



CHRISTOPHER NEME, PRINCIPAL

EDUCATION

M.P.P., University of Michigan, 1986
B.A., Political Science, University of Michigan, 1985

EXPERIENCE

2010-present: Principal, Energy Futures Group, Hinesburg, VT
1999-2010: Director of Planning & Evaluation, Vermont Energy Investment Corp., Burlington, VT
1993-1999: Senior Analyst, Vermont Energy Investment Corp., Burlington, VT
1992-1993: Energy Consultant, Lawrence Berkeley National Laboratory, Gaborone, Botswana
1986-1991: Senior Policy Analyst, Center for Clean Air Policy, Washington, DC

PROFESSIONAL SUMMARY

Chris Neme leads a variety of consulting projects for clients across the United States, Canada, and Europe. He specializes in analysis of markets for energy efficiency measures and the design and evaluation of programs and policies to promote them. Prior to co-founding Energy Futures Group, he served as Director of the Vermont Energy Investment Corporation's 30-person consulting division. During his more than 20 years in the energy efficiency industry, Mr. Neme has conducted analyses of efficiency potential in five states; reviewed or developed efficiency programs in more than 20 states and provinces and in Europe; supported utility-stakeholder "collaboratives" in eight states, and defended expert witness testimony before regulatory commissions in ten different states and provinces. Mr. Neme has led several different training courses on the elements of good efficiency program design. He has also published papers and/or presented assessments of efficiency markets, programs and policies through a wide variety of publications, conferences, Consortium for Energy Efficiency Technical Committees, ENERGY STAR working groups and other forums. Mr. Neme recently served as Co-Chair of NEEP's EM&V Research and Evaluation Committee.

SELECTED PROJECTS

- **Regulatory Assistance Project - U.S.** Providing on-going technical support on efficiency policy and program design, including drafting a report on the U.S. experience using efficiency programs to cost-effectively defer transmission and distribution system investments; providing technical assistance and training to Arkansas and Connecticut regulators; and helping to administer an initiative to provide technical support on efficiency program planning and evaluation to Energy Foundation grantees and regulatory staff. (2010 to present)
- **Regulatory Assistance Project - Europe.** Providing on-going technical support on efficiency policy and program design to RAP and its partners in the United Kingdom, Germany, Belgium and other countries. This has included reviewing draft European Union policies on Energy Savings Obligations, EM&V protocols and other related issues. Drafted a policy brief on policy and design considerations for an efficiency feed-in-tariff. Also drafted (and presented at 2011 ECEEE conference in France) a 64-page report that reviewed leading residential retrofit programs in North America and Europe and proposed a "roadmap" for achieving deep retrofits in half of the building stock. Reviewing and draft (2009 to present)



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- ***Natural Resources Defense Council (Illinois & Michigan).*** Critically reviewed multi-year DSM plans filed by Commonwealth Edison, Ameren, Detroit Edison and Consumers Energy. Drafted and defended regulatory testimony on critiques. Represent NRDC in monthly stakeholder-utility collaborative meetings in both Illinois and Michigan to discuss program designs, evaluation priorities, draft evaluation reports and other related topics. (2010 to present)
- ***Green Energy Coalition (Ontario).*** Representing a coalition of environmental groups in various regulatory proceedings. Present recommendations on DSM policies, critically review and negotiate with utilities on proposed DSM Plans, serve (elected by non-utility stakeholders) on utility Evaluation/Audit Committees which oversee an annual savings verification process and evaluation planning, and defend expert witness testimony. (1993 to present)
- ***Northeast Energy Efficiency Partnerships.*** Managing Regional EM&V forum project to develop savings estimates for emerging technologies. Responsibilities include drafting RFP to hire a contractor to perform the work, managing the contractor's work, and facilitating a committee of program administrators overseeing the project. Also serve as Senior Advisor on the development of a Technical Reference Manual for Mid-Atlantic States. (2009 to present)
- ***Ohio Sierra Club.*** Filed and defended expert witness testimony on the implications of not fully bidding all efficiency resources into the PJM capacity market. Also critically reviewing First Energy's and other utilities' multi-year DSM plans. Participating in periodic stakeholder-utility collaborative meetings. (2012 to present)
- ***DC Department of the Environment (Washington DC).*** Part of VEIC team administering the DC Sustainable Energy Utility (SEU). Primary responsibilities are characterizing the DC efficiency market and supporting the design of efficiency programs that the SEU will be implementing. (2011 to present)
- ***Iowa Consumer Advocate.*** Critically reviewed several electric and gas utilities' DSM plans and savings claims. Assisted with the development of regulatory testimony. Currently serve as technical advisor to statewide collaborative process, occasionally providing input on utility evaluation plans and other topics. (1994 to present)
- ***Ontario Power Authority.*** Developed and presented assessment of future efficiency policy and program trends for OPA's Advisory Council on Energy Efficiency. (2012)
- ***Regulatory Assistance Project – Global.*** Assisted RAP in framing several global research reports. Co-authored the first report – an extensive “best practices guide” on government policies for achieving energy efficiency objectives, drawing on experience with a variety of policy mechanism employed around the world. (2011)
- ***Tennessee Valley Authority.*** Assisted CSG team providing input to TVA on the redesign of its residential efficiency program portfolio to meet aggressive new five-year savings goals. (2010)
- ***Efficiency Vermont.*** Oversaw residential program planning, input to the VT Department of Public Service on evaluation planning, input to NEEP's regional EM&V forum, and development of M&V plan and other aspects of bids of efficiency resources into New England's Forward Capacity Market (FCM) from March 2000 through Spring 2010.



