

Thomas P. Hendrickson

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EDUCATION

University of California, Berkeley

Ph.D., Civil and Environmental Engineering, May 2013

- Dissertation title: "Carbon and Water Resource Management for Water Distribution Systems"

M.S., Civil and Environmental Engineering, May 2009

Carnegie Mellon University, Pittsburgh, PA

B.S., Civil Engineering, May 2008

PEER-REVIEWED PUBLICATIONS

Lewandrowski, J., Rosenfeld, J., Pape, D., Hendrickson, T., Jaglo, K. and Moffroid, K., 2019. "The Greenhouse Gas Benefits of Corn Ethanol—Assessing Recent Evidence." *Biofuels*.

Hendrickson, T.P. and Bruguera, M., 2018. "Impacts of Groundwater Management on Energy Resources and Greenhouse Gas Emissions in California." *Water Research*, 141, pp.196-207.

Hendrickson, T.P., Nikolic, M. and Rakas, J., 2016. "Selecting Climate Change Mitigation Strategies in Urban Areas Through Life Cycle Perspectives." *Journal of Cleaner Production*, 135, pp.1129-1137.

Hendrickson, T. P., Nguyen, M., Sukardi, M., Miot, A., Horvath, A., and Nelson, K. (2015). "Life-cycle Energy Use and Greenhouse Gas Emissions of a Building-scale Wastewater Treatment and Non-potable Reuse System." *Environmental Science & Technology*. 49(17),10303-10311.

Nealer, R. and Hendrickson, T. P. (2015). "Review of Recent Lifecycle Assessments of Energy and Greenhouse Gas Emissions for Electric Vehicles." *Current Sustainable/Renewable Energy Reports*. 2 (3), 66-73.

Hendrickson, T. P., Kavvada, O., Shah, N., Sathre, R., and Scown, C. D. (2015). "Life-cycle Implications and Supply Chain Logistics of Electric Vehicle Battery Recycling." *Environmental Research Letters*. 10(1), 014011.

Sathre, R., Scown, C.D., Kavvada, O. and Hendrickson, T.P., 2015. Energy and climate effects of second-life use of electric vehicle batteries in California through 2050. *Journal of Power Sources*. 288, 82-91.

Stokes, J., Hendrickson, T. P., and Horvath, A. (2014). "Save Water to Save Carbon and Money: Developing Abatement Costs for Expanded Greenhouse Gas Reduction Portfolios." *Environmental Science & Technology*. 48(23), 13583-13591.

Hendrickson, T. P. and Horvath, A. (2014). "A Perspective on Cost-effectiveness of Greenhouse Gas Solutions in Water Distribution Systems." *Environmental Research Letters*. 9(2), 024017.

Hendrickson, T. P., Horvath, A. and Madanat, S. M. (2013). "Life-Cycle Costs and Emissions of Pareto-Optimal Residential, Roof-Mounted Photovoltaic Systems." *Journal of Infrastructure Systems*. 19(3),

RESEARCH EXPERIENCE

University of California, Berkeley

Postdoctoral Scholar, May 2013 - December 2015

Advisors: Arpad Horvath, Corinne Scown

- Led collaborative research efforts with utilities, state agencies, and federal agencies to generate life-cycle GHG emission reduction and climate resilience solutions for infrastructure systems in the energy, water, wastewater, transportation, and waste sectors.

Graduate Student Researcher, January 2011 - May 2013

Advisor: Arpad Horvath

- Identified cost-effective solutions for reducing GHG emissions and environmental impacts of water distribution systems with life-cycle assessment

WORK EXPERIENCE

Lawrence Berkeley National Laboratory

Project Scientist, March 2021 - Present

- Currently developing life-cycle assessment and environmental justice models for evaluating policy and decarbonization scenarios in plastics production, waste infrastructure, transportation, and energy storage.

ICF - San Francisco, CA

Senior Managing Consultant, Climate Change, January 2016 – January 2021

- Technical lead and project manager for clients in GHG emission reduction planning, life-cycle assessment, and GHG emission inventories and forecasts, climate vulnerability studies, climate adaptation planning.
- Led projects and teams across diverse sectors, including electric power, natural gas, transportation fuels, coal production, renewable energy, water resources, wastewater, agriculture, and waste management.

SolarCity Corp. - San Mateo, CA

PV Systems Engineer, September 2009 - November 2010

- Managed engineering efforts from to installation of photovoltaic systems.
- Analyzed complex structural projects and implemented process improvement.

SELECTED PROJECT EXPERIENCE

Gas Alternatives Life-Cycle Assessment Model. Hawaii Gas. Honolulu, HI.

Project Manager, April 2019 – January 2021

Currently leading the ICF team in the development of a life-cycle assessment (LCA) model for Hawaii Gas's natural gas system from fuel extraction to final combustion. ICF's model allows users to rapidly assessment Hawaii Gas's baseline emissions against renewable and other alternatives. ICF's LCA work incorporated customizations in support of Hawaii Gas's first corporate inventory.

South Africa Low Emissions Development, US AID, Pretoria, South Africa.

Project Manager, March 2017 - June 2020

- Acted as project coordinator, task lead, and technical specialist for the multi-subject effort to support US AID's expansion of low emission development projects in South Africa. Collaborated with stakeholders and clients to identify best opportunities for expanding mitigation, while providing technical support in generating guidance documents, performing life-cycle assessments, and building life-cycle GHG emission accounting and mitigation tools.

Delaware Climate Action Plan. Dept. of Natural Resources and Environmental Control. Dover, DE.

Project Manager, December 2019 - September 2020

- Led the ICF team's development of Delaware's first state-wide GHG emission reduction plan. This required the development of the state's first detailed baseline emission forecast for multiple scenarios and full analysis for over 20 mitigation measures across key state sectors.

Climate Change Vulnerability Assessment, San Diego Gas & Electric, San Diego, CA.

Project Manager, March 2020 - present.

- Currently leading a climate change vulnerability assessment of SDG&E's system that will both deepen and extend SDG&E's current understanding of its climate vulnerabilities. Leading a team in assessing assets, operations, and services for exposure, sensitivity, adaptive capacity, and potential impacts from relevant climate hazards by collaborating with SDG&E experts, examining design protocols, and assessing downscaled global climate model projections.

OTHER ACTIVITIES

Ultimate Frisbee

- Elite Club, 2004-2017 (National Champion 2011, 2012), Elite Masters 2019-2020 (National Champion 2019)