Committee on Energy and Commerce U.S. House of Representatives Witness Disclosure Requirement - "Truth in Testimony"

Witness Disclosure Requirement - "Truth in Testimony" Required by House Rule XI, Clause 2(g)(5)

1. Your Name: Eugene L. Shlatz

2.	Your Title: Director						
3.	The Entity(ies) You are Representing: Navigant Consulting, Inc.						
4.	Are you testifying on behalf of the Federal, or a State or local government entity?	Yes	No X				
5.	Please list any Federal grants or contracts, or contracts or payments originating wit foreign government, that you or the entity(ies) you represent have received on or aff January 1, 2015. Only grants, contracts, or payments related to the subject matter the hearing must be listed.						
	None						
6.	Please attach your curriculum vitae to your completed disclosure for	m. CV Attac	hed.				

Eugene L. Shlatz

Director

Professional Summary

Gene has over 30 years of management consulting and supervisory experience in energy delivery, electric power generation and distributed energy systems. He has directed numerous engagements on electric system reliability, smart and renewable technologies, microgrids, asset management, electric pricing, due diligence and system adequacy. His clients have included US, Canadian, European and South American electric utilities, electricity consumers, law firms and government agencies. Gene is an expert on electric power delivery systems, and has testified before FERC and state regulatory commissions on transmission open access, DG integration, retail rates, regulatory compliance, and capital planning. He has published numerous articles and industry presentations on smart grid, distributed resources, electric reliability, asset management, energy efficiency, and electric pricing.

Professional Experience

Directs project teams and manages consulting engagements for electric utility, government and energy supply clients. Responsible for energy delivery and power production assignments in the following areas:

- » Emerging Technologies renewable technology and smart grid integration, energy efficiency and technical/economic assessment of distributed resources
- » Asset Management implementation strategy, project prioritization, performance measurement, utilization and cost optimization, electric delivery system planning
- » Operations & Planning transmission and distribution performance evaluation; target setting, remediation analysis, service quality standards and business process improvement
- » Regulatory capital planning, marginal and locational-based costs, expert witness support

Representative Client List and Engagements

Distributed Generation, Microgrids & Advanced Technologies

- » California Energy Commission/Southern California Edison. Project manager of DER integration studies for a major utility planning region. Predicted hosting capacity limits and options to increase DER capacity and value via advanced communications and control technologies. Assessed the capability of energy storage to increase capacity limits.
- » U.S. Department of Energy/Dominion Virginia Power. Project manager of Solar Integration Study to identify renewable capacity impacts and integration requirements in the state of Virginia. Determined distribution hosting capacity limits and impacts of increasing amounts of solar on DVP's generation, transmission and distribution system.
- » Los Angeles Department of Water & Power. Technical lead of a DER integration study to determine integration requirements and hosting capacity limits, and approaches to target DER based on locational needs and benefits. Assessed communication and control strategies, organization structure, tariff and rate options and preferred strategy to achieve renewable portfolio targets.