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- ***Ohio Public Utilities Commission.*** Senior Advisor to a project to develop a web-based Technical Reference Manual (TRM). The TRM includes deemed savings assumptions, deemed calculated savings algorithms and custom savings protocols. It is designed to serve as the basis for all electric and gas efficiency program savings claims in the state. (2009 to 2010)
- ***New Jersey Clean Energy Program.*** Oversaw support of Honeywell-led team delivering all statewide residential efficiency and renewable energy programs. Led work on program design, regulatory filings, savings algorithms, and evaluation planning. (2006 to 2010)
- ***New York State Energy Research and Development Authority (NYSERDA).*** Led several analyses of residential electric and gas efficiency potential (over 20 years) for New York State. Scenarios included continuation of existing initiatives, new budget constraints and a least-cost approach to meeting greenhouse gas emission reduction targets. (2001 to 2010)
- ***NSTAR Collaborative.*** Oversaw all technical assistance on the design and implementation of six residential DSM programs. Personally led work on two programs (high use retrofit & low income). This involved negotiations with NSTAR on goals, budgets and program designs, and technical assistance on selection of delivery contractors, development of field protocols to guide measure installation decisions, and review of program results. All work was conducted on behalf of the Massachusetts Non-Utility Parties. (1999 to 2005)
- ***Oregon Energy Trust.*** Part of a team that developed case studies of successful community-based efficiency or renewable energy efforts across North America, synthesized lessons learned from those examples, and developed recommendations for how the trust might more effectively advance its mission through community-based approaches to promoting efficiency. (2004-2005)
- ***Natural Resource Defense Council – New Jersey Utilities Collaborative.*** Oversaw all technical assistance on the design of and implementation planning for eight statewide residential DSM programs and one statewide renewable energy program. Personally led work on two of the programs (Electric HVAC and Gas HVAC). This involved facilitation of monthly meetings with all seven electric and gas utilities in the state; negotiations with the utilities on budgets, goals, and program designs; and extensive technical assistance on a variety of programmatic issues, including the development of marketing plans and evaluation plans. (1994 to 2003)
- ***Long Island Power Authority Clean Energy Plan.*** Led team that designed the four major residential programs (three efficiency, one PV) incorporated into the plan in 1999. Oversaw extensive technical support to the implementation of those programs. This involved assistance with the development of goals and budgets, development of savings algorithms, cost-effectiveness screening, and on-going program design refinements. (1998 to 2009)
- ***Northeast Energy Efficiency Partnerships Residential HVAC Initiative.*** Served as NEEP's Residential HVAC Program Manager. Responsible for promoting NEEP's program design concept to utilities in the Northeast, providing technical support to efforts to implement the design, and promoting the adoption of improved federal efficiency standards (and ENERGY STAR standards) for central air conditioners. (1997 to 2005)



