



## Toben E. Galvin

**Toben Galvin**  
Director

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### Professional History

- Associate Director, Navigant Consulting
- Senior Consultant & Practice Area Leader, Summit Blue Consulting
- Deputy Director, Efficiency Maine, Maine Public Utilities Commission
- Senior Energy Analyst, Vermont Energy Investment Corporation / Efficiency Vermont
- Economist, National Oceanic and Atmospheric Administration
- Policy Coordinator, Conservation International
- Project Assistant, Chemonics International, Inc.

### Education

- M.S., Resource Economics, University of Florida 2000
- B.A., Anthropology, Grinnell College 1995
- School for International Training, Comparative Ecology, Quito, Ecuador

### Professional Associations

- Association of Energy Service Professionals
- International Association of Energy Economics

Toben Galvin is a Director for Navigant in the Energy Efficiency/ Demand Side Management Practice Area. Mr. Galvin has a broad background in the energy efficiency field, having previously worked for Efficiency Vermont which provides statewide demand side management (DSM) implementation services and as Deputy Director of Energy Programs at the Maine Public Utilities Commission/Efficiency Maine. Mr. Galvin has over ten years of experience in the energy efficiency demand-side management (DSM) industry. His areas of expertise span a wide spectrum from energy efficiency and demand response program design, process and impact evaluation, DSM potential studies and measure characterization, to regulatory reporting and compliance strategies. He has served as a program design advisor for numerous electric and gas utilities with a particular emphasis recently on overall strategy advice and energy efficiency portfolio planning to help utilities comply with statewide energy efficiency resource standards. Mr. Galvin has experience working with senior utility leadership and facilitating DSM collaborative stakeholder groups. Mr. Galvin earned a M.S. in Resource Economics from the University of Florida and a B.A. in Anthropology from Grinnell College.

### Professional Experience

- » PECO. Philadelphia, PA, 2013-2015 Electric Efficiency Portfolio Plan Development. Managed the design and development of PECO's updated portfolio of DSM programs for the next three year cycle, with a total portfolio cost of \$250 million. Prepared portfolio benefit-cost analysis, participation estimates, delivery costs, and overall PECO DSM program plan for the Pennsylvania Public Utility Commission. (2011-Present)
- » DTE Energy. 2012-2014 Comprehensive Portfolio Evaluation for Electric and Natural Gas Efficiency Programs. Project Manager for this portfolio evaluation, addressing all aspects of process, impact, and market effects research for DTE and MichCon Gas. (2012-Present)



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- » Chesapeake Utilities Corporation. Natural Gas Efficiency Program Design and Regulatory Support. Assisting utility with regulatory strategy and review of Delaware's pending energy efficiency resource standard and program design assistance for Maryland gas DSM programs. (2011)
- » *Wabash Valley Power Association, Indianapolis, IN, Efficiency Program Design and Portfolio Evaluation.* Assisting Wabash with portfolio DSM design for their 23 member co-ops, annual budget of \$2 million, and providing on-going portfolio evaluation and other support such as updating of avoided costs. (2011-Present)
- » *Efficiency Maine Trust. Impact Evaluation of ARRA Funded C&I Custom and Commercial Prescriptive Energy Efficiency Projects.* (2011)
- » *New York Power Authority, White Plains, NY. DSM Program Design.* Assisted NYPA with an evaluation of various residential energy efficiency program design options. (2011)
- » *State of Vermont, Department of Public Service. Process and Impact Evaluation of Efficiency Vermont's Geo-targeting Program.* Project manager for process and impact evaluation of Efficiency Vermont's Geo-targeting program. (2010)
- » *Maine Public Utilities Commission (MPUC). Review of Efficiency Maine Trust Triennial All-Fuels 2011-2013 DSM Plan.* Assisting the MPUC with statutory review of the 2011-2013 DSM plan for the delivery of statewide electric, natural gas, fuel oil, and propane energy efficiency programs. (2010)
- » *State of Vermont, Department of Public Service. Benchmarking of Efficiency Vermont's 2008 Performance.* Conducting a benchmarking study comparing Efficiency Vermont's energy savings and associated costs to a peer group of 15 other utilities. (2010). Navigant is completing a benchmarking update for the 2011 and 2012 program years (2014).
- » *Integrus, IL, Selection of Energy Efficiency Implementation Contractors. (Chicago).* Assisting with RFP Preparation and Selection of DSM Implementation Contractor. Assisting Integrus with the design of their residential, C&I, and on-bill financing third-party implementation contracts for natural gas energy efficiency programs serving City of Chicago. Portfolio value of \$35 million from 2011-2013. Drafting RFPs, reviewing and scoring proposal responses, advising utilities on best selections, performance incentives, and contract negotiation strategies. (2010)
- » *State of Maine, Maine Public Utilities Commission. DSM Potential Study.* Completed a meta-analysis review of 10 other regional energy efficiency potential studies and extrapolated achievable potential estimates for Maine and associated required budgets. (2009)