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- » Orange & Rockland Utilities. Project manager of a DG Interconnection benchmarking analysis. Conducting studies to <u>predict hosting capacity limits on O&R's T&D system</u> and mitigation options in support of NY's Renewable Energy Vision initiative.
- » Pacific Gas & Electric Company. Project manager of a <u>Transmission and Distribution PV Impact Study</u>. It included engineering analyses designed to facilitate the integration of DGPV into the grid. Developed PV values based on analysis across multiple scenarios and attributable to DGPV.
- » **Major Southeastern U.S. Utility (Confidential).** Project manager of a Solar Integration Study to assess the <u>technical and economic impact of increasing amounts of solar on the utilities' generation</u>, transmission and distribution system.
- » California Energy Commission/Southern California Edison. Project manager of a study evaluating <u>DG impacts and integration requirements</u> for up to 12,000 MW of DG in California by 2020. Developed a technical evaluation and costing framework applicable to all CA utilities.
- » **U.S. Navy.** Evaluated on-site <u>microgrid options for a major military shipyard,</u> including technical assessment of renewable generation, control strategies, electric system performance and system upgrades required to operate in stand-alone and parallel modes of operation.
- » U.S. Department of Energy (DOE). Provided technical and program management support for <u>DOE's Smart Grid Investment Grant (SGIG) program</u>. Responsible for impact evaluation of smart grid technologies, including program benefits and implementation strategies.
- » PowerStream (Ontario). Providing project management and evaluation services for an on-site microgrid comprised of a mix of wind, solar, storage and gas-fired technologies. Developing control and dispatch strategies and methods for assessing MG performance and benefits.
- » NV Energy. Project manager of <u>DG and large PV integration studies</u> for southern and northern Nevada. Identified <u>technical/capacity limits of renewable energy sources on NV Energy's T&D system</u>. Responsible for technical and economic evaluation of power system impacts and integration costs, including intermittency. Testified before Nevada Commission to support findings.
- » Toronto Hydro. Project manager of comprehensive evaluation of <u>distributed energy resources</u> versus traditional T&D alternatives for a major urban center. Included a technical assessment of DG systems impacts, technology integration and forecast of cost-effective alternatives.
- » Southern California Edison Company. Technical support a 3-year integrated grid pilot designed to demonstrate modern grid infrastructure functionality and advance customers' ability to interconnect renewable energy sources, proactively manage customer demand, and improve the safety and reliability of the grid in a cost-effective manner. The project deployed advanced technologies to facilitate the integration of high penetration distributed energy resources (DER).

Reliability, Benchmarking and Electric System Planning

» New York Power Authority/ Puerto Rico Electric Power Authority. Lead investigator and subject matter expert of a study to assess damage caused by major hurricanes in 2017 and to provide recommendations to bring the power generation and delivery system to current design standards.

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- » Hawaiian Electric Company. Project manager of a technical analysis to assess the impact of capital and O&M improvement programs on <u>electric system reliability performance during storms</u> and major events. Demonstrated a correlation of program improvements and system resiliency during storms.
- » Exelon/Commonwealth Edison. Lead consultant of an engineering and operational assessment of Exelon's system design, construction and maintenance practices. Our study was filed before the ICC in response to claims of system inadequacy for major storms. Provided expert witness testimony that confirmed ComEd's T&D practices were consistent with or exceeded industry standards.
- » Jersey Central Power & Light. Principle investigator of a commission-mandated <u>Operations Review of JCP&L's distribution system</u>. The review included an assessment of reliability, storm response, preventative maintenance and budgeting processes. Navigant's report and recommendations were unanimously approved and accepted by the New Jersey Board of Public Utilities.
- » Exelon/Commonwealth Edison. Lead consultant of an engineering and operational assessment of Exelon's system design, construction and maintenance practices. Our study was filed before the ICC in response to claims of system inadequacy for major storms. Provided expert witness testimony that confirmed ComEd's T&D practices were consistent with or exceeded industry standards.
- » Saskatoon Light & Power. Project manager of a 20-year capital development plan designed to meet reliability and performance objectives at lowest cost. Our assessment included a review and analysis of T&D engineering, maintenance and operations; including recommendations for improvement.
- » Sulphur Springs Valley Electric Cooperative (SSVEC). Project manager of an <u>independent</u> <u>Feasibility Study of delivery alternatives</u>, including T&D, distributed generation, energy efficiency, energy storage and renewables. Successfully testified as an expert witness before AZ commission.
- » Austin Energy. Performed a <u>benchmarking and gap analysis</u> of AE's engineering and operations. Prepared recommendations to enhance reliability and operations efficiency.
- » Saskatoon Light & Power. Project manager of a 20-year capital development plan designed to meet reliability and performance objectives at lowest cost. Our assessment included a review and analysis of T&D engineering, maintenance and operations; including recommendations for improvement.
- » Toronto Hydro Electric System, Limited (THESL). Performed a long-range planning study for THESL's radial and network downtown distribution system. Evaluated capital expansion versus CDM needed to serve downtown Toronto for 20 years.
- » Sulphur Springs Valley Electric Cooperative (SSVEC). Project manager of an independent Feasibility Study of delivery alternatives, including T&D, distributed generation, energy efficiency, energy storage and renewables. Successfully testified as an expert witness before AZ commission.
- » **Austin Energy.** Performed a <u>benchmarking and gap analysis of engineering and operations performance</u> for AE's energy delivery organization.

