

# David A. Schlissel

President

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## SUMMARY

I have worked for thirty six years as a consultant and attorney on complex management, engineering, and economic issues, primarily in the field of energy. This work has involved conducting technical investigations, preparing economic analyses, presenting expert testimony, providing support during all phases of regulatory proceedings and litigation, and advising clients during settlement negotiations. I received undergraduate and advanced engineering degrees from the Massachusetts Institute of Technology and Stanford University, respectively, and a law degree from Stanford Law School.

## PROFESSIONAL EXPERIENCE

**Coal-fired Generation** – Evaluated the economic and financial risks of investing in, constructing and operating new coal-fired power plants. Investigated whether project participants had adequately considered the risks associated with building a new coal-fired power plant. The most significant of these risks are the likelihood of federal regulation of greenhouse gas emissions and rising construction costs. Examined whether there are lower cost, lower risk alternatives than proposed coal-fired plants.

**Electric System Reliability** - Evaluated whether new generation facilities and transmission lines are needed to ensure adequate levels of system reliability. Investigated the causes of distribution system outages and inadequate service reliability. Examined the reasonableness of utility system reliability expenditures.

**Power Plant Air Emissions** – Investigated whether proposed generating facilities would provide environmental benefits in terms of reduced emissions of NO<sub>x</sub>, SO<sub>2</sub> and CO<sub>2</sub>. Examined whether new state emission standards would lead to the retirement of existing power plants or otherwise have an adverse impact on electric system reliability.

**Power Plant Water Use** – Examined power plant repowering as a strategy for reducing water consumption at existing electric generating facilities. Analyzed the impact of converting power plants from once-through to closed-loop systems with cooling towers on plant revenues and electric system reliability. Evaluated the potential impact of the EPA's Proposed Clean Water Act Section 316(b) Rule for Cooling Water Intake Structures at existing power plants.

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**Power Plant Operations and Economics** - Investigated the causes of more than one hundred power plant and system outages, equipment failures, and component degradation, determined whether these problems could have been anticipated and avoided, and assessed liability for repair and replacement costs. Examined power plant operating, maintenance, and capital costs. Analyzed power plant operating data from the NERC Generating Availability Data System (GADS). Evaluated utility plans for and management of the replacement of major power plant components. Assessed the adequacy of power plant quality assurance and maintenance programs. Examined the selection and supervision of contractors and subcontractors.

**Power Plant Repowering** - Evaluated the environmental, economic and reliability impacts of rebuilding older, inefficient generating facilities with new combined cycle technology.

**Nuclear Power** - Examined the impact of the nuclear power plant life extensions and power uprates on decommissioning costs and collections policies. Evaluated utility decommissioning cost estimates and cost collection plans. Examined the reasonableness of utility decisions to sell nuclear power assets and evaluated the value received as a result of the auctioning of those plants. Investigated the significance of the increasing ownership of nuclear power plants by multiple tiered holding companies with limited liability company subsidiaries. Investigated the potential safety consequences of nuclear power plant structure, system, and component failures.

**Transmission Line Siting** – Examined the need for proposed transmission lines. Analyzed whether proposed transmission lines could be installed underground. Worked with clients to develop alternate routings for proposed lines that would have reduced impacts on the environment and communities.

**Electric Industry Regulation and Markets** - Investigated whether new generating facilities that were built for a deregulated subsidiary should be included in the rate base of a regulated utility. Evaluated the reasonableness of proposed utility power purchase agreements with deregulated affiliates. Investigated the prudence of utility power purchases in deregulated markets. Examined whether generating facilities experienced more outages following the transition to a deregulated wholesale market in New England. Evaluated the reasonableness of nuclear and fossil plant sales, auctions, and power purchase agreements. Analyzed the impact of proposed utility mergers on market power. Assessed the reasonableness of contract provisions and terms in proposed power supply agreements.

**Economic Analysis** - Analyzed the costs and benefits of energy supply options. Examined the economic and system reliability consequences of the early retirement of major electric generating facilities. Evaluated whether new electric generating facilities are used and useful. Quantified replacement power costs and the increased capital and operating costs due to identified instances of mismanagement.

**Expert Testimony** - Presented the results of management, technical and economic analyses as testimony in more than ninety proceedings before regulatory boards and commissions in twenty three states, before two federal regulatory agencies, and in state and federal court proceedings.

**Litigation and Regulatory Support** - Participated in all aspects of the development and preparation of case presentations on complex management, technical, and economic issues. Assisted in the preparation and conduct of pre-trial discovery and depositions. Helped identify and prepare expert witnesses. Aided the preparation of pre-hearing petitions and motions and post-hearing briefs and appeals. Assisted counsel in preparing for hearings and oral arguments. Advised counsel during settlement negotiations.

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## **TESTIMONY, AFFIDAVITS, DEPOSITIONS AND COMMENTS**

### **Mississippi Public Service Commission (Docket No. 2009-UA-014) – December 2009**

The costs and risks associated with the proposed Kemper County IGCC power plant.

### **Public Service Commission of Wisconsin (Docket No. 05-CE-137) –December 2009**

The costs and risks associated with the proposed installation of emissions control equipment at the Edgewater Unit 5 coal-fired power plant.

### **Public Service Commission of Wisconsin (Docket No. 05-CE-138) –September and October 2009**

The costs and risks associated with the proposed installation of emissions control equipment at the Columbia 1 and 2 coal-fired power plants.

### **Georgia Public Service Commission (Docket No. 27800-U) – December 2008**

The possible costs and risks of proceeding with the proposed Plant Vogtle Units 3 and 4 nuclear power plants.

### **Public Service Commission of Wisconsin (Docket No. 6680-CE-170) – August and September 2008**

The risks associated with the proposed Nelson Dewey 3 baseload coal-fired power plant.

### **Indiana Utility Regulatory Commission (Cause No. 43114 IGCC 1) – July 2008**

The estimated cost of Duke Energy Indiana's Edwardsport Project.

### **Public Service Commission of Maryland (Case 9127) – July 2008**

The estimated cost of the proposed Calvert Cliffs Unit 3 nuclear power plant.

### **Ohio Power Siting Board (Case No. 06-1358-EL-BGN) – December 2007**

AMP-Ohio's application for a Certificate of Environmental Compatibility and Public Need for a 960 MW pulverized coal generating facility.

