

Katherine McKenzie

Hawaii Natural Energy Institute

Professional Experience

Project Specialist, Hawaii Natural Energy Institute, University of Hawaii at Manoa, October 2012 to present. Assisting HNEI's Director and working with senior faculty to plan, organize, and conduct projects across the range of HNEI's technical areas of focus: alternative fuels, renewable power generation, electrical grid integration, energy efficiency, and battery and fuel cell systems. Coordinating and assisting with extramural proposals resulting in \$99 million in federal funding to date. Review and editing HNEI's major technical, progress and final reports. Project lead for HNEI's Electrification of Transportation project, to assess the impact on fossil fuel use and emissions. Previously managed the Electric Vehicle Transportation Center, an applied research initiative in partnership with the Florida Solar Energy Center, College of Engineering, and Department of Urban & Regional Planning. Project management support for the Hawaii Wave Energy Test Site, a cooperative effort between the Marine Corps Base Hawaii, Navy and US Department of Energy.

Renewable Energy Analyst, Hawaii State Energy Office, February 2010 to September 2012. Led development and administered the \$6 million electric vehicle "EV Ready" Grant and Rebate Programs. Developed and coordinated the renewable energy track as Co-Chair of the Asia Pacific Clean Energy Summit and Expo, providing the model for future events. Provided research and analysis on a broad range of renewable energy options to the administration, legislature, media, industry, investors and the public, including wind, solar and smart grid.

Tech Innovation Consultant, Strategic Project Services LLC, from July 2004 to February 2010. Conducted business & economic development projects, including development and administration of federal and state grants for innovation, environment and renewable energy development, strategic planning, organizational change, process improvement, as well as researching and implementing best practices in technology related business and economic development.

Director of Projects & Membership, Hawaii Science & Technology Council, January 2007 to March 2009. Led the Council's primary research project in partnership with nationally renowned experts, state government and local stakeholders, culminating with a press event with Sen. Daniel K. Inouye. Managed development and implementation of a web-based association-management system and industry directory database. Assisted with outreach including monthly seminars with the University of Hawaii's Shidler College of Business and the College of Engineering. Helped develop strategic direction, goals and operations with the Council's president, board of directors, and other partners.

Program Director and Project Manager, Manufacturing Extension Partnership (MEP), 2000 to 2004. Led the local team of this national organization, providing consulting and coaching services in strategic planning, operations improvement, business best practices and technical transfer. Established a critical network of government agencies, academia and private sector participants providing MEP continuity in Hawaii. Worked in collaboration with mainland MEP centers to refine the federal program policy and delivery. Won and managed federal grants and private sector contracts, including delivery one of largest projects in the national MEP system, and attaining the first performance merit for Hawaii. Clients included Pearl Harbor and Portsmouth Naval Shipyards, Grace Pacific, Kamaka Ukulele, and numerous

other local businesses. Led workshops in business planning for higher productivity, teamwork, customer focus, communication, sales, supply-chain integration and quality best practices for more than 400 participants.

Manufacturing Manager, Senior Development Engineer, Precision Interconnect (Portland, Oregon), 1996 to 1999.

Sales Manager, Industrial Heating Systems / Production Manager, Optical Fiber Cables, MM Cables LTD., (Melbourne, Australia), 1991-1996.

Senior Account Executive, Metallurgist, Comalco Aluminum LTD., (Sydney, Australia), 1989 to 1991.

Research Engineer, Centre for Frontier Engineering Research, (Alberta, Canada), 1986 to 1989.

Corrosion Engineer, Commonwealth Seager Group, (Calgary, Alberta, Canada), 1985 to 1986.

Publications and Presentations

- McKenzie, K., (2017). "Hawaiian Island EV Grid Integration", presentation, EVs & the Grid 2017, San Francisco, CA.
- Dubarry, M., Devie, A., McKenzie, K., (2017). "Durability and Reliability of Electric Vehicle Batteries under Electric Utility Grid Operations: Bidirectional Charging Impact Analysis", Journal of Power Sources, Volume 358, Pages 39-49, doi: 10.1016/j.jpowsour.2017.05.015
- McKenzie, K., (2016). "Interaction of EVs In a High Renewables Island Grid", presentation, and collaborated on, and moderated panel, "Electrified Transportation as a Power Grid Resource", IEEE Transportation Electrification Conference and Expo (iTEC), Dearborn, MI.
- McKenzie, K., (2016). "Electric Vehicles in a High Renewables Island Grid", poster presentation, EV Summit, Electric Vehicle Transportation Center, Florida Solar Energy Center, University of Central Florida, Cocoa Florida.
- McKenzie, K., (2016). "Electric Vehicle Transportation and Power Grid Integration", presentations, Engineers and Architects of Hawaii, and Women in Renewable Energy, Honolulu, HI.
- McKenzie, K., (2015/2016). "The State of Electric Vehicles in Hawaii", and "The State of Electric Vehicles in Hawaii: 2016 Update", reports, Electric Vehicle Transportation Center.
- McKenzie, K., (2013) "Strategic Use of Electric Vehicle Charging to Reduce Renewable Energy Curtailment on Oahu", report, HNEI.
- Poole, K., Center for Regional Economic Competitiveness, Feser, E., University of Illinois at Urbana-Champaign, McKenzie, K. Hawaii Science & Technology Institute, (2008). "Innovation and Technology in Hawaii: An Economic and Workforce Profile", published by Hawaii Science & Technology Institute.

Education

- M.S. in Engineering, Metallurgical, University of Alberta, Canada, 1989
- B.S. in Engineering, Metallurgical, University of Alberta, Canada, 1985