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- » **Ameren Services.** Conducted a review and <u>predictive assessment of distribution reliability</u>. A methodology was developed to apply fact-based methods to allocate reliability expenditures.
- » **American Electric Power.** Conducted a review and <u>predictive assessment of distribution reliability</u>. Applied fact-based methods to prioritize investment decisions and to quantify risk.
- » Potomac Electric Power Company (PHI). Conducted an investigation and benchmarking of PEPCO's T&D system, including transmission and distribution infrastructure. Prepared recommendations to enhance performance and reduce outage risk.
- » National Grid. Conducted a system review and <u>predictive assessment of distribution reliability</u>. A strategic methodology was developed to predict system outage performance based on system attributes, equipment performance and historical reliability.
- » Potomac Electric Power Company (PHI). Project manager of a <u>benchmarking analysis of PEPCO's T&D system</u>, including transmission and distribution infrastructure. Prepared recommendations to enhance performance and reduce outage risk.
- » Dominion Virginia Power. Project manager and lead investigator of a comprehensive <u>technical</u> <u>review and risk assessment of secondary networks</u>. Reviewed and analyzed engineering standards, planning criteria, operations and maintenance, and construction methods.

Asset Management

- » Horizon Utilities Corporation. Developed strategies and provided ongoing support for HU's asset management initiative. Conducted a gap analysis and implementation of asset management strategies and evaluation methods. Included an evaluation of infrastructure upgrades, operational and reliability improvement and implementation strategies using AM-based approaches.
- First Energy. Lead consultant of a project team that implemented <u>asset management processes and capital prioritization</u> models for 6 operating companies in three jurisdictions. Responsible for model development and applications, technical review and overall quality assurance.
- » Seattle City Light. Conducted a <u>benchmarking and gap analysis</u> of the power supply and energy delivery business units. It included a business case analysis to support implementation of asset management methods and new AM organization.
- » Pepco/Conectiv (PHI). Responsible for an <u>asset management and prioritization</u> assessment of capital improvement and O&M programs for three states and the District of Columbia. It included developing asset prioritization methods for transmission, distribution and IT programs.
- » Entergy. Responsible for an <u>asset management and prioritization</u> assessment of Entergy's capital improvement programs for six jurisdictional utilities in 5 states. It included developing asset-specific prioritization methods for transmission and distribution programs.

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» PacifiCorp. Responsible for an <u>asset management and prioritization</u> assessment of PacifiCorp's capital improvement programs for six jurisdictional utilities in 6 states. It included developing asset-specific prioritization methods for transmission and distribution and IT programs.

Regulatory and Pricing

- » NV Energy (Sierra Pacific Power Company). Conducted a <u>T&D avoided cost study</u> to support an SPPC's rate filing and to determine Excess Energy Charges for net metering customers. Submitted expert testimony before the Nevada Commission on T&D marginal costs and application to NEM solar.
- » Exelon (Philadelphia Electric Company). Developed <u>T&D avoided cost</u> study to support PECO energy efficiency programs. Participated in a statewide stakeholder process to approve T&D avoided costs, which included the statewide EE program evaluator, the electric utility and related parties.
- » Puerto Rico Electric Power Authority (PREPA). Conducted a <u>T&D avoided cost analysis</u> and prepared expert testimony to support PREPA's rate filing and avoided costs applied to net metered customers.
- » Public Utility Authority (Israel). Conducted a <u>technical and economic review</u> of the Israeli Electric Corporation and Palestinian Electric Authority electric generation and power delivery system on behalf of the PUA. The review focused on the adequacy of IEC and PA electric infrastructure, power costs and investment programs.
- » Vermont Department of Public Service (VDPS). Conducted a geo-targeted analysis of energy efficiency programs designed to defer T&D investments. Worked with electric utility stakeholders to identify cost-effective deferral opportunities and to assess processes designed to target EE programs.
- » Toronto Hydro Electric System, Limited (THESL). Prepared <u>business case studies</u> for major capital programs in a <u>rate filing</u> before the Ontario Energy Board. Testified as an expert witness on several critical T&D infrastructure programs, the majority of which were approved by the board.
- » Canadian Utility (Confidential) Confidential study to assess the value and strategic benefits of the acquisition of electric utility energy delivery assets. Included a technical and economic assessment of key regulatory and acquisition risk factors to support a recommendation.
- » Progress Energy. Project manager of a best practices and <u>compliance review of fixed asset charging practices</u>. Reviewed methods, systems and practices used to record fixed assets for Florida and the Carolinas to support proposed changes filed with state commissions and the SEC.
- » Citizens Utilities/Vermont Electric Cooperative. Supported numerous <u>Certificate of Public Good</u> (CPG) applications before the Vermont Public Service Board (VPSB). Expert witness for technical, environmental, and costing studies.
- » Vermont Department of Public Service (VDPS). Conducted research and prepared sections of the <u>Twenty-Year Electric Plan</u>, including the impact of the independent system operator (ISO) and regional transmission organization (RTO) initiatives on Vermont's transmission providers.