### **U.S. Nuclear Regulatory Commission (Docket Nos. 50-247-LR, 50-286-LR) – November 2007 and February 2009**

The available options for replacing the power generated at Indian Point Unit 2 and/or Unit 3.

### **West Virginia Public Service Commission (Case No. 06-0033-E-CN) – November 2007**

Appalachian Power Company's application for a Certificate of Public Convenience and Necessity for a 600 MW integrated gasification combined cycle generating facility.

### **Iowa Utility Board (Docket No. GCU-07-01) – October 2007**

Whether Interstate Power & Light Company's adequately considered the risks associated with building a new coal-fired power plant and whether that Company's participation in the proposed Marshalltown plant is prudent.

### **Virginia State Corporation Commission (Case No. PUE-2007-00066) – November 2007**

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Whether Dominion Virginia Power's adequately considered the risks associated with building the proposed Wise County coal-fired power plant and whether that Commission should grant a certificate of public convenience and necessity for the plant.

**Louisiana Public Service Commission (Docket No. U-30192) – September 2007**

The reasonableness of Entergy Louisiana's proposal to repower the Little Gypsy Unit 3 generating facility as a coal-fired power plant.

**Arkansas Public Service Commission (Docket No. 06-154-U) – July 2007**

The probable economic impact of the Southwestern Electric Power Company's proposed Hempstead coal-fired power plant project.

**North Dakota Public Service Commission (Case Nos. PU-06-481 and 482) – May 2007 and April 2008**

Whether the participation of Otter Tail Power Company and Montana-Dakota Utilities in the Big Stone II Generating Project is prudent.

**Indiana Utility Regulatory Commission (Cause No. 43114) – May 2007**

The appropriate carbon dioxide ("CO<sub>2</sub>") emissions prices that should be used to analyze the relative economic costs and benefits of Duke Energy Indiana and Vectren Energy Delivery of Indiana's proposed Integrated Gasification Combined Cycle Facility and whether Duke and Vectren have appropriately reflected the capital cost of the proposed facility in their modeling analyses.

**Public Service Commission of Wisconsin (Docket No. 6630-EI-113) – March 2007**

Whether the proposed sale of the Point Beach Nuclear Plant to FPL Energy Point Beach, LLC, is in the interest of the ratepayers of Wisconsin Electric Power Company.

**Florida Public Service Commission (Docket No. 070098-EI) – March 2007**

Florida Light & Power Company's need for and the economics of the proposed Glades Power Park.

**Michigan Public Service Commission (Case No. 14992-U) – December 2006**

The reasonableness of the proposed sale of the Palisades Nuclear Power Plant.

**Minnesota Public Utilities Commission (Docket No. CN-05-619) – November 2006, December 2007, January 2008 and November 2008**

Whether the co-owners of the proposed Big Stone II coal-fired generating plant have appropriately reflected the potential for the regulation of greenhouse gases in their analyses of the facility; and whether the proposed project is a lower cost alternative than renewable options, conservation and load management.

**North Carolina Utilities Commission (Docket No. E-7, Sub 790) – September 2006 and January 2007**

Duke's need for two new 800 MW coal-fired generating units and the relative economics of adding these facilities as compared to other available options including energy efficiency and renewable technologies.

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**New Mexico Public Regulatory Commission (Case No. 05-00275-UT) – September 2006**  
Report to the New Mexico Commission on whether the settlement value of the adjustment for moving the 141 MW Afton combustion turbine merchant plant into rate base is reasonable.

**Arizona Corporation Commission (Docket No. E-01345A-0816) – August and September 2006**

Whether APS's acquisition of the Sundance Generating Station was prudent and the reasonableness of the amounts that APS requested for fossil plant O&M.

**U.S. District Court for the District of Montana (Billings Generation, Inc. vs. Electrical Controls, Inc, et al., CV-04-123-BLG-RFC) – August 2006**

Quantification of plaintiff's business losses during an extended power plant outage and plaintiff's business earnings due to the shortening and delay of future plant outages. [Confidential Expert Report]

**Deposition in South Dakota Public Utility Commission Case No. EL05-022 – June 14, 2006**

**South Dakota Public Utility Commission (Case No. EL05-022) – May and June 2006**

Whether the co-owners of the proposed Big Stone II coal-fired generating plant have appropriately reflected the potential for the regulation of greenhouse gases in their analyses of the alternatives to the proposed facility; the need and timing for new supply options in the co-owners' service territories; and whether there are alternatives to the proposed facility that are technically feasible and economically cost-effective.

**Georgia Public Service Commission (Docket No. 22449U) – May 2006**

Georgia Power Company's request for an accounting order to record early site permitting and construction operating license costs for new nuclear power plants.

**California Public Utilities Commission (Dockets Nos. A.05-11-008 and A.05-11-009) – April 2006**

The estimated costs for decommissioning the Diablo Canyon, SONGS 2&3 and Palo Verde nuclear power plants and the annual contributions that are needed from ratepayers to assure that adequate funds will be available to decommission these plants at the projected ends of their service lives.

**New Jersey Board of Public Utilities (Docket No. EM05020106) – November and December 2005 and March 2006**

Joint Testimony with Bob Fagan and Bruce Biewald on the market power implications of the proposed merger between Exelon Corp. and Public Service Enterprise Group.

**Virginia State Corporation Commission (Case No. PUE-2005-00018) – November 2005**

The siting of a proposed 230 kV transmission line.

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**Iowa Utility Board (Docket No. SPU-05-15) – September and October 2005**

The reasonableness of IPL's proposed sale of the Duane Arnold Energy Center nuclear plant.

**New York State Department of Environmental Conservation (DEC #3-3346-00011/00002) – October 2005**

The likely profits that Dynegy will earn from the sale of the energy and capacity of the Danskammer Generating Facility if the plant is converted from once-through to closed-cycle cooling with wet towers or to dry cooling.

**Arkansas Public Service Commission (Docket 05-042-U) – July and August 2005**

Arkansas Electric Cooperative Corporation's proposed purchase of the Wrightsville Power Facility.

**Maine Public Utilities Commission (Docket No. 2005-17) – July 2005**

Joint testimony with Peter Lanzalotta and Bob Fagan evaluating Eastern Maine Electric Cooperative's request for a CPCN to purchase 15 MW of transmission capacity from New Brunswick Power.

