consultant on July 28, 2011 augments write-ups prepared in response to DE 11-094, Staff-1, Questions 5, 6, 7, & 9.

Guidance for PSNH ES Rate Supplemental Energy Needs

Beginning with commencement of the development of the ES rate and thru September of the ES rate year - PSNH to perform on a quarterly basis an analysis of loads based on the latest actual load data available and the current PSNH load forecast.

PSNH to review quarterly in order to determine if there is a need for supplemental energy purchases or sales. This review will take into account the economic utilization of owned generation, existing bilaterals, and IPPs in determining the ES energy portfolio net position (the Supplemental Needs). Purchases and/or sales recommendations will be developed based on the following:

As part of PSNH ES Rate Hedge Plan (Prior to Rate Setting):

Summer / Winter supplemental purchases should be made to meet [REDACTED] of Supplemental Needs. However, if supplemental needs are [REDACTED] or less this minimal exposure may remain un-hedged. If it is forecast that existing purchases and economic generation will meet [REDACTED] of needs, PSNH will attempt to sell any excess to reduce supply to [REDACTED] coverage of load. If the excess is within [REDACTED] of needs this minimal exposure may remain. However, PSNH will not [REDACTED].

Spring / Fall supplemental purchases should be made to meet [REDACTED] of Supplemental Needs. However, if supplemental needs are [REDACTED] or less this minimal exposure may remain un-hedged. If it is forecast that existing purchases and economic generation will meet [REDACTED] of needs, PSNH will attempt to sell any excess to reduce supply to [REDACTED] coverage of load. If the excess is within [REDACTED] of needs this minimal exposure may remain. However, PSNH will not [REDACTED].

During ES Rate Year (Quarterly Review):

If it is forecast that existing purchases and economic generation will meet [REDACTED] of needs, PSNH will attempt to sell any excess so as to maintain [REDACTED] coverage of load. If the excess is within [REDACTED] of needs this minimal exposure may remain. However, PSNH will not [REDACTED].

During ES Rate Year (Short Term - One Month or Less):

If during the PSNH weekly assessment of ES load needs and generation resources it is determined that a condition of oversupply [REDACTED] will occur due to owned generation and supplemental energy purchases and such condition is reasonably expected to be of a [REDACTED] duration, PSNH will evaluate market opportunities to 1) reduce generation output (if economically viable) and /or 2) sell supplemental energy. In this event of a sale into the bilateral energy market, such sale opportunity will consider risks associated with customer load (weather driven demand) as well as any potential for an unplanned generation resource loss.