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- » *Consumers Energy, MI. 2009-2014 Electric and Natural Gas Portfolio Plan Development.* Managed the design and development of Consumers Energy 2009-2014 DSM program plan, with a total portfolio cost of \$550 million over six years. Prepared DSM program plan for Michigan Public Service Commission. Assisted Consumers Energy with drafting RFPs for program implementation contractors. (2008-Present)
- » *Tenaska Inc., Omaha, NE. Strategic Planning Assessment of Aggressive National Energy Efficiency and Renewable Portfolio Standards on Load Growth Projections.* High-level summary report and presentation to Tenaska's Board of Directors.
- » *JEA, Jacksonville, FL. Electric DSM and Demand Response Program Design.* Assisting JEA, the 8th largest municipal utility located in Jacksonville, FL with program design and day to day implementation support for the launch of residential lighting, low income, direct load control, and curtailable load programs. Total DSM portfolio is approximately \$8 million per year. (2007-Present)
- » *Tucson Electric Power/UniSource Energy, Tucson, AZ, Residential and Commercial Electric and Natural Gas DSM Program Design and Regulatory Support.* Is working with a team of Summit Blue consultants to assist with the program design and implementation support for a portfolio of residential and commercial electric and gas energy efficiency programs, including direct load control programs. Total DSM portfolio value is \$26 million over five years. Mr. Galvin is focusing on residential program design, RFP preparation, regulatory data requests, baseline studies, decoupling strategy, and resource staffing plans. (2007-Present)
- » *Nova Scotia Power Inc., Halifax, Canada. Electric DSM Program Design and Regulatory Support.* Currently providing residential program design and regulatory support assistance to Nova Scotia Power as they prepare for the launch of an aggressive residential and commercial DSM portfolio with a five year investment of \$150 million. (2007-Present)
- » *Southern Maryland Electric Cooperative (SMECO), MD. Electric DSM Program Design and Regulatory Support.* Program Design. Assisted with the design and development of SMECO's 2009-2015 DSM program plan worth \$75 million over 7 years. Presented SMECO's DSM program plan to the Maryland Public Service Commission. (2008)
- » *Ameren, St. Louis, MO. Assisting with RFP Preparation and Selection of DSM Implementation Contractor.* Assisting AmerenUE and Ameren Illinois Utilities with all aspects related to the design of their residential, C&I, and demand response third party implementation contracts through a request for proposals (RFPs) process for program delivery in Missouri and Illinois for 2008-2010. AmerenUE DSM portfolio is \$95 million over three years and Ameren Illinois Utilities DSM portfolio is \$68 million over three years. Drafting RFPs, reviewing and scoring proposal responses, advising utilities on best selections and contract negotiation strategies. (2007-2008)