**Federal Energy Regulatory Commission (Docket No. EC05-43-0000) – April and May 2005**

Joint Affidavit and Supplemental Affidavit with Bruce Biewald on the market power aspects of the proposed merger of Exelon Corporation and Public Service Enterprise Group, Inc.

**Maine Public Utilities Commission (Docket No. 2004-538 Phase II) – April 2005**

Joint testimony with Peter Lanzalotta and Bob Fagan evaluating Maine Public Service Company's request for a CPCN to purchase 35 MW of transmission capacity from New Brunswick Power.

**Maine Public Utilities Commission (Docket No. 2004-771) – March 2005**

Analysis of Bangor Hydro-Electric's Petition for a Certificate of Public Convenience and Necessity to construct a 345 kV transmission line

**United States District Court for the Southern District of Ohio, Eastern Division (Consolidated Civil Actions Nos. C2-99-1182 and C2-99-1250)**

Whether the public release of company documents more than three years old would cause competitive harm to the American Electric Power Company. [Confidential Expert Report]

**New Jersey Board of Public Utilities (Docket No. EO03121014) – February 2005**

Whether the Board of Public Utilities can halt further collections from Jersey Central Power & Light Company's ratepayers because there already are adequate funds in the company's decommissioning trusts for the Three Mile Island Unit No. 2 Nuclear Plant to allow for the decommissioning of that unit without endangered the public health and safety.

**Maine Public Utilities Commission (Docket No. 2004-538) – January and March 2005**

Analysis of Maine Public Service Company's request to construct a 138 kV transmission line from Limestone, Maine to the Canadian Border.

**California Public Utilities Commission (Application No. AO4-02-026) – December 2004 and January 2005**

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Southern California Edison's proposed replacement of the steam generators at the San Onofre Unit 2 and Unit 3 nuclear power plants and whether the utility was imprudent for failing to initiate litigation against Combustion Engineering due to defects in the design of and materials used in those steam generators.

**United States District Court for the Southern District of Indiana, Indianapolis Division (Civil Action No. IP99-1693) – December 2004**

Whether the public release of company documents more than three years old would cause competitive harm to the Cinergy Corporation. [Confidential Expert Report]

**California Public Utilities Commission (Application No. AO4-01-009) – August 2004**

Pacific Gas & Electric's proposed replacement of the steam generators at the Diablo Canyon nuclear power plant and whether the utility was imprudent for failing to initiate litigation against Westinghouse due to defects in the design of and materials used in those steam generators.

**Public Service Commission of Wisconsin (Docket No. 6690-CE-187) – June, July and August 2004**

Whether Wisconsin Public Service Corporation's request for approval to build a proposed 515 MW coal-burning generating facility should be granted.

**Public Service Commission of Wisconsin (Docket No. 05-EI-136) – May and June 2004**

Whether the proposed sale of the Kewaunee Nuclear Power Plant to a subsidiary of an out-of-state holding company is in the public interest.

**Connecticut Siting Council (Docket No. 272) – May 2004**

Whether there are technically viable alternatives to the proposed 345-kV transmission line between Middletown and Norwalk Connecticut and the length of the line that can be installed underground.

**Arizona Corporation Commission (Docket No. E-01345A-03-0437 – February 2004**

Whether Arizona Public Service Company should be allowed to acquire and include in rate base five generating units that were built by a deregulated affiliate.

**State of Rhode Island Energy Facilities Siting Board (Docket No. SB-2003-1) – February 2004**

Whether the cost of undergrounding a relocated 115kV transmission line would be eligible for regional cost socialization.

**State of Maine Department of Environmental Protection (Docket No. A-82-75-0-X) – December 2003**

The storage of irradiated nuclear fuel in an Independent Spent Fuel Storage Installation (ISFSI) and whether such an installation represents an air pollution control facility.

**Rhode Island Public Utility Commission (Docket No. 3564) – December 2003 and January 2004**

Whether Narragansett Electric Company should be required to install a relocated 115kV transmission line underground.

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**New York State Board on Electric Generation Siting and the Environment (Case No. 01-F-1276) – September, October and November 2003**

The environmental, economic and system reliability benefits that can reasonably be expected from the proposed 1,100 MW TransGas Energy generating facility in Brooklyn, New York.

**Wisconsin Public Service Commission (Case 6690-UR-115) - September and October 2003**

The reasonableness of Wisconsin Public Service Corporation's decommissioning cost collections for the Kewaunee Nuclear Plant.

**Oklahoma Corporation Commission (Cause No. 2003-121) – July 2003**

Whether Empire District Electric Company properly reduced its capital costs to reflect the write-off of a portion of the cost of building a new electric generating facility.

**Arkansas Public Service Commission (Docket 02-248-U) – May 2003**

Entergy's proposed replacement of the steam generators and the reactor vessel head at the ANO Unit 1 Steam Generating Station.

**Appellate Tax Board, State of Massachusetts (Docket No C258405-406) – May 2003**

The physical nature of electricity and whether electricity is a tangible product or a service.

**Maine Public Utilities Commission (Docket 2002-665-U) – April 2003**

Analysis of Central Maine Power Company's proposed transmission line for Southern York County and recommendation of alternatives.

**Massachusetts Legislature, Joint Committees on Government Regulations and Energy – March 2003**

Whether PG&E can decide to permanently retire one or more of the generating units at its Salem Harbor Station if it is not granted an extension beyond October 2004 to reduce the emissions from the Station's three coal-fired units and one oil-fired unit.

**New Jersey Board of Public Utilities (Docket No. ER02080614) – January 2003**

The prudence of Rockland Electric Company's power purchases during the period August 1, 1999 through July 31, 2002.

**New York State Board on Electric Generation Siting and the Environment (Case No. 00-F-1356) – September and October 2002 and January 2003**

The need for and the environmental benefits from the proposed 300 MW Kings Park Energy generating facility.

**Arizona Corporation Commission (Docket No. E-01345A-01-0822) – March 2002**

The reasonableness of Arizona Public Service Company's proposed long-term power purchase agreement with an affiliated company.

**New York State Board on Electric Generation Siting and the Environment (Case No. 99-F-1627) – March 2002**

Repowering NYPA's existing Poletti Station in Queens, New York.



