



# Dulane Moran

## Principal Consultant



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### EDUCATION

- > M.P.A., Natural Resource Management, Energy Policy, Portland State University
- > B.A., English Literature, University of Oregon

### CAREER

- > Cadeo Group
  - Principal: 2019-2024
- > Northwest Energy Efficiency Alliance (NEEA)
  - Principal, Research and Evaluation: 2016-2019
- > Nexant
  - Managing Consultant: 2015-2016
- > Research Into Action
  - Project Director: 2003-2014

**Dulane Moran** is an energy industry professional with more than 20 years of experience in program and policy analysis, organizational development, and market research. She has directed dozens of research projects spanning nearly every sector and type of program intervention. Dulane is on the Board of Directors for the International Energy Program Evaluation Conference and was a member of Energy Trust of Oregon's Evaluation Advisory Board.

### AREAS OF EXPERTISE

A collaborative and engaged manager, Dulane directs and conducts all aspects of consulting projects, ensures project quality and synthesis of findings, directs staff, manages budgets and schedules, and participates in strategic decision-making. She has extensive experience in benchmarking and comparative analysis, identification of best practices, program logic and theory documentation, and market transformation. Dulane's work is informed by her expert understanding of the policy objectives and constraints that typically guide investments in energy efficiency, demand response, and renewable energy, including equity and non-energy benefits.

### SELECTED INDUSTRY EXPERIENCE

- > **Energy Trust of Oregon: Logic Modeling**  
Developing and facilitating a variety of training activities designed to build organizational expertise in logic modeling throughout Energy Trust. This process is designed to align organizational resources towards priorities established in the organizations strategic plan.
- > **Pacific Gas and Electric Codes and Standards Program Research - Baseline Studies for Portable Heat Pump Air Conditioning and Efficient Rooftop Units (ERTU)**  
Directing two small scale market characterization projects focused on emerging technology of interest to PG&E codes and standards staff. For both portable heat pumps and ERTUs, Evergreen is conducting an extensive product and literature review, identifying estimates of current market availability and sales share.
- > **Commonwealth Edison: Virtual Power Plant (VPP) Market Scan**  
Directing a quick turnaround market scan for ComEd to understand core components of emerging VPP programs. As part of a grid management filing, ComEd required a range of information on VPPs including divergent and convergent definitions, typical technologies enrolled or encouraged, incentive structures and program rules, and policy or grid needs driving VPP program development. This project involved extensive literature review, interviews with advocates and market observers, a catalog of existing programs and in-depth interviews with a subset of program managers.



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## SELECTED INDUSTRY EXPERIENCE (continued)

The following selected projects were completed while Dulane was at Cadeo Group. While at Cadeo, Dulane provided project and organizational leadership to the research consulting group focused on projects that inform interventions designed to encourage energy efficiency and sustainable choices in North American homes and businesses.

> **High Performance RTU Market Characterization, Luminaire Level Lighting Control Market Characterization, and High-Performance Window Market Characterization**

For the Center for Energy and the Environment, directed a suite of market characterizations to inform the planning and initial implementation of a new commercial and industrial market transformation portfolio in Minnesota.

> **Greenhouse Gas Abatement Potential Study**

As part of a larger Greenhouse Gas Potential Study for EmPOWER Maryland, directed best practices research to provide guidance on electrification program design elements, with a focus on commercial sector challenges

> **Technical and Strategy Support**

For the Pacific Northwest National Laboratory, organized and facilitated a series of workshops with Office of State and Community Energy Programs (SCEP) team members at the US Department of Energy to inform the development of a logic model for the Home Rebate Program. Worked with team to identify market effects indicators, refine outcomes from both DOE and state-level activities, and guide the development of an analysis plan that includes baseline and market effects measurement.

> **Minnesota Advanced Code Collaborative Market Research**

For the Center for Energy and the Environment in Minnesota, Dulane directed market research to inform a DOE-sponsored project to ensure that codes and standards advancement contribute to Minnesota's climate goals and provide the tools, support, and information needed to code officials, design engineers, HVAC contractors and others working on new commercial buildings.

