

## Joseph Trainor

### SUMMARY OF EXPERIENCE:

Mr. Trainor is a Senior Manager for PSEG-LI in Regulation and Pricing. Mr. Trainor's current responsibilities include rate case management, tariff management, customer pricing, and revenue reporting. Mr. Trainor is an Electrical Engineer with specialties in the areas of class cost-of-service analyses and modeling, statistical and comparative cost and operating analysis, revenue requirements modeling, load and sales forecasting, rate design, demand-side management (DSM) and financial modeling. Mr. Trainor has managed the Guam Power Authority 2013 rate filing, which included managing internal and external legal counsel, reviewing and editing all testimony and data requests. Mr. Trainor was also responsible for testifying in the 2013 rate case on the subjects of revenue requirements, load research, cost of service and rate design.

Mr. Trainor is the architect of DSM and cost-of-service models. He has performed electric and gas cost-of-service and marginal cost-of-service projects for a variety of clients. He has performed minimum system and zero intercept studies in numerous states, as well as load research, weather normalization and load forecast studies. He created models to calculate test year revenue requirements. He has also created models to perform economic, rate and financial valuations of multi-jurisdictional utilities for the purpose of investment. He analyzed electric load data for state agencies to support their competitive procurement.

Mr. Trainor has developed class allocations factors, special studies, and revenue and billing analyses for a variety of gas and electric clients. He has developed statistical models to evaluate the performance of nuclear and coal plants. He has evaluated and screened hundreds of DSM programs. He has produced load research sample designs and normalized utilities sales and system peaks. He also has experience in the fields of transmission system benchmarking, unbundled class revenue requirements, Form 1 and NERC Form 411 data analysis and database management.

Mr. Trainor has also assisted in the economic evaluations of Power Plants to assess their performance in a deregulated environment. Mr. Trainor has performed economic evaluations of Nuclear Power Plants to assess the value of a life extension. He has developed systems for managing large and complex data sets for energy prices and costs. He has performed statistical modeling for the purpose of load forecasting and substation distribution investment. In addition to his utility and energy industry analytical skills, Mr. Trainor's broader IT expertise includes application programming and database management.

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#### Specialization:

- Electric and Gas Costing,
- Rate Design
- Demand-Side Management
- Sales Forecasting and Normalization,
- Statistical Sampling and Forecasting,

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#### Education

- MBA, Long Island University, New York, 2003
- BS, Electrical Engineering, Manhattan College, New York, 1993

#### Employment

PSEG Long Island  
2014-Present  
Senior Manager of Regulation and Pricing

Black & Veatch  
1998-2014  
Principal – Management Consultant Division

Muze, Inc.  
1994-1998  
Manager – Software Updates

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## CONSULTING PROJECT EXPERIENCE

### Multiple Clients | Electric and Gas Costing

Mr. Trainor has performed both electric and gas embedded cost-of-service studies. He has developed the special studies, interviewed personnel and performed other data-gathering procedures necessary to obtain all of the information needed to perform both types of studies. Mr. Trainor has testified to embedded cost-of-service studies and provided training to utility personnel on performance of these studies.

Mr. Trainor assisted the State of Alaska with the issuance of the AGIA license to TC Alaska by completed the rate modeling for the over 40 billion dollar project and quantifying the various tariff provisions included in TC Alaska's application.

Mr. Trainor has also performed both electric and gas marginal cost-of-service studies. He has developed the special studies and gathered the necessary information needed to perform both types of studies. He has provided testimony and rate case support for marginal cost of service studies.

Clients for whom Mr. Trainor has served in these areas include:

- State of Alaska;
- Niagara Mohawk Power Corporation;
- KeySpan Energy;
- Massachusetts Electric Company;
- Guam Power Authority;
- Citizens Gas;
- Peoples Natural Gas Company;
- Enbridge Gas New Brunswick
- Empire District;
- Philadelphia Gas Works;
- Baltimore Gas and Electric;
- MidWest Energy; and
- Energy West Resources.

### Multiple Clients | Rate Design

Mr. Trainor has performed both electric and gas rate design studies. He has developed and testified to the allocation process to fairly distribute a Company's rate request to the various rate classes. Mr. Trainor has developed Time of Use and Decoupling rate models. He has created proof of revenue models that have calculated the detailed rates by class. Mr. Trainor has been responsible for making and testifying to all tariffs edits that occurred as a result the rates and rate design changes. He has trained utility personnel on the concepts and underline theories used in justification of various rate designs.

Clients for whom Mr. Trainor has served in these areas include:

- State of Alaska;
- Southern Maryland Electric Cooperative

- Niagara Mohawk Power Corporation;
- KeySpan Energy;
- Guam Power Authority;
- Citizens Gas;
- Enbridge Gas New Brunswick
- Empire District;
- Philadelphia Gas Works;
- Energy West Resources.