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**Connecticut Siting Council (Docket No. 217) – March 2002, November 2002, and January 2003**

Whether the proposed 345-kV transmission line between Plumtree and Norwalk substations in Southwestern Connecticut is needed and will produce public benefits.

**Vermont Public Service Board (Case No. 6545) – January 2002**

Whether the proposed sale of the Vermont Yankee Nuclear Plant to Entergy is in the public interest of the State of Vermont and Vermont ratepayers.

**Connecticut Department of Public Utility Control (Docket 99-09-12RE02) – December 2001**

The reasonableness of adjustments that Connecticut Light and Power Company seeks to make to the proceeds that it received from the sale of Millstone Nuclear Power Station.

**Connecticut Siting Council (Docket No. 208) – October 2001**

Whether the proposed cross-sound cable between Connecticut and Long Island is needed and will produce public benefits for Connecticut consumers.

**New Jersey Board of Public Utilities (Docket No. EM01050308) - September 2001**

The market power implications of the proposed merger between Conectiv and Pepco.

**Illinois Commerce Commission Docket No. 01-0423 – August, September, and October 2001**

Commonwealth Edison Company's management of its distribution and transmission systems.

**New York State Board on Electric Generation Siting and the Environment (Case No. 99-F-1627) - August and September 2001**

The environmental benefits from the proposed 500 MW NYPA Astoria generating facility.

**New York State Board on Electric Generation Siting and the Environment (Case No. 99-F-1191) - June 2001**

The environmental benefits from the proposed 1,000 MW Astoria Energy generating facility.

**New Jersey Board of Public Utilities (Docket No. EM00110870) - May 2001**

The market power implications of the proposed merger between FirstEnergy and GPU Energy.

**Connecticut Department of Public Utility Control (Docket 99-09-12RE01) - November 2000**

The proposed sale of Millstone Nuclear Station to Dominion Nuclear, Inc.

**Illinois Commerce Commission (Docket 00-0361) - August 2000**

The impact of nuclear power plant life extensions on Commonwealth Edison Company's decommissioning costs and collections from ratepayers.

**Vermont Public Service Board (Docket 6300) - April 2000**

Whether the proposed sale of the Vermont Yankee nuclear plant to AmerGen Vermont is in the public interest.

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**Massachusetts Department of Telecommunications and Energy (Docket 99-107, Phase II) - April and June 2000**

The causes of the May 18, 1999, main transformer fire at the Pilgrim generating station.

**Connecticut Department of Public Utility Control (Docket 00-01-11) - March and April 2000**

The impact of the proposed merger between Northeast Utilities and Con Edison, Inc. on the reliability of the electric service being provided to Connecticut ratepayers.

**Connecticut Department of Public Utility Control (Docket 99-09-12) - January 2000**

The reasonableness of Northeast Utilities plan for auctioning the Millstone Nuclear Station.

**Connecticut Department of Public Utility Control (Docket 99-08-01) - November 1999**

Generation, Transmission, and Distribution system reliability.

**Illinois Commerce Commission (Docket 99-0115) - September 1999**

Commonwealth Edison Company's decommissioning cost estimate for the Zion Nuclear Station.

**Connecticut Department of Public Utility Control (Docket 99-03-36) - July 1999**

Standard offer rates for Connecticut Light & Power Company.

**Connecticut Department of Public Utility Control (Docket 99-03-35) - July 1999**

Standard offer rates for United Illuminating Company.

**Connecticut Department of Public Utility Control (Docket 99-02-05) - April 1999**

Connecticut Light & Power Company stranded costs.

**Connecticut Department of Public Utility Control (Docket 99-03-04) - April 1999**

United Illuminating Company stranded costs.

**Maryland Public Service Commission (Docket 8795) - December 1998**

Future operating performance of Delmarva Power Company's nuclear units.

**Maryland Public Service Commission (Dockets 8794/8804) - December 1998**

Baltimore Gas and Electric Company's proposed replacement of the steam generators at the Calvert Cliffs Nuclear Power Plant. Future performance of nuclear units.

**Indiana Utility Regulatory Commission (Docket 38702-FAC-40-S1) - November 1998**

Whether the ongoing outages of the two units at the D.C. Cook Nuclear Plant were caused or extended by mismanagement.

**Arkansas Public Service Commission (Docket 98-065-U) - October 1998**

Entergy's proposed replacement of the steam generators at the ANO Unit 2 Steam Generating Station.

**Massachusetts Department of Telecommunications and Energy (Docket 97-120) - October**

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**1998**

Western Massachusetts Electric Company's Transition Charge. Whether the extended 1996-1998 outages of the three units at the Millstone Nuclear Station were caused or extended by mismanagement.

**Connecticut Department of Public Utility Control (Docket 98-01-02) - September 1998**

Nuclear plant operations, operating and capital costs, and system reliability improvement costs.

**Illinois Commerce Commission (Docket 97-0015) - May 1998**

Whether any of the outages of Commonwealth Edison Company's twelve nuclear units during 1996 were caused or extended by mismanagement. Whether equipment problems, personnel performance weaknesses, and program deficiencies could have been avoided or addressed prior to plant outages. Outage-related fuel and replacement power costs.

**Public Service Commission of West Virginia (Case 97-1329-E-CN) - March 1998**

The need for a proposed 765 kV transmission line from Wyoming, West Virginia, to Cloverdate, Virginia.

**Illinois Commerce Commission (Docket 97-0018) - March 1998**

Whether any of the outages of the Clinton Power Station during 1996 were caused or extended by mismanagement.

**Connecticut Department of Public Utility Control (Docket 97-05-12) - October 1997**

The increased costs resulting from the ongoing outages of the three units at the Millstone Nuclear Station.

**New Jersey Board of Public Utilities (Docket ER96030257) - August 1996**

Replacement power costs during plant outages.

**Illinois Commerce Commission (Docket 95-0119) - February 1996**

Whether any of the outages of Commonwealth Edison Company's twelve nuclear units during 1994 were caused or extended by mismanagement. Whether equipment problems, personnel performance weaknesses, and program deficiencies could have been avoided or addressed prior to plant outages. Outage-related fuel and replacement power costs.