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- » Potomac Electric Power Company (PHI). Project manager of a benchmarking study of storm hardening measures. Assessed the impact of hardening options on reliability and performance. Also assessed service quality (SQI) measures and performance-based rate (PBR) mechanisms.
- » Citizens Utilities (Vermont Electric Division). Project manager for a <u>T&D Audit</u> mandated by the Vermont Public Service Board. Reviewed T&D plant accounting systems and processes, and provided recommendations for improvement.
- » Massachusetts Department of Telecommunications and Energy (MDTE). Project manager of a <u>stray voltage</u> assessment of jurisdictional utilities. Identified causes of stray voltage and provided recommendations to mitigate future events, including action and improvement plans.

Work History

- » Navigant Consulting, Director
- » Stone & Webster Management Consultants, Executive Consultant
- » Green Mountain Power Corp, Assistant Vice President, Energy Planning
- » Ernst & Whinney, Supervisor

- » Gilbert/Commonwealth, Senior Consulting Engineer
- » Westinghouse Electric Corporation, Systems Analysis Engineer
- » Boston Edison Company, Student Engineer, Cooperative Education Prog.

Certifications, Memberships, and Awards

- » Professional Engineer State of Vermont
- » Institute of Electrical and Electronic Engineers, Section Chairman (Past)

Education

- » M.S. Electric Power Engineering, Rensselaer Polytechnic Institute
- » B.S. Electric Power Engineering, Rensselaer Polytechnic Institute

Articles & Publications

- "Smart Grid and Distributed Energy Storage," Total Energy USA, Houston Texas, November 2012.
- "Distributed Generation: Grid Impacts and Interconnection Strategies," Rocky Mountain Electric League, 2012 Spring Management, Engineering and Operations Conference, Omaha Nebraska.
- "Energy Storage Opportunities for Integration of Large-Scale Renewable Generation," Electricity Storage Association (ESA) Annual Conference, Washington DC, May 2012.

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- "Grid Integration of Renewable, Intermittent Resources," 2011 PowerGen International Conference, December 2011, Las Vegas, NV, with Vladimir Chadliev.
- "Reducing T&D Investments Through Energy Efficiency" IEPEC, August 2011, with Kathryn Parlin & Walter Poor.
- "Value of Distributed Generation and Smart Grid Applications," DistribuTECH, San Diego, February, 2011.
- » "Prioritization Methods for Smart Grid Investments," EEI Perspectives, April-May, 2010.
- "Evaluation of Targeted Demand-Side Management at ConEd (CECONY)," ACEEE Energy Efficiency Conference, September, 2009, with Craig McDonald.
- » "DER Operational & Grid Benefits" Electric Light & Power, February, 2009.
- "Benefits of Smart Grid Integration with Distributed Energy Storage Systems," Infocast Power Storage Conference, July, 2008.
- "The Rise of Distributed Energy Resources," Public Utilities Fortnightly, Feb, 2007, with S. Tobias.
- "Risk Planning & Project Prioritization: Bringing Energy Delivery to the Next Level in Asset Management," InfoCast T&D Asset Management Conference, St. Louis, MI, May 2004.
- "Valuation Methods: Estimating the Value of Avoiding the Risks Associated with T&D Reliability Failures," EEI Spring 2004 T&D Conference, Charlotte, NC, April 2004.
- » "Reliability Tradeoffs," EEI Perspectives, January-February, 2004, with Daniel O'Neill.
- "What's the Outlook for Distributed Generation Interconnection Standards?" 2003 PowerGen International Conference, Las Vegas, Nevada, December 2003.
- "Federal Interconnection Standards: Putting DG in a Box," Public Utilities Fortnightly, April 2003, with Stan Blazewicz.
- "An Innovative Approach to Fact-Based Distribution Reliability Cost Optimization," Distribution 2000, Brisbane, Australia, November 1999, with Cheryl Warren.
- "System Reliability: Competitive Issues," Rethinking Electric Reliability Conference, Chicago Illinois, September 1997.
- "Reliability: Competition & Keeping the Lights On," EUCI, Denver, Colorado, October 1998.
- » "System Reliability in a Restructured Environment," Electric System Reliability in a Competitive Environment Workshop, Denver, Colorado, October 1997.
- "Privatization Efforts in South America" EUCI Workshop, Denver, Colorado, January 1997.
- "Open Access Pricing Issues," Transmission Pricing Conference, Vail, Colorodo, Sept. 1996

