

Emily Peterson

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ENERGY AND ENVIRONMENTAL ECONOMICS, INC.

San Francisco, CA

Senior Managing Consultant

Ms. Peterson develops models that examine building electrification and transportation electrification, incorporating that analysis, especially on flexible loads, into both decarbonization scenarios and resource adequacy modeling. Ms. Peterson joined E3 in 2020 after more than 2 years working with alternative fuels and environmental assessments using life-cycle methodologies. She primarily works in E3's distributed energy resources practice area modeling and analyzing the economics of clients' renewables integration and transportation electrification goals. Ms. Peterson has a background in engineering and received her master's degree in civil and environmental engineering. Her expertise includes alternative fuel deployment and transportation policy.

Select E3 projects include:

- **Title 24 Building Codes for California Energy Commission (2022-2023).** Technical lead for E3's work on the California Title 24 Building Energy Standards, which provides regular updates to the Long-term System Cost economic basis of the standards. Led analysis which involved managing running multiple tools and E3 models to provide recurring and ongoing analysis.
- **United States Department of Energy (DOE), Connected Communities Initiative (2023-present).** Examining planning for flexible loads within a resource adequacy framework that is optimized for bill impacts and grid impacts. Part of a broader team, funded by a DOE Connected Communities funding opportunity, analyzing connected communities of grid-interactive efficient buildings.
- **Xcel Energy, Colorado and Minnesota Clean Heat Plans (2023).** Built the BldTech model to mass produce result from ResStock and ComStock. E3 then used the model to create a marginal abatement curve of decarbonization options for building types in Xcel's Colorado and Minnesota territories.
- **Open Vehicle-Grid Integration Platform (2020-2021).** Ms. Peterson worked on a team to conduct initial research and analysis to support vehicle grid integration (VGI) value opportunity analysis and support the development of VGI business models. She developed electric vehicle (EV) charging profiles under different charge management strategies using E3's EV Load Shape Tool for a variety of markets.
- **Sacramento Municipal Utility District, Virtual Power Plant (2021).** Ms. Peterson worked with a team to understand and quantify the potential contribution of a virtual power plant toward meeting SMUD's 2030 Carbon Neutral Goal. She developed electric vehicle (EV) charging profiles under different price streams using E3's EV Load Shape. Ms. Peterson also modeled the difference in behind the meter battery dispatch under different price streams.
- **Sacramento Municipal Utility District, Value of Solar and Storage (2020).** Ms. Peterson used E3's RESTORE model to value distributed, behind the meter solar or solar + storage systems

compensated through SMUD's net energy metering program. The analysis was completed from SMUD ratepayer, societal, and solar customer perspectives.

- **California Energy Commission, Nonresidential PV and Battery Cost-Effectiveness (2020).** Ms. Peterson utilized E3's RESTORE model to evaluate participant lifecycle benefits and cost effectiveness of behind-the-meter PV and storage in high-rise multifamily and nonresidential new construction to determine proposed requirement sizes.

ICF INTERNATIONAL, INC.

Transportation and Energy Specialist

San Francisco, CA
September 2018 – April 2020

- Evaluated the environmental and economic impacts of clean fuels, alternative transportation, and infrastructure
- Developed a model to quantitatively estimate the cost and benefits of on-road transportation decarbonization
- Performed lifecycle assessments of GHG impacts of alternative transportation fuels

UNIVERSITY OF CALIFORNIA, BERKELEY

Graduate Student Instructor

Berkeley, CA
August 2017-May 2018

- Supported the instruction of two courses: Environmental Engineering, Dr. William Nazaroff; and Quantitative Aspects of Global Environmental Problems, Dr. Lara Kueppers
- Instructed section for 100 students
- Developed quantitative assignment solutions
- Communicated with students in office hours

SOUTHERN ILLINOIS UNIVERSITY

Research Assistant

Carbondale, IL
October 2015-May 2016

- Assisted Dr. Yanna Liang with research, specifically researching energy literature, working in teams to prepare bagasse, and completing pretreatment of bagasse in timely manner

Extracurricular Work Experience

SOUTHERN ILLINOIS UNIVERSITY

Research

Carbondale, IL
October 2015 - August 2016

- McNair Scholars Program Summer Research Institute, Dr, Yanna Liang: "Optimization of the Hydrothermal Liquefaction process using K₂CO₃ as the Catalyst for Pretreated Bagasse"

Education

University of California, Berkeley
Master of Science, Civil & Environmental Engineering

Berkeley, CA
May 2018

Southern Illinois University
Bachelor of Science, Civil & Environmental Engineering
Minor: Mathematics
Passed Fundamentals of Engineering (FE/EIT) Exam, May 2017

Carbondale, IL
May 2017

Publications

Yanna Liang, Zheting Bi, Ji Zhang, Emily Peterson, Zeying Zhu, Chunjie Xia, Tomasz Wiltowski, Ph.D. (2016).
“Biocrude from pretreated sorghum bagasse through catalytic hydrothermal liquefaction.” *Fuel*.