**Public Utility Commission of Texas (Docket 13170) - December 1994**

Whether any of the outages of the River Bend Nuclear Station during the period October 1, 1991, through December 31, 1993, were caused or extended by mismanagement.

**Public Utility Commission of Texas (Docket 12820) - October 1994**

Operations and maintenance expenses during outages of the South Texas Nuclear Generating Station.

**Wisconsin Public Service Commission (Cases 6630-CE-197 and 6630-CE-209) - September and October 1994**

The reasonableness of the projected cost and schedule for the replacement of the steam generators at the Point Beach Nuclear Power Plant. The potential impact of plant aging on future operating costs and performance.

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**Public Utility Commission of Texas (Docket 12700) - June 1994**

Whether El Paso Electric Company's share of Palo Verde Unit 3 was needed to ensure adequate levels of system reliability. Whether the Company's investment in Unit 3 could be expected to generate cost savings for ratepayers within a reasonable number of years.

**Arizona Corporation Commission (Docket U-1551-93-272) - May and June 1994**

Southwest Gas Corporation's plastic and steel pipe repair and replacement programs.

**Connecticut Department of Public Utility Control (Docket 92-04-15) - March 1994**

Northeast Utilities management of the 1992/1993 replacement of the steam generators at Millstone Unit 2.

**Connecticut Department of Public Utility Control (Docket 92-10-03) - August 1993**

Whether the 1991 outage of Millstone Unit 3 as a result of the corrosion of safety-related plant piping systems was due to mismanagement.

**Public Utility Commission of Texas (Docket 11735) - April and July 1993**

Whether any of the outages of the Comanche Peak Unit 1 Nuclear Station during the period August 13, 1990, through June 30, 1992, were caused or extended by mismanagement.

**Connecticut Department of Public Utility Control (Docket 91-12-07) - January 1993 and August 1995**

Whether the November 6, 1991, pipe rupture at Millstone Unit 2 and the related outages of the Connecticut Yankee and Millstone units were caused or extended by mismanagement. The impact of environmental requirements on power plant design and operation.

**Connecticut Department of Public Utility Control (Docket 92-06-05) - September 1992**

United Illuminating Company off-system capacity sales. [Confidential Testimony]

**Public Utility Commission of Texas (Docket 10894) - August 1992**

Whether any of the outages of the River Bend Nuclear Station during the period October 1, 1988, through September 30, 1991, were caused or extended by mismanagement.

**Connecticut Department of Public Utility Control (Docket 92-01-05) - August 1992**

Whether the July 1991 outage of Millstone Unit 3 due to the fouling of important plant systems by blue mussels was the result of mismanagement.

**California Public Utilities Commission (Docket 90-12-018) - November 1991, April 1992, June and July 1993**

Whether any of the outages of the three units at the Palo Verde Nuclear Generating Station during 1989 and 1990 were caused or extended by mismanagement. Whether equipment problems, personnel performance weaknesses and program deficiencies could have been avoided or addressed prior to outages. Whether specific plant operating cost and capital expenditures were necessary and prudent.

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**Public Utility Commission of Texas (Docket 9945) - June 1991**

Whether El Paso Electric Company's share of Palo Verde Unit 3 was needed to ensure adequate levels of system reliability. Whether the Company's investment in the unit could be expected to generate cost savings for ratepayers within a reasonable number of years. El Paso Electric Company's management of the planning and licensing of the Arizona Interconnection Project transmission line.

**Arizona Corporation Commission (Docket U-1345-90-007) - December 1990 and April 1991**

Arizona Public Service Company's management of the planning, construction and operation of the Palo Verde Nuclear Generating Station. The costs resulting from identified instances of mismanagement.

**New Jersey Board of Public Utilities (Docket ER89110912J) - July and October 1990**

The economic costs and benefits of the early retirement of the Oyster Creek Nuclear Plant. The potential impact of the unit's early retirement on system reliability. The cost and schedule for siting and constructing a replacement natural gas-fired generating plant.

**Public Utility Commission of Texas (Docket 9300) - June and July 1990**

Texas Utilities management of the design and construction of the Comanche Peak Nuclear Plant. Whether the Company was prudent in repurchasing minority owners' shares of Comanche Peak without examining the costs and benefits of the repurchase for its ratepayers.

**Federal Energy Regulatory Commission (Docket EL-88-5-000) - November 1989**

Boston Edison's corporate management of the Pilgrim Nuclear Station.

**Connecticut Department of Public Utility Control (Docket 89-08-11) - November 1989**

United Illuminating Company's off-system capacity sales.

**Kansas State Corporation Commission (Case 164,211-U) - April 1989**

Whether any of the 127 days of outages of the Wolf Creek generating plant during 1987 and 1988 were the result of mismanagement.

**Public Utility Commission of Texas (Docket 8425) - March 1989**

Whether Houston Lighting & Power Company's new Limestone Unit 2 generating facility was needed to provide adequate levels of system reliability. Whether the Company's investment in Limestone Unit 2 would provide a net economic benefit for ratepayers.

**Illinois Commerce Commission (Dockets 83-0537 and 84-0555) - July 1985 and January 1989**

Commonwealth Edison Company's management of quality assurance and quality control activities and the actions of project contractors during construction of the Byron Nuclear Station.

**New Mexico Public Service Commission (Case 2146, Part II) - October 1988**

The rate consequences of Public Service Company of New Mexico's ownership of Palo Verde Units 1 and 2.

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**United States District Court for the Eastern District of New York (Case 87-646-JBW) - October 1988**

Whether the Long Island Lighting Company withheld important information from the New York State Public Service Commission, the New York State Board on Electric Generating Siting and the Environment, and the U.S. Nuclear Regulatory Commission.

**Public Utility Commission of Texas (Docket 6668) - August 1988 and June 1989**

Houston Light & Power Company's management of the design and construction of the South Texas Nuclear Project. The impact of safety-related and environmental requirements on plant construction costs and schedule.

**Federal Energy Regulatory Commission (Docket ER88-202-000) - June 1988**

Whether the turbine generator vibration problems that extended the 1987 outage of the Maine Yankee nuclear plant were caused by mismanagement.

**Illinois Commerce Commission (Docket 87-0695) - April 1988**

Illinois Power Company's planning for the Clinton Nuclear Station.