> **Northwest Clean Energy Market Assessment**

In 2022, Dulane directed a market assessment of four specific project areas that might represent potential markets for a local Community Development Financial Institution (CDFI) focused on encouraging investment in new clean energy projects through innovative financial products and tax credits. The market scan analyzed opportunities for community renewable energy, non-fossil transportation, grid integration (including microgrids, smart controls, and aggregated capacity) and multifamily solar and electrification.

> **Eastside Collaborative Ductless Heat Pump Pilot Assessment**

Directed and evaluation of a localized market transformation pilot focused on expanding access to ductless heat pumps in Eastern Washington and Idaho. The pilot sought to engage the local supply chain and promote ductless heat pumps in areas where adoption has been slower than the regional average. The project included data collection with utility stakeholders and with supply chain representatives.

> **Small Business Direct Install Program Process Evaluation**

Directed a process evaluation of Rhode Island Energy's Small Business program. This project used benchmarking, interviews, and market surveys to understand the opportunities to expand program offerings beyond low-cost lighting. The project also included mapping participation patterns and investigating the participation of women- and

minority-owned businesses. Focus groups explored barriers for these businesses and opportunities for enhanced program services.

> **High Performance Windows Market Research**

Directed a project for the Northwest Energy Efficiency Alliance (NEEA) designed to identify triggers for window purchase and replacement among homeowners. This project described the path-to-purchase, assessed awareness of high-performance windows, understand barriers to high performance windows and collect information to help NEEA estimate the average age of windows when replaced.

> **Heat Pump Water Heater Challenging Installation Research**

For NEEA, directed a project designed to estimate the prevalence of several scenarios that create challenging installation conditions for heat pump water heaters in existing homes.

> **Weatherization Market Research**

For the Bonneville Power Administration, managed a large-scale market research project designed to provide robust data to support assumptions about the level of insulation installed in the residential retrofit market regionally outside of efficiency programs. The project included surveys of insulation installers, manufacturers, and wholesale/distribution companies.

> **Residential and Nonresidential Lighting Market Research**

For Energy Trust of Oregon, directed an assessment of the Oregon lighting market designed to inform near- and long-term opportunities for Energy Trust program planners. This effort catalogued numerous studies and synthesized stock, sales, and market studies across the residential, commercial, and industrial markets. Special focus was given to opportunities associated with indoor agriculture as well as gaps that might indicate the need for a focus consistent with diversity, equity, and inclusion goals.

> **HVAC Sales Data Analysis**

For the Bonneville Power Administration, managed two rounds of analysis and market extrapolation work using regional HVAC distributor data collected through a collaborative effort of NEEA and BPA. This research is built upon an on-going data collection and analysis effort, the results of which inform market modeling efforts, build understanding of baseline market conditions, and identify future research designed to fill important data gaps.

## SELECTED PUBLICATIONS AND PRESENTATIONS

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- > "Planning to Capture the Transformative Potential of Government Investment." Moran, D., D. Walker. 2024 In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA. American Council for an Energy Efficient Economy.
- > "Shell Upgrades: A Key Step for Deep Retrofits?" Moran, D. E. Miller and R. Zakrasek. 2022. In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA. American Council for an Energy Efficient Economy.
- > "Opposites Attract: TRM meet MT." Moran, D. M. Gardner, and J. Harris. 2020. In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA. American Council for an Energy Efficient Economy.
- > "The Population Puzzle: Putting the Pieces Together." Moran, D., J. Aiona, M. Psaris-Weis, J. Cropp and D. Bruchs. 2019. In *Proceedings of 2019 International Energy Program Evaluation Conference*. Denver, CO. August 20-22.
- > "Paving the way for new market transformation programs: building a bridge from resource acquisition." Moran, D., N. Leritz, and B. Littlehales. 2018. In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove CA. American Council for an Energy-Efficient Economy. August 12-17.
- > "Mining for Community-Based Gold: Striking It Rich in California." Moran, D., A. Dunn, and C. Kan. 2014. In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA. American Council for an Energy-Efficient Economy. August 18-22.
- > "All Trade Allies are Not Created Equal: Identifying Leverage Points in the Commercial Lighting Market." Price, K., D. Moran, S. Bickel; C. Chen, B. Smith. 2014. In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA. American Council for an Energy-Efficient Economy. August 18-22.
- > "Voluntary Peak Load Curtailment: What drives household performance?" Moran, D., and H. Forster. 2013. In *Proceedings of the 2013 International Conference on Energy Efficiency in Domestic Appliances and Lighting*. Coimbra, Portugal. September 11-13.
- > "Watt's Next for Nonresidential Lighting Retrofits?" Moran, D., B. Tannenbaum, C. Chen, and N. Albers. 2013. In *Proceedings of the International Energy Program Evaluation Conference*, Chicago, IL, August 13-15.