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- ***Southern Maryland Electric Cooperative.*** Led review and feedback on residential efficiency program portfolio. Also led impact evaluation of residential new construction and home retrofit programs. (1994 to 1998)
- ***Lawrence Berkeley Laboratory/Botswana.*** Conducted both economic and institutional analyses of the potential for cost-effective end-use energy efficiency improvements in southern Africa. Principal focus was on the electricity sector in Botswana. Initiated discussions between the Botswana government and LBL on the benefits of energy efficient building codes and the possibility of LBL developing such a code for Botswana. (1992)

SELECTED PUBLICATIONS

- “An Energy Efficiency Feed-in-Tariff: Key Policy and Design Considerations”, published by the Regulatory Assistance Project, March/April 2012 (with Richard Cowart)
- “U.S. Experience with Efficiency as a Transmission and Distribution System Resource”, published by the Regulatory Assistance Project, February 2012 (with Rich Sedano)
- “Achieving Energy Efficiency: A Global Best Practices Guide on Government Policies”, published by the Regulatory Assistance Project, February 2012 (with Nancy Wasserman)
- “Residential Efficiency Retrofits: A Roadmap for the Future”, published by the Regulatory Assistance Project, May 2011 (with Meg Gottstein and Blair Hamilton)
- “Is it Time to Ditch the TRC?” Proceedings of ACEEE 2010 Summer Study on Energy Efficiency in Buildings, Volume 5 (with Marty Kushler).
- “A Comparison of Energy Efficiency Programmes for Existing Homes in Eleven Countries”, prepared for the United Kingdom Department of Energy and Climate Change on behalf of the Regulatory Assistance Project, 19 February 2010 (with Blair Hamilton et al.).
- “Energy Efficiency as a Resource in the ISO New England Forward Capacity Market”, in *Energy Efficiency*, published on line 06 June 2010 (with Cheryl Jenkins and Shawn Enterline).
- “Energy Efficiency as a Resource in the ISO New England Forward Capacity Market”, Proceedings of the 2009 European Council on an Energy Efficient Economy Summer Study, pp. 175-183 (with Cheryl Jenkins and Shawn Enterline).
- “Playing with the Big Boys: Energy Efficiency as a Resource in the ISO New England Forward Capacity Market”, Proceedings of ACEEE 2008 Summer Study Conference on Energy Efficiency in Buildings, Volume 5 (with Cheryl Jenkins and Blair Hamilton)
- “Recommendations for Community-Based Energy Program Strategies”, Final Report, developed for the Energy Trust of Oregon, June 1, 2005 (with Dave Hewitt et al.)
- “Shareholder Incentives for Gas DSM: Experience with One Canadian Utility”, Proceedings of ACEEE 2004 Summer Study Conference on Energy Efficiency in Buildings, Volume 5 (with Kai Millyard).