**North Carolina Utilities Commission (Docket E-2, Sub 537) - February 1988**

Carolina Power & Light Company's management of the design and construction of the Harris Nuclear Project. The Company's management of quality assurance and quality control activities. The impact of safety-related and environmental requirements on construction costs and schedule. The cost and schedule consequences of identified instances of mismanagement.

**Ohio Public Utilities Commission (Case 87-689-EL-AIR) - October 1987**

Whether any of Ohio Edison's share of the Perry Unit 2 generating facility was needed to ensure adequate levels of system reliability. Whether the Company's investment in Perry Unit 1 would produce a net economic benefit for ratepayers.

**North Carolina Utilities Commission (Docket E-2, Sub 526) - May 1987**

Fuel factor calculations.

**New York State Public Service Commission (Case 29484) - May 1987**

The planned startup and power ascension testing program for the Nine Mile Point Unit 2 generating facility.

**Illinois Commerce Commission (Dockets 86-0043 and 86-0096) - April 1987**

The reasonableness of certain terms in a proposed Power Supply Agreement.

**Illinois Commerce Commission (Docket 86-0405) - March 1987**

The in-service criteria to be used to determine when a new generating facility was capable of providing safe, adequate, reliable and efficient service.

**Indiana Public Service Commission (Case 38045) - November 1986**

Northern Indiana Public Service Company's planning for the Schaefer Unit 18 generating facility. Whether the capacity from Unit 18 was needed to ensure adequate system reliability. The rate consequences of excess capacity on the Company's system.

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**Superior Court in Rockingham County, New Hampshire (Case 86E328) - July 1986**

The radiation effects of low power testing on the structures, equipment and components in a new nuclear power plant.

**New York State Public Service Commission (Case 28124) - April 1986 and May 1987**

The terms and provisions in a utility's contract with an equipment supplier. The prudence of the utility's planning for a new generating facility. Expenditures on a canceled generating facility.

**Arizona Corporation Commission (Docket U-1345-85) - February 1986**

The construction schedule for Palo Verde Unit No. 1. Regulatory and technical factors that would likely affect future plant operating costs.

**New York State Public Service Commission (Case 29124) – December 1985 and January 1986**

Niagara Mohawk Power Corporation's management of construction of the Nine Mile Point Unit No. 2 nuclear power plant.

**New York State Public Service Commission (Case 28252) - October 1985**

A performance standard for the Shoreham nuclear power plant.

**New York State Public Service Commission (Case 29069) - August 1985**

A performance standard for the Nine Mile Point Unit No. 2 nuclear power plant.

**Missouri Public Service Commission (Cases ER-85-128 and EO-85-185) - July 1985**

The impact of safety-related regulatory requirements and plant aging on power plant operating costs and performance. Regulatory factors and plant-specific design features that will likely affect the future operating costs and performance of the Wolf Creek Nuclear Plant.

**Massachusetts Department of Public Utilities (Case 84-152) - January 1985**

The impact of safety-related regulatory requirements and plant aging on power plant operating costs and performance. Regulatory factors and plant-specific design features that will likely affect the future operating costs and performance of the Seabrook Nuclear Plant.

**Maine Public Utilities Commission (Docket 84-113) - September 1984**

The impact of safety-related regulatory requirements and plant aging on power plant operating costs and performance. Regulatory factors and plant-specific design features that will likely affect the future operating costs and performance of the Seabrook Nuclear Plant.

**South Carolina Public Service Commission (Case 84-122-E) - August 1984**

The repair and replacement strategy adopted by Carolina Power & Light Company in response to pipe cracking at the Brunswick Nuclear Station. Quantification of replacement power costs attributable to identified instances of mismanagement.

**Vermont Public Service Board (Case 4865) - May 1984**

The repair and replacement strategy adopted by management in response to pipe cracking at the Vermont Yankee nuclear plant.

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**New York State Public Service Commission (Case 28347) -January 1984**

The information that was available to Niagara Mohawk Power Corporation prior to 1982 concerning the potential for cracking in safety-related piping systems at the Nine Mile Point Unit No. 1 nuclear plant.

**New York State Public Service Commission (Case 28166) - February 1983 and February 1984**

Whether the January 25, 1982, steam generator tube rupture at the Ginna Nuclear Plant was caused by mismanagement.

**U.S. Nuclear Regulatory Commission (Case 50-247SP) - May 1983**

The economic costs and benefits of the early retirement of the Indian Point nuclear plants.



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## REPORTS, ARTICLES, AND PRESENTATIONS

*Comments on Draft Portland General Electric Company 2009 Integrated Resource Plan*, October 2009.

*Energy Future: A Green Energy Alternative for Michigan*, report, July 2009.

*Energy Future: A Green Energy Alternative for Michigan*, presentation, July 2009.

*Comments on Consumers Energy's Electric Generation Alternatives Analysis for the Balanced Energy Initiative including the Proposed Karn-Weadock Coal Plant*, July 2009.

*Comments on Wolverine Power Cooperative's Electric Generation Alternatives Analysis for the Proposed Rogers City Coal Plant*. July 2009

*Preliminary Assessment of East Kentucky Power Cooperative's 2009 Resource Plan*, June 2009.

*The Financial Risks to Old Dominion Electric Cooperative's Consumer-Members of Building and Operating the Proposed Cypress Creek Power Station*, April 2009.

*An Assessment of Santee Cooper's 2008 Resource Planning*, April 2009.

*Nuclear Loan Guarantees: Another Taxpayer Bailout Ahead*, Report for the Union of Concerned Scientists, March 2009.

*New Hampshire Senate Bill 152: Merrimack Station Scrubber*, March 2009.

*The Risks of Building and Operating Plant Washington*, Presentation to the Sustainable Atlanta Roundtable, December 2008.

*The Risks of Building and Operating Plant Washington*, Report and Presentation to EMC Board Members, December 2008.

*Don't Get Burned, the Risks of Investing in New Coal-Fired Power Plants*, Presentation at the University of California at Berkeley Energy and Resources Group Colloquium, October 2008.

*Don't Get Burned, the Risks of Investing in New Coal-Fired Power Plants*, Presentation at Georgia Tech University, October 2008.

*Nuclear Power Plant Construction Costs*, Synapse Energy Economics, July 2008.