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Testimony and Appearance as an Expert Witness

Coop Decemention	0	V	Dealast Issiad				
Case Description	Company	Year	Docket Jurisc	liction			
Rate Cases, Integrated Resource Planning and Regulatory Investigations							
Transfer of Electric Assets (Municipalization)	IBM	2017	15A-0589E	Colorado			
Marginal Costs (NEM & Rate Filing)	NV Energy	2016	16-06006	Nevada			
Custom Incentive Rate Filing	Toronto Hydro	2016	EB -2014-0116	Ontario			
Incremental Capital Module (Rate Filing)	Toronto Hydro	2014	EB-2012-0064	Ontario			
Summer/Winter 2011 Storm Review	Exelon/ComEd	2013	11-0588	Illinois			
Distributed Generation Integration	NV Energy	2012	10-04008	Nevada			
Distributed Utility Planning	CUC	2011	6290	Vermont			
Power Purchase Contracts – IURC Complaint	Jay REMC	2003	9704-CP-069	Indiana			
Section 205 Filing – Wholesale Rates	NISource	1998	ER96-35-000	FERC			
Open Access Transmission Tariff Filing	NISource	1997	ER96-399-000	FERC			
Request for Increase in Wholesale Rates	NISource	1996	ER92-330-000	FERC			
Request for Increase in Retail Rates	GMP	1996	5532	Vermont			
Least-Cost Planning Integrated Resource Plan	GMP	1991	5270	Vermont			
Request for Increase in Retail Rates	GMP	1991	5428	Vermont			
Request for Increase in Retail Rates	GMP	1990	5370	Vermont			
Request for Increase in Retail Rates	GMP	1989	5282	Vermont			
Request for Increase in Retail Rates	GMP	1988	5125	Vermont			
Contidionates of Dublic Cond							
Certificates of Public Good Transmission Line Construction Authorization	SSVEC	2010	E-01575A	A rizono			
	Velco/CUC	2010 2004	6792	Arizona			
Northern Loop Transmission Upgrades Substation Reconstruction – Richford				Vermont Vermont			
	CUC	2003	6682				
Island Pond to Bloomfield Line HK Webster Substation	CUC	2001	6044	Vermont			
	CUC	1999	6045	Vermont			
Burton Hill Substation		1999	6046	Vermont			
Border to Richford 120/46kV Line	CUC	1998	5331A	Vermont			
New Transmission Lines and Substation	IBM	1991	5549	Vermont			
New Substation – Northern Vermont	GMP	1990	5459	Vermont			
Gas Turbine Interconnection Facilities	IBM	1989	5347	Vermont			
Dover Substation Expansion	GMP	1987	5226	Vermont			
Industry Restructuring & Asset Transaction							
Purchase of Electric Assets	VEC	2004	6853	Vermont			
Certificate of Consent, Sale of Distribution Assets	CUC	2004	6850	Vermont			
Certificate of Consent, Sale of Transmission Assets	Velco/CUC	2004	6825	Vermont			
Prudency Review and Audit Support	CUC	2003	5841/5859	Vermont			
Competitive Opportunities Filing	ConEdison	1997	96-E-0897	New York			