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- “Shareholder Incentives for Gas DSM: Experience with One Canadian Utility”, Proceedings of ACEEE 2004 Summer Study Conference on Energy Efficiency in Buildings, Volume 5 (with Kai Millyard).
- “Cost Effective Contributions to New York’s Greenhouse Gas Emission Reduction Targets from Energy Efficiency and Renewable Energy Resources”, ACEEE 2004 Summer Study Proceedings, Volume 8 (with David Hill et al.).
- “Opportunities for Accelerated Electric Energy Efficiency Potential in Quebec: 2005-2012”, prepared for Regroupement national des conseils regionaux de l’environnement du Quebec, Regroupement des organismes environnementaux energie and Regroupement pour la responsabilite sociale des entreprises, May 16, 2004 (with Eric Belliveau, John Plunkett and Phil Dunsky).
- “Review of Connecticut’s Conservation and Load Management Administrator Performance, Plans and Incentives”, for Connecticut Office of Consumer Counsel, October 31, 2003 (with John Plunkett, Phil Mosenthal, Stuart Slote, Francis Wyatt, Bill Kallock and Paul Horowitz)
- “Energy Efficiency and Renewable Energy Resource Development Potential in New York State”, for New York Energy Research and Development Authority, August 2003 (with John Plunkett, Phil Mosenthal, Stave Nadel, Neal Elliott, David Hill and Christine Donovan).
- “Assessment of Economically Deliverable Transmission Capacity from Targeted Energy Efficiency Investments in the Inner and Metro-Area and Northwest and Northwest/Central Load Zones”, for Vermont Electric Power Company, Final Report: April 2003 (with John Plunkett et al.).
- “Residential HVAC Quality Installation: New Partnership Opportunities and Approaches”, Proceedings of ACEEE 2002 Summer Study Conference on Energy Efficiency in Buildings, Volume 6 (with Rebecca Foster, Mia South, George Edgar and Put Murphy).
- “Using Targeted Energy Efficiency Programs to Reduce Peak Electrical Demand and Address Electric System Reliability Problems”, published by the American Council for an Energy Efficient Economy, November 2000 (with Steve Nadel and Fred Gordon).
- “Energy Savings Potential from Addressing Residential Air Conditioner and Heat Pump Installation Problems”, American Council for an Energy Efficient Economy, February 1999 (with John Proctor and Steve Nadel).
- “Promoting High Efficiency Residential HVAC Equipment: Lessons Learned from Leading Utility Programs”, Proceedings of ACEEE 1998 Summer Study Conference on Energy Efficiency in Buildings, Volume 2 (with Jane Peters and Denise Rouleau).
- PowerSaver Home Program Impact Evaluation, report to Potomac Edison, February 1998 (with Andy Shapiro, Ken Tohinaka and Karl Goetze).
- “PowerSaver Home Program Impact Evaluation”, prepared for Southern Maryland Electric Cooperative, December 9, 1997 (with Andy Shapiro, Ken Tohinaka and Karl Goetze).



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- “A Tale of Two States: Detailed Characterization of Residential New Construction Practices in Vermont and Iowa”, Proceedings of ACEEE 1996 Summer Study Conference on Energy Efficiency in Buildings, Volume 2 (with Blair Hamilton, Paul Erickson, Peter Lind and Todd Presson).
- “New Smart Protocols to Avoid Lost Opportunities and Maximize Impact of Residential Retrofit Programs”, in Proceedings of ACEEE 1994 Summer Study on Energy Efficiency in Buildings, pp. 9.147-9.157 (with Blair Hamilton and Ken Tohinaka).
- “Economic Analysis of Woodchip Systems” and “Finding Capital to Pay for a Woodchip Heating System”, Chapters 6 and 8 in *Woodchip Heating Systems: A Guide for Institutional and Commercial Biomass Installations*, published by the Council of Northeastern Governors, July 1994.
- “PSE&G Lost Opportunities Study: Current Residential Programs and Relationship to Lost Opportunities”, prepared for the PSE&G DSM Collaborative, June 1994 (with Blair Hamilton, Paul Berkowitz and Wayne DeForest).
- “Long-Range Evaluation Plan for the Vermont Weatherization Assistance Program”, prepared for the Vermont Office of Economic Opportunity, February 1994 (with Blair Hamilton and Ken Tohinaka).
- “Impact Evaluation of the 1992-1993 Vermont Weatherization Assistance Program”, prepared for the Vermont Office of Economic Opportunity, December 1993 (with Blair Hamilton and Ken Tohinaka).
- “Electric Utilities and Long-Range Transport of Mercury and Other Toxic Air Pollutants”, published by the Center for Clean Air Policy, 1991.
- “Coal and Emerging Energy and Environmental Policy”, in *Natural Resources and Environment*, 1991 (with Don Crane).
- “Acid Rain: The Problem”, in EPA Journal, January/February 1991 (with Ned Helme)
- “An Efficient Approach to Reducing Acid Rain: The Environmental Benefits of Energy Conservation”, published by the Center for Clean Air Policy, 1989.
- “The Untold Story: The Silver Lining for West Virginia in Acid Rain Control”, published by the Center for Clean Air Policy, 1988.
- “Midwest Coal by Wire: Addressing Regional Energy and Acid Rain Problems”, published by the Center for Clean Air Policy, 1987.
- “Acid rain: Road to a Middleground Solution”, published by the Center for Clean Air Policy, 1987 (with Ned Helme).