



Thomas P. Hendrickson

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Education

- **University of California, Berkeley.** Ph.D., Civil and Environmental Engineering, May 2013.
- **University of California, Berkeley.** M.S., Civil and Environmental Engineering, May 2009.
- **Carnegie Mellon University.** B.S., Civil Engineering, May 2008.

Professional Experience

Lawrence Berkeley National Laboratory, Berkeley, CA

Research Scientist, Sustainable Energy Systems Group, 2021 - present

- Currently leading the development innovative life-cycle assessment, technoeconomic analysis, material flow analysis models for evaluating policy and technological impacts in water infrastructure, critical materials, building materials, waste infrastructure, transportation, and energy storage

ICF, San Francisco, CA

Senior Managing Consultant, Climate Change, 2016 – 2021

- Technical lead and project manager for clients in climate vulnerability studies, climate adaptation planning, GHG emission reduction planning, life-cycle assessment, and greenhouse gas emission inventories and forecasts;

University of California, Berkeley, Berkeley, CA

Postdoctoral Scholar, May 2013 - December 2015

- 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.

PhD Candidate, January 2011 – May 2013

- Led research on life-cycle cost and greenhouse gas assessments of drinking water infrastructure, coordinating with a utility in Montana to determine cost-effective emission reduction strategies;

SolarCity Corp., San Mateo, CA

PV Systems Engineer, 2009 - 2010

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

Peer-Reviewed Journal Publications

Hendrickson, T.P., Zuberi, M.J.S., Sun, K., Sartre Meloy, A., Shehabi, A., Stokes-Draut, J., Smith, S.J., Peng, P., Masanet, E. 2025. "A Rapid Embodied Carbon Assessment Tool for Priority Materials". *Environmental Research Communications*. Accepted with revisions, November 2025.



- Tchivwila, M.B., Rakas, J., **Hendrickson, T.P.** and Nikolić, M. 2025. "A model for selecting the best sustainable airport technology alternatives." *Environmental Research: Infrastructure and Sustainability*. 5(4), p.041001.
- Kane, S., Bose, B., **Hendrickson, T.P.**, Fan, J., Nordahl, S.L., Scown, S.D., Miller, S.A. 2025. "A framework for ground-up life cycle assessment of novel, carbon-storing building materials". *Energy & Environmental Science*. In review, May 2025.
- Cohen, Y., Soto, M., Marki, N., Jarma, Y.A., Rogers, M., Yip, K., Strauss, P., Aguilar, C., Khan, B., Rao, P., **Hendrickson, T.P.** 2025. Techno-economic Assessment of Distributed Wellhead RO Water Treatment for Nitrate Removal and Salinity Reduction: A Field Study in Small Disadvantaged Communities. *Water Research*. p.123462.
- Van Roijen, E., Kane, S., Fan, J., Olsson, J.A., Bose, B., **Hendrickson, T.P.**, Nordahl, S.L., Kendall, A., Scown, C.D., and Miller, S.A. 2025. "Dynamic accounting of carbon uptake in the built environment." *Environmental Science & Technology*.
- Bose, B., **Hendrickson, T.P.**, Nordahl, S.L., Kane, S., Fan, J., Miller, S.A., Scown, S.D. 2025. "Life-cycle carbon footprint and total production potential of cross-laminated timber from California's wildland-urban interface." *Environmental Research Letters*. 20 (9), 094046.
- Wesselkämper, J., Newkirk, A., **Hendrickson, T.P.**, Helal, N., Rao, P., Smith, S.J., Haddad, A.Z. 2025. "Enhancing Supply Resilience for Critical Decarbonization Materials: Case Study of Gallium Supply in the United States". *Resources, Conservation & Recycling*. May 2025.
- Wesselkämper, J., **Hendrickson, T.P.**, Lux, S., von Delft, S. 2025. "Recycling or 2nd Use? Supply Potentials and Climate Effects of End-of-Life Electric Vehicle Batteries". *Environmental Science & Technology*. Accepted with Revisions, April 2025.
- Masanet, E., **Hendrickson, T.P.**, Satre-Maloy, A., Smith, S.J., Stokes-Draut, J., Sun, K., Zuberi, J.S., Shehabi, A. 2024. "Maximizing the benefits of 'Buy Clean' policies for building materials: Six key priorities". *Resources, Conservation & Recycling*. Accepted with revisions, December 2024.
- Kane, S., Bin Thaneya, A., Gursel, A.P., Fan, J., Bose, B., **Hendrickson, T.P.**, Nordahl, S.L., Scown, C.D., Miller, S.A. and Horvath, A. 2024. "Uncertainty in determining carbon dioxide removal potential of biochar." *Environmental Research Letters*. 20(1), 014062.
- Hendrickson, T.P.**, Abhyankar, N., Mohanty, P., Mayfield, K. K., Kirkendall, W., Stanley, A. J., Stack, S., Yang, H., and Satchwell, A. J. 2024. "Decarbonizing the US Energy System". *Annual Review of Environment and Resources*. 49.
- Moon, H. S., Park, W. Y., **Hendrickson, T.P.**, Phadke, A., Popovich, N. 2024. "Exploring the Cost and Emissions Impacts, Feasibility, and Scalability of Battery-Electric Ships". *Nature Energy*, 1-14.
- Hendrickson, T.P.**, Bose, B., Vora, N., Huntington, T., Nordahl, S., Helms, B. A., and Scown, C. D., 2024. "Paths to Circularity for Plastics in the United States". *One Earth*, 7(3), 520-531.
- Lewandrowski, J., Rosenfeld, J., Pape, D., **Hendrickson, T.P.**, 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., 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.

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.

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)

Technical Reports

Rao, P., **Hendrickson, T.P.**, Wachs, E., Upasani, S., & Carpenter, A. 2025. Testing a method for developing facility-level greenhouse gas emissions intensities of US traded goods. Lawrence Berkeley National Laboratory. <https://doi.org/10.20357/B74W39>

Invited Speaker Sessions

Hendrickson, T.P., Bose, B., Vora, N., Huntington, T., Nordahl, S., Helms, B.A., and Scown, C.D. "Paths to Circularity for Plastics in the United States". *Circular Economy Plastic Summit*. May 2024.

Hendrickson, T.P., Bose, B., Vora, N., Huntington, T., Nordahl, S., Helms, B.A., and Scown, C.D. "Paths to Circularity for Plastics in the United States". *Energy Analysis and Environmental Impacts Seminar Series*. July 2023.

Conference Presentations

Hendrickson, T.P., Bose, B., Vora, N., Huntington, T., Nordahl, S., Helms, B.A., and Scown, C.D. "Paths to Circularity for Plastics in the United States". *American Chemistry Society – Fall Meeting 2022*. August 2022.

Hendrickson, T.P., Comesana, A., Soto, M., Cohen, Y., Khan, B., Rao, P. “Maximizing Impact Mitigation in Distributed Reverse-Osmosis Systems”. *American Center for Life-Cycle Assessment Conference*. September 2024.

Hendrickson, T.P., Bose, B., Huntington, T., Nordahl, S., Helms, B.A., Scown, C.D. “Aligning Sustainability Policies with Environmental Justice Outcomes Toward Zero Waste”. *American Center for Life-Cycle Assessment Conference*. September 2024.



Course Instruction

University of California, Berkeley. Civil & Environmental Engineering. *CE11 Engineered Systems and Sustainability* – Fall 2023.