### **Multiple Clients | Revenue Requirements and Energy Project Financing and Analysis**

Mr. Trainor has created automated revenue requirement models. Mr. Trainor has performed economic and financial modeling of multi-jurisdictional utilities for the purpose of investment analysis. Mr. Trainor has performed economic and rate forecast modeling for bond issuance, and financial analysis of regulated utilities for investment purposes. Mr. Trainor has performed economic and financing analyses that have evaluated the performance and profitability of electrical power plants.

Mr. Trainor has performed life cycle economic comparisons on nuclear plants versus other alternatives for litigation purposes. He has evaluated power plants to project their performance in a deregulated environment.

Clients for whom Mr. Trainor has served in these areas include:

- Niagara Mohawk Power Corporation
- Enmax Power Corporation;
- Nissequogue Cogen Partners;
- San Diego Gas and Electric;
- Arizona Public Service; and
- Blavin & Company.

### **Multiple Clients | Load Research**

Mr. Trainor has developed load research samples for water, gas and electric utilities by accessing complete customer databases and identifying the residential and small commercial customers required to provide a statically valid load sample. He has analyzed and testified to the results of the collected research data and produced customer class load profiles, normalized sales and identified customer usage patterns.

Clients for whom Mr. Trainor has served in these areas include:

- Kauai Island Utility
- Kansas Gas and Electric;
- Westar Energy;
- Empire District;
- Guam Power Authority;
- Indiana Water Authority; and
- Illinois American Water Company.

### Multiple Clients | Load Forecasting

Mr. Trainor has normalized utilities sales, system energy requirements and system peaks. He has performed studies to normalize system load factors and has developed two stage models to forecast utilities sales and system growth. Mr. Trainor has also taken the results of forecasted system peak growth and allocated the growth to substations for the use in distribution system planning.

Clients for whom Mr. Trainor has served in these areas include:

- Westar Energy;
- Union Gas;
- KeySpan Energy;
- Freeport Electric;
- Rockville Centre Electric; and
- United Illuminating.

### Multiple Clients | Demand-Side Management

Mr. Trainor has screened and evaluated hundreds of demand-side management (DSM) programs for various utilities. Some of these programs include direct load control, window and central air conditioner replacement, high-efficiency heat pumps and many other programs. The evaluations include both the energy and peak savings versus different cost-based tests, such as rate impact measurement, total resource cost, utility cost and customer cost tests. He is an expert user of DSMore and has built front-end and back-end models to enhance DSMore's functionality. He has developed customized DSM models to evaluate DSM measures across many different climate zones using regression models to account for the various usage and peak responses due to weather. These models also account for changing ground water temperature and hours of daylight. Mr. Trainor has also development hourly load data using ITRON end-use profiles for DSM measures to include in IRP modeling. Mr. Trainor has then taken the results of these screens and developed estimates of load and peak saving based on budgeted dollars and estimated measure penetrations.

Clients for whom Mr. Trainor has served in these areas include:

- American Electric Power;
- First Energy
- Jersey Central Power & Light;
- Westar Energy;
- Union Electric; and
- Rockville Centre Electric.

### Multiple Clients | Computer Modeling, Database Creation and Management

Mr. Trainor has utilized his database management and modeling skills to develop and enhance his clients' analytical tools and capabilities, as well as to enhance and upgrade the cost-of-service models. The enhancements to the models include a VBA-user interface that allows the user to navigate the model, analyze the data and perform maintenance functions through menu routines.

In addition to the numerous PC-based programs, he has experience in running, modifying and extracting information from databases that contain hundreds of thousands of records, making them available to clients using a graphical user interface. Mr. Trainor has designed and used computer models to perform economic, rate, cost benchmarking and financial planning projects. He has analyzed customer databases to perform statistical sampling.

Mr. Trainor has participated in a project to procure electric supply for a group of state agencies. He assisted in the creation of the Request for Proposal, appendixes and exhibits. He managed the collection of the historical load data by obtaining, cleaning and presenting the data. He developed an easy-to-use, front-end application, which became part of the RFP and was posted on a public website for distribution to bidders.

Mr. Trainor is skilled in multiple spreadsheet and database application software, including Microsoft Excel, Access and FoxPro.

Clients for whom Mr. Trainor has served in these areas include:

- Nissequogue Cogen Partners;
- State of New Jersey
- State of Alaska
- Connecticut Natural Gas;
- Baltimore Gas and Electric Company;
- Kansas Gas Service; and
- Philadelphia Gas Works.

#### NY TESTIMONY EXPERIENCE

CASE DESCRIPTION	CASE NUMBER
In the Matter of the Application of The Brooklyn Union Gas Company d/b/a Keyspan Energy Delivery New York For a Major Rate Increase.	Case No. 06-G-1185
In the Matter of the Application of Keyspan Gas East Corporation d/b/a Keyspan Energy Delivery Long Island For a Major Rate Increase.	Case No. 06-G-1186
In the Matter of the Application of Niagara Mohawk Power Corporation d/b/a NATIONAL GRID For a Major Rate Increase	Case No. 08-G-0609
In the Matter of the Application of Niagara Mohawk Power Corporation d/b/a NATIONAL GRID For a Major Rate Increase	Case No. 12-G-0202