Liyang Wang, CEM, EIT

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Education

University of California, Berkeley 2022 – Present
PhD, Energy & Resources Group

University of California, Berkeley 2020 – 2022 (expected)
Master of Science, Energy & Resources Group

University of Massachusetts, Amherst 2011- 2014
Bachelor of Science, Mechanical Engineering
Emphasis: energy efficiency and renewable energy

Research Experience

Lawrence Berkeley National Laboratory, Berkeley, CA January 2017 - Present
Senior Research Associate (04/2019 – Present)

- Develop programs that accelerate the adoption rate of distributed energy resources (DER) technologies
- Identify and research consumer and organizational behavior regarding technology adoption
- Develop semi-automated tools using Python and R to analyze qualitative and quantitative data (i.e. energy consumption, survey data, purchasing activities, interview data, etc.)
- Lead the design of emerging technology programs by identifying high impact technologies and quantifying the lifetime energy savings of those technologies
- Create survey and conduct interviews targeted at key stakeholders in industry and academia regarding technology adoption and translate survey results into actionable items and insightful conclusions
- Provide guidance to other team members on research methods, research project background, and knowledge regarding energy technologies, policies, and emerging technologies

Research Associate (01/2017 – 03/2019)

- Supported research projects related to implementation and evaluation of sustainable purchasing programs for Federal Energy Management Program (FEMP)
- Collected and analyze primary data regarding energy technology purchasing activities
- Conducted technology and market assessment for emerging technologies and calculate their energy savings potential
- Drafted guidelines for Department of Energy's Green Lease Leader program

Industry Experience

Fire Capital Management, Berkeley, CA August 2020 – December 2020
Consultant via the Berkeley Innovative Solutions Groups

- ❖ Led a team of 3 graduate students and created go-to-market strategy for Fire Capital to expand their services into impact investing
- ❖ Analyzed the current landscape of the impact investment market
- ❖ Conducted interviews with stakeholders in foundations, investment consulting firms, and institutional investors to identify market gaps

Eversource Energy, Westwood, MA July 2014 - December 2016
Energy Efficiency Consultant

- ❖ Developed energy efficiency incentive program structure, process, and incentive rate
- ❖ Collaborated with designers and building owners to implement energy efficiency projects for 100+ buildings across all business sectors
- ❖ Utilized Python and excel to analyze years of historical energy consumption data for demand reduction and energy conservation measures implementation purposes
- ❖ Researched and assessed emerging energy efficiency technologies for pilot studies
- ❖ Presented incentive programs, data findings, and lessons learned at design charrettes, national conferences and corporate meetings

National Grid, Waltham, MA June 2013 - September 2013
Engineering Intern

- ❖ Collaborated with engineers to implement smart thermostat pilot (Nest & EcoBee)
- ❖ Calculated and analyzed energy saving loads for energy conservation measures
- ❖ Researched designs for smart grid pilot and demand response program
- ❖ Assisted Transportation Engineers in deploying 50 EV charging stations in MA and NY

BEAM Energy & Engineering, Boston, MA June 2012 - September 2012
Project Manager

- ❖ Assisted in the design of utility-scale Solar PV systems
- ❖ Utilized ArcGIS, RETScreen, and NREL SAM to create solar potential maps, energy and financial analysis for 10+ PV Installation at landfills, airports and rooftops
- ❖ Drafted a technical design and financial proposal for government agency

Other Relevant Experience

Berkeley Energy & Resources Collaborative August 2020 – Present
Director of Events (Energy & Resources 101) and Mentor

- ❖ Organized a conference with a focus of examining energy and resources issues through interdisciplinary approach and justice lens
- ❖ Assembled four panels with experts across acidemia, policy, industry, and non-profit
- ❖ Mentoring three undergraduate students interested in energy careers from underrepresented background across different STEM departments

Engineers Without Borders-UMass Chapter September 2012 – May 2014
Treasurer and Local Solar Project Manager