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- » Maine Public Utilities Commission (MPUC), Augusta, ME. Small-Scale Renewable Program Design. Mr. Galvin is providing program design and regulatory rulemaking support for revisions to the Maine Solar Energy Rebate program. Mr. Galvin is assisting the MPUC with devising a new incentive structure for residential and commercial solar electric and solar hot water systems, drafting new program rules and regulations, and moderating public stakeholder meetings. (2007)
- » Efficiency Maine, Maine Public Utilities Commission. Deputy Director Energy Division. Provided leadership on overall efficiency and renewable program design, policy, organizational management, and evaluation oversight for Efficiency Maine and the Maine Solar Energy Rebate program. Lead author and analyst on major Efficiency Maine reports, RFPs, legislative testimony, and PUC dockets. (2007)
- » Vermont Energy Investment Corp. Senior Analyst in Vermont Energy Investment Corporation's (VEIC) Planning and Evaluation department for program design and evaluation of energy efficient technologies and renewable energy systems. Specific duties included DSM program design, evaluating proposed energy efficiency and renewable measures for cost effectiveness, and working with clients as a program advisor on residential new construction, lighting and appliances, existing homes, demand response, and information and education programs. (2002-2004) Representative projects:
  - » Efficiency Vermont: Analyst for Efficiency Vermont, the nation's first statewide energy-efficiency utility. Provided DSM planning assistance to the Residential New Construction, Retail Lighting and Appliances and Existing Homes market strategy teams. Conducted special research and evaluation projects in support of DSM program design, measure savings, and market potential. Evaluation and quantitative analysis of the measure savings and cost-effectiveness of energy efficient and renewable energy technology. Performed cost-effectiveness screenings for energy efficiency measures, researched and wrote measure characterizations, presented and negotiated technical issues with regulatory agencies. Primary author of Efficiency Vermont's Technical Reference Manual (TRM), that documents in narrative form the energy and demand savings, free-ridership, spillover, incremental costs, and lifetimes of the prescriptive measures implemented by the programs.
  - » Long Island Power Authority: Assisted with program design, research, evaluation, and incentives analysis for the ENERGY STAR Residential New Construction, Information and Education, and Demand Response Programs.
  - » Department of Energy, New Brunswick, Canada: Researched and measured screening analysis for a 10 year DSM energy efficiency potential study for the Province of New Brunswick, Canada. Area of focus included Retail Lighting and Appliance options. Prepared a detailed TRM custom for New Brunswick that presents energy and demand savings for efficient measures.



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- » Natural Resources Defense Council- New Jersey Utilities Collaborative: Co-author of an incentives analysis for Energy Star Homes Program. Delivered to seven New Jersey electric and gas utilities facilitating the development of and rebate incentive levels for a uniform statewide new construction program.
- » Renewable Energy Resource Center: Program design, consumer education, and implementation support for Vermont's Solar and Small Wind Incentive Program for solar electric, solar hot water, and small wind technologies. Program manager for VEIC's U.S. Department of Energy "Million Solar Roofs" grant agreement.
- » Alliance for Climate Action-10% Challenge Program: Research analyst for greenhouse gas emissions inventory estimate for Burlington, VT.

### **Selected Publications and Presentations**

- » "The Role of a Central Design Authority Framework To Achieve More Aggressive Energy Efficiency Goals," Galvin, T., Smyth, I., Vantzia, D. Presented at the International Energy Program and Policies Evaluation Conference, Berlin, Germany, 2014.
- » "Reap What You Sow: Why We Need to Invest in Integrated DSM Design for More Innovative, Aggressive, and Successful Energy Efficiency Programs," Galvin, T., Harris, J., Slote, S., and Purcell, D., Presented at the American Council for an Energy Efficient Economy 2014 Summer Study Conference. Monterey, CA, 2014.
- » "Show Me The Money: A Review of Recent Utility Energy Efficiency Performance Incentive Designs," Galvin, T., Kim, B. Presented at the 2013 ACEEE National Conference on Energy Efficiency as a Resource, American Council for an Energy Efficient Economy. Nashville, TN, 2013. [http://aceee.org/files/pdf/conferences/eer/2013/2C-Galvin\\_0.pdf](http://aceee.org/files/pdf/conferences/eer/2013/2C-Galvin_0.pdf)
- » "Utility Lost Revenue Recovery and Shareholder Incentives," Galvin, T., Zarumba, R., and Smith, D., presented at the American Council for an Energy Efficient Economy 2012 Summer Study Conference. Monterey, CA, 2012.
- » "Energy Efficiency and Regulatory Process Arizona Style: Existing Barriers and a Suggested Path Forward," Galvin, T. Keneipp, F., and Slote, S., prepared for the American Council for an Energy Efficient Economy 2010 Summer Study Conference. Monterey, CA, 2010.
- » "DSM Contracts and Stakeholder Advisory Groups: Considerations for DSM Program Managers," Galvin, T. and Slote, S., prepared for the American Council for an Energy Efficient Economy 2008 Summer Study Conference. Monterey, CA, 2008.