*Coal-Fired Power Plant Construction Costs*, Synapse Energy Economics, July 2008.

*Synapse 2008 CO<sub>2</sub> Price Forecasts*, Synapse Energy Economics, July 2008.

*Don't Get Burned, the Risks of Investing in New Coal-Fired Power Plants*, Presentation at the NARUC ERE Committee, NARUC Summer Meetings, July 2008.

*Are There Nukes In Our Future*, Presentation at the NASUCA Summer Meetings, June 2008.

*Risky Appropriations: Gambling US Energy Policy on the Global Nuclear Energy Partnership*, Report for Friends of the Earth, the Institute for Policy Studies, the Government Accountability Project, and the Southern Alliance for Clean Energy, March 2008.

*Don't Get Burned, the Risks of Investing in New Coal-Fired Power Plants*, Presentation to the New York Society of Securities Analysts, February 26, 2008.

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*Don't Get Burned*, Report for the Interfaith Center for Corporate Responsibility, February 2008.

*The Risks of Participating in the AMPGS Coal Plant*, Report for NRDC, February 2008.

*Kansas is Not Alone, the New Climate for Coal*, Presentation to members of the Kansas State Legislature, January 22, 2008.

*The Risks of Building New Nuclear Power Plants*, Presentation to the Utah State Legislature Public Utilities and Technology Committee, September 19, 2007.

*The Risks of Building New Nuclear Power Plants*, Presentation to Moody's and Standard & Poor's rating agencies, May 17, 2007.

*The Risks of Building New Nuclear Power Plants*, U.S. Senate and House of Representative Briefings, April 20, 2007.

*Carbon Dioxide Emissions Costs and Electricity Resource Planning*, New Mexico Public Regulation Commission, Case 06-00448-UT, March 28, 2007, with Anna Sommer.

*The Risks of Building New Nuclear Power Plants*, Presentation to the New York Society of Securities Analysts, June 8, 2006.

*Conservation and Renewable Energy Should be the Cornerstone for Meeting Future Natural Gas Needs*. Presentation to the Global LNG Summit, June 1, 2004. Presentation given by Cliff Chen.

*Comments on natural gas utilities' Phase I Proposals for pre-approved full cost recovery of contracts with liquid natural gas (LNG) suppliers and the costs of interconnecting their systems with LNG facilities*. Comments in California Public Utilities Commission Rulemaking 04-01-025. March 23, 2004.

*The 2003 Blackout: Solutions that Won't Cost a Fortune*, The Electricity Journal, November 2003, with David White, Amy Roschelle, Paul Peterson, Bruce Biewald, and William Steinhurst.

*The Impact of Converting the Cooling Systems at Indian Point Units 2 and 3 on Electric System Reliability*. An Analysis for Riverkeeper, Inc. November 3, 2003.

*The Impact of Converting Indian Point Units 2 and 3 to Closed-Cycle Cooling Systems with Cooling Towers on Energy's Likely Future Earnings*. An Analysis for Riverkeeper, Inc. November 3, 2003.

*Entergy's Lost Revenues During Outages of Indian Point Units 2 and 3 to Convert to Closed-Cycle Cooling Systems*. An Analysis for Riverkeeper, Inc. November 3, 2003.

*Power Plant Repowering as a Strategy for Reducing Water Consumption at Existing Electric Generating Facilities*. A presentation at the May 2003 Symposium on Cooling Water Intake Technologies to Protect Aquatic Organisms. May 6, 2003.

*Financial Insecurity: The Increasing Use of Limited Liability Companies and Multi-tiered Holding Companies to Own Electric Generating Plants*. A presentation at the 2002 NASUCA Annual Meeting. November 12, 2002.

*Determining the Need for Proposed Overhead Transmission Facilities*. A Presentation by David Schlissel and Paul Peterson to the Task Force and Working Group for Connecticut Public Act 02-95. October 17, 2002.

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*Future PG&E Net Revenues From The Sale of Electricity Generated at its Brayton Point Station.* An Analysis for the Attorney General of the State of Rhode Island. October 2, 2002.

*PG&E's Net Revenues From The Sale of Electricity Generated at its Brayton Point Station During the Years 1999-2002.* An Analysis for the Attorney General of the State of Rhode Island. October 2, 2002.

*Financial Insecurity: The Increasing Use of Limited Liability Companies and Multi-Tiered Holding Companies to Own Nuclear Power Plants.* A Synapse report for the STAR Foundation and Riverkeeper, Inc., by David Schlissel, Paul Peterson, and Bruce Biewald, August 7, 2002.

*Comments on EPA's Proposed Clean Water Act Section 316(b) for Cooling Water Intake Structures at Phase II Existing Facilities,* on behalf of Riverkeeper, Inc., by David Schlissel and Geoffrey Keith, August 2002.

*The Impact of Retiring the Indian Point Nuclear Power Station on Electric System Reliability.* A Synapse Report for Riverkeeper, Inc. and Pace Law School Energy Project. May 7, 2002.

*Preliminary Assessment of the Need for the Proposed Plumtree-Norwalk 345-kV Transmission Line.* A Synapse Report for the Towns of Bethel, Redding, Weston, and Wilton Connecticut. October 15, 2001.

*ISO New England's Generating Unit Availability Study: Where's the Beef?* A Presentation at the June 29, 2001 Restructuring Roundtable.

*Clean Air and Reliable Power: Connecticut Legislative House Bill HB6365 will not Jeopardize Electric System Reliability.* A Synapse Report for the Clean Air Task Force. May 2001.

*Room to Breathe: Why the Massachusetts Department of Environmental Protection's Proposed Air Regulations are Compatible with Reliability.* A Synapse Report for MASSPIRG and the Clean Water Fund. March 2001.

*Generator Outage Increases: A Preliminary Analysis of Outage Trends in the New England Electricity Market,* a Synapse Report for the Union of Concerned Scientists, January 7, 2001.

*Cost, Grid Reliability Concerns on the Rise Amid Restructuring,* with Charlie Harak, Boston Business Journal, August 18-24, 2000.

*Report on Indian Point 2 Steam Generator Issues,* Schlissel Technical Consulting, Inc., March 10, 2000.

*Preliminary Expert Report in Case 96-016613, Cities of Wharton, Pasadena, et al v. Houston Lighting & Power Company,* October 28, 1999.