- > "What's Driving the CART in Behavior-Based Demand Response?" Forster, H., D. Moran, and B. Gettig. 2013. In *Proceedings of the International Energy Program Evaluation Conference*. Chicago, IL, August 13-15.
- > "Engaging Small Customers: Maximizing the Direct-install Hook." Fisher, M., D. Moran, and S. Gogte. 2013. In *Proceedings of the Association of Energy Services Professionals 21<sup>st</sup> National Conference and Expo*. Orlando FL. Association of Energy Services Professionals. January 28-31.
- > "The Mind of the Home Performance Consumer: An In-Depth Look at Homeowner Attitudes, Motivations & Barriers." 2013. Moran, D., K. Reese, E. Levin, and G. Upton. Paper presented at the 2013 ACI National Home Performance Conference, Denver, CO: Affordable Comfort Institute. April 30-May 3.
- > "You Want Me to Do What? Smart Grid and Demand Response Pilots Test the Waters with Residential Customers." Moran, D., H. Forster, and B. Gettig. 2012. In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA. American Council for an Energy-Efficient Economy. August 12-17.
- > "Can we get smarter? Visibility and Experimentation with Residential Technologies." 2012. Moran, D., and A. Dunn. Paper presented at the Behavior, Energy & Climate Change Conference. Sacramento, CA. November 12-14.
- > "Real-Time Scrambling to Improve an On-Bill Financing Pilot Program." Moran, D., and P. Degens. 2011. In *Proceedings of the International Energy Program Evaluation Conference*, Boston, MA, August 16-18.
- > "What Have We Learned About E-Mail Surveys?" Moran, D., A. Armstrong, and J. Suzuki. 2011. In *Proceedings of the International Energy Program Evaluation Conference*, Boston, MA, August 16-18.
- > "Arm's Length by Design: Navigating the Pitfalls of Third-Party Implementation." Moran, D., M. McRae, R. Scholl, and J.S. Peters. 2011. In *Proceedings of the Association of Energy Services Professionals 21<sup>st</sup> National Conference and Expo*. Orlando FL: Association of Energy Services Professionals. January 17-20.
- > "Curtailment Service Providers: They Bring the Horse to Water...Do We Care if It Drinks?" Moran, D., and J. Suzuki. 2010. In *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA: American Council for an Energy-Efficient Economy. August 15-20.
- > "CFL Program Strategy Review: No Programmatic Silver Bullet." Moran, D. 2008. In *Proceedings of the 2008 ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA: American Council for an Energy-Efficient Economy. August 17-22.
- > "PV Workforce Development and the Market for Customer-Sited PV." Moran, D., M. McRae, J.S. Peters, C. Nemore, P. Gonzales, and A. Ferranti. 2008. In *Proceedings of SOLAR 2008 ASES National Solar Energy Conference*. San Diego, CA: American Solar Energy Society. May 3-8.
- > "Commercial Energy Efficiency Loans: What Role Do They Play in the Efficiency Toolbox?" 2007. Moran, D. In *Proceedings of the Association of Energy Services Professionals 17<sup>th</sup> National Energy Services Conference*. Las Vegas, NV: Association of Energy Services Professionals. January 29-February 1.
- > "Using Logic Models to Improve and Enhance Nonresidential Programs." Moran, D., J.S. Peters, S. Albert, V. Engel, and L. Megdal. 2004. In *Proceedings of the 2004 ACEEE Summer Study on Energy Efficiency in Buildings; Panel 4*. Pacific Grove, CA: American Council for an Energy-Efficient Economy. August 22-27.