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- » “Optimizing DSM Portfolios: How to Maximize Savings with Minimum Risk by Targeting the Efficient Frontier,” Galvin, T. presented by Toben Galvin, Summit Blue Consulting. Paper authored by Bill Kallock and Dan Violette, Summit Blue Consulting, International Energy Program Evaluation Conference. Chicago, IL, 2007.
- » “A Review of JEA’s Upcoming DSM Programs,” Galvin, T., presented as part of Association of Energy Service Professionals (AESP) Brownbag Series on “New Energy Efficiency Initiatives in the Southeast”, October, 2007.
- » “Efficiency Maine 2006 Annual Report and Technical Appendix,” Galvin, T., Bergeron, D., and Clegg, N., 2006.
- » “Maine Solar Energy Rebate Program 2006 Annual Report,” Galvin, T., 2006.
- » “Savings Without Rebates: Regulatory Obstacles to Claiming Savings from Market Transformation and Options for Overcoming Them,” Reed, G., Galvin, T., and Hamilton, B., prepared for the American Council for an Energy Efficient Economy 2006 Summer Study Conference. Monterey, CA, 2006.
- » “New Construction Tax Credits- A Builders Guide,” Galvin, T. and Faesy, R., presented at Affordable Comfort- New England, October, 2006.
- » “Review and Guidelines for Achieving the \$2,000 Residential New Construction Tax Credit,” Galvin, T. and Faesy, R., presented to the Northeast Home Energy Rating Alliance, June, 2006.
- » “Residential New Construction Baseline Study Best Practices: Lessons Learned from Long Island, New York,” Galvin, T., Faesy, R., Slote, S., and Harrison, K., prepared for the American Council for an Energy Efficient Economy 2004 Summer Study Conference. Monterey, CA, 2004.
- » “Vermont’s Renewable Energy Incentive Program: A Look Under the Hood and State to State Comparative Analysis,” Galvin, T., presented at Renewable Energy Vermont Annual Conference. Burlington, VT, 2004.
- » “Residential New Construction Baseline Study Best Practices: Results from Long Island, New York,” Galvin, T., presented at the American Council for an Energy Efficient Economy (ACEEE) 2004 Summer Study Conference. Monterey, CA, 2004.

### **Testimony/Presentation Experience With Public Utility Commissions**

- » Galvin, T. “Development of PECO Energy Company’s Act 129 Energy Efficiency and Conservation Plan and Principal Summary Findings”. Direct testimony supporting PECO’s petition for approval of its Phase II EE&C Plan. Submitted to Pennsylvania Public Utility Commission. Docket No. M-2009-2093215. November 1, 2012.



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- » Galvin, T., et. al., "Review of the Efficiency Maine Trust Triennial Plan 2011-2013: Presented to the Maine Public Utilities Commission. Augusta, ME, June, 2010.
- » Galvin, T., Gunn, R, and Agapay, L. "Benchmarking of Vermont's 2008 Electric Energy Efficiency Programs". Presented to the Vermont Department of Public Service. Montpelier, VT. May, 2010.
- » Galvin, T., Wood, L., Agapay, L., and Gunn, R., "Summary Report of Recently Completed Potential Studies and Extrapolation of Achievable Potential for Maine (2010-2019). Live testimony presented to the Maine Public Utilities Commission. Augusta, ME, January, 2010.
- » Galvin, T. and Slote, S., "Southern Maryland Electric Cooperative Demand Side Management Plan for 2009-2015". EmPower Maryland Case No. 9157. Live testimony presented to the Maryland Public Service Commission. Baltimore, MD, November, 2008.
- » Galvin, T. and Bergeron, D., "Maine Public Utilities Commission Draft Staff Report Docket No. 2006- 446: Inquiry into New Conservation Programs and Developing a Plan for Using Increases in the Conservation Fund." Live testimony presented to the Maine Public Utilities Commission. Augusta, ME, February, 2007.

### **International Experience**

- » Conversationally fluent in Spanish. Study abroad experience in Ecuador, Bolivia, Guatemala, Peru, Mexico.