*Comments of Schlissel Technical Consulting, Inc. on the Nuclear Regulatory Commission's Draft Policy Statement on Electric Industry Economic Deregulation,* February 1997.

*Report to the Municipal Electric Utility Association of New York State on the Cost of Decommissioning the Fitzpatrick Nuclear Plant,* August 1996.

*Report to the Staff of the Arizona Corporation Commission on U.S. West Corporation's telephone cable repair and replacement programs,* May, 1996.

*Nuclear Power in the Competitive Environment,* NRRI Quarterly Bulletin, Vol. 16, No. 3, Fall 1995.

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*Nuclear Power in the Competitive Environment*, presentation at the 18th National Conference of Regulatory Attorneys, Scottsdale, Arizona, May 17, 1995.

*The Potential Safety Consequences of Steam Generator Tube Cracking at the Byron and Braidwood Nuclear Stations*, a report for the Environmental Law and Policy Center of the Midwest, 1995.

*Report to the Public Policy Group Concerning Future Trojan Nuclear Plant Operating Performance and Costs*, July 15, 1992.

*Report to the New York State Consumer Protection Board on the Costs of the 1991 Refueling Outage of Indian Point 2*, December 1991.

*Preliminary Report on Excess Capacity Issues to the Public Utility Regulation Board of the City of El Paso*, Texas, April 1991.

*Nuclear Power Plant Construction Costs*, presentation at the November, 1987, Conference of the National Association of State Utility Consumer Advocates.

*Comments on the Final Report of the National Electric Reliability Study*, a report for the New York State Consumer Protection Board, February 27, 1981.

## **OTHER SIGNIFICANT INVESTIGATIONS AND LITIGATION SUPPORT WORK**

Reviewed the salt deposition mitigation strategy proposed for Reliant Energy's repowering of its Astoria Generating Station. October 2002 through February 2003.

Assisted the Connecticut Office of Consumer Counsel in reviewing the auction of Connecticut Light & Power Company's power purchase agreements. August and September, 2000.

Assisted the New Jersey Division of the Ratepayer Advocate in evaluating the reasonableness of Atlantic City Electric Company's proposed sale of its fossil generating facilities. June and July, 2000.

Investigated whether the 1996-1998 outages of the three Millstone Nuclear Units were caused or extended by mismanagement. 1997 and 1998. Clients were the Connecticut Office of Consumer Counsel and the Office of the Attorney General of the Commonwealth of Massachusetts.

Investigated whether the 1995-1997 outages of the two units at the Salem Nuclear Station were caused or extended by mismanagement. 1996-1997. Client was the New Jersey Division of the Ratepayer Advocate.

Assisted the Associated Industries of Massachusetts in quantifying the stranded costs associated with utility generating plants in the New England states. May through July, 1996

Investigated whether the December 25, 1993, turbine generator failure and fire at the Fermi 2 generating plant was caused by Detroit Edison Company's mismanagement of fabrication, operation or maintenance. 1995. Client was the Attorney General of the State of Michigan.

Investigated whether the outages of the two units at the South Texas Nuclear Generating Station during the years 1990 through 1994 were caused or extended by mismanagement. Client was the Texas Office of Public Utility Counsel.

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Assisted the City Public Service Board of San Antonio, Texas in litigation over Houston Lighting & Power Company's management of operations of the South Texas Nuclear Generating Station.

Investigated whether outages of the Millstone nuclear units during the years 1991 through 1994 were caused or extended by mismanagement. Client was the Office of the Attorney General of the Commonwealth of Massachusetts.

Evaluated the 1994 Decommissioning Cost Estimate for the Maine Yankee Nuclear Plant. Client was the Public Advocate of the State of Maine.

Evaluated the 1994 Decommissioning Cost Estimate for the Seabrook Nuclear Plant. Clients were investment firms that were evaluating whether to purchase the Great Bay Power Company, one of Seabrook's minority owners.

Investigated whether a proposed natural-gas fired generating facility was need to ensure adequate levels of system reliability. Examined the potential impacts of environmental regulations on the unit's expected construction cost and schedule. 1992. Client was the New Jersey Rate Counsel.

Investigated whether Public Service Company of New Mexico management had adequately disclosed to potential investors the risk that it would be unable to market its excess generating capacity. Clients were individual shareholders of Public Service Company of New Mexico.

Investigated whether the Seabrook Nuclear Plant was prudently designed and constructed. 1989. Clients were the Connecticut Office of Consumer Counsel and the Attorney General of the State of Connecticut.

Investigated whether Carolina Power & Light Company had prudently managed the design and construction of the Harris nuclear plant. 1988-1989. Clients were the North Carolina Electric Municipal Power Agency and the City of Fayetteville, North Carolina.

Investigated whether the Grand Gulf nuclear plant had been prudently designed and constructed. 1988. Client was the Arkansas Public Service Commission.

Reviewed the financial incentive program proposed by the New York State Public Service Commission to improve nuclear power plant safety. 1987. Client was the New York State Consumer Protection Board.

Reviewed the construction cost and schedule of the Hope Creek Nuclear Generating Station. 1986-1987. Client was the New Jersey Rate Counsel.

Reviewed the operating performance of the Fort St. Vrain Nuclear Plant. 1985. Client was the Colorado Office of Consumer Counsel.

## **WORK HISTORY**

2010 - President, Schlissel Technical Consulting, Inc.

2000 - 2009: Senior Consultant, Synapse Energy Economics, Inc.

1994 - 2000: President, Schlissel Technical Consulting, Inc.

1983 - 1994: Director, Schlissel Engineering Associates

1979 - 1983: Private Legal and Consulting Practice

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1975 - 1979: Attorney, New York State Consumer Protection Board  
1973 - 1975: Staff Attorney, Georgia Power Project

## **EDUCATION**

1983-1985: Massachusetts Institute of Technology  
Special Graduate Student in Nuclear Engineering and Project Management,

1973: Stanford Law School,  
Juris Doctor

1969: Stanford University  
Master of Science in Astronautical Engineering,

1968: Massachusetts Institute of Technology  
Bachelor of Science in Astronautical Engineering,

## **PROFESSIONAL MEMBERSHIPS**

- New York State Bar since 1981
- American Nuclear Society