- ❖ Researched and implemented environmentally sustainable and economical way of obtaining clean water in Namawanga, Kenya
- ❖ Traveled to Kenya to build an iron-removal system for a contaminated well in the Namawanga community with a team of 8 engineering students and a professor
- ❖ Led a team of 5 students to implement solar PV systems for UMass Amherst
- ❖ Managed the finances of the Chapter and analyzed donation information for Engineers Without Borders-USA

Selected Publications

*Brockway, Anna, M., **Wang, Liyang**., Dunn, Laurel. N., Callaway, Duncan., & Jones, Andrew. (2022). Climate-aware decision-making: lessons for electric grid infrastructure planning and operations. Environmental Research Letters, 17(7), 073002.*

Wang, Liyang, Morabito, Molly, Payne, Christopher T., and Robinson, Gerald. (2020) *"Identifying Institutional Barriers and Policy Implications for Sustainable Energy Technology Adoption Among Large Organizations in California"*. Energy Policy

Morabito, Molly, **Wang, Liyang**, Payne, Christopher T, and Fernandes, Luis L. (2020) "*National Mandates Won't Save Us!: How to Design Energy Efficiency Policies that Address Institutional Barriers to Change.*" ACEEE's Summer Study on Energy Efficiency in Buildings.

Wang, Liyang and Payne, Christopher T. (2018) *"Changing Institutional Procurement Behavior to Achieve Energy Savings"*. ACEEE's Summer Study on Energy Efficiency in Buildings.

Conference Presentations

Liyang Wang, Andrew Jones, David Anthoff, *"Achieving a climate-resilient electricity grid: beyond optimality, searching for robustness & embracing uncertainty"* Presented at The Society for Decision Making Under Deep Uncertainty (DMDU) Annual Meeting 2022

Liyang Wang, Anna Brockway, Laurel Dunn, Duncan Callaway, Andrew Jones, *"Climate-aware Decision-making: Lessons for Electric Grid Infrastructure Planning and Operations".* Presented at American Geophysical Union (AGU) Fall Meeting 2021

Liyang Wang and Molly Morabito, *"Your Guide to Carbon-Conscious Purchasing"*. Presented at the Sustainable Purchasing Leadership Council Summit 2020

Liyang Wang, Molly Morabito, and Christopher T. Payne, *"Identify Organizational Barriers and Opportunities in Clean Energy Technology Adoption for Large Institutions".* Presented at Behavior, Energy & Climate Change Conference 2019

Liyang Wang, "Leverage Procurement Data to Achieve Energy Savings and Improve Program Effectiveness". Presented at Federal Environmental Symposium 2019

Molly Morabito and **Liyang Wang**, "*Understanding the Significance of Energy-Efficiency in the Federal Procurement Community".* Presented at Federal Environmental Symposium 2019

Michael Clemson, **Liyang Wang**, and Joe Fullerton, *"Accelerating Clean Energy Procurement at CSU and UC"*. Presented at the California Higher Education Collaborative Conference 2019

Liyang Wang and Sravan Chalasani, "*Leveraging Procurement Data to Achieve Energy Savings and Improve Program Effectiveness in the Federal Sector*". Presented at the Sustainable Purchasing Leadership Council Summit 2019

Liyang Wang and Christopher T. Payne, "*Changing Institutional Procurement Behavior to Achieve Energy Savings.*" Presented at the 20th biennial ACEEE conference on Energy Efficiency in Buildings, 2018

Liyang Wang and Christopher T. Payne, "*Measuring Impacts of Institutional Change Workshops given at BECC*". Presented at the Behavior, Energy & Climate Change Conference, 2017

Liyang Wang and Peter Klint, "*Emerging Technology to Energy Efficiency Program Adoption*". Presented at the Northeastern University Energy Conference, 2016

Skills & Certifications

Python, R, Tableau, MAXQDA, Matlab, ArcGIS, AutoCAD, eQuest, NREL SAM, RETScreen, certified energy manager and engineer in training