Tianyu Feng, PMP, CEM, LEED AP

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ENERGY AND ENVIRONMENTAL ECONOMICS, INC.   Chicago, IL
Senior Consultant

Mr. Feng supports E3's Asset Valuation and Climate Pathways & Electrification group, specializing in distributed energy resources valuation, large-scale battery storage modeling and revenue analysis. He also focuses on the building and transportation electrification policies and economics, including utility costs, cost effectiveness, and cost-shifting effects. Prior to joining E3, he gained over four years of experience in energy efficiency and utility demand-side management programs, leading efforts in analyzing policies and program implementation.

Selected E3 projects include:

- **NYSERDA BEEM (Building Efficiency and Electrification Model) Roadmap (2021-present)**

  - Building Electrification Roadmap (BER) **–** Analyzed the implementation of a list of energy efficiency strategies towards building electrification by evaluating their economic performance and market penetration in residential and commercial sectors. Helped create an output viewer for the clients to assess the performance of different scenarios.
  - Low-Moderate Income (LMI) Assessment – Evaluated the utility costs, utility allowances, and cost-shifting resulting from heat pump adoption for regulated affordable housing and unregulated affordable housing.

- **City of Dublin Building Electrification Roadmap (2024-present)** Led the research and authored the building electrification roadmap for the City of Dublin, California. The report provides a comprehensive analysis of electrification measures, associated costs, emission reductions, policy consideration, financing options and adoption scenarios by 2050.

- **California Public Utilities Commission, Transportation Electrification Studies for the Integrated Resource Plan (2024)** Led the research and consolidation of key inputs and assumptions, including light-duty and medium/heavy-duty charger data and charging load shapes, for the Freight Infrastructure Plan (FIP) workstream. This involved evaluating various data sources from the California Energy Commission and California IOUs.

- **Building Electrification U.S. Market Assessment for a Major Heat Pump Manufacturing Company (2021-2022)** Developed:

  - a model to estimate the market penetration, projected sales growth, and cost analysis for space heating and water heating heat pumps under different federal and state policies

  - a building electrification pathway model to evaluate the feasibility and impact of electrification with different policy scenarios and technology adoption across the U.S.

- **Ontario Municipal Employees Retirement System (OMERS) Battery Platform Diligence (2023)** Modeled large-scale battery operation and optimization to generate hourly energy and AS Revenue forecast for 6 projects in CAISO and ERCOT Market. Generated nodal-specific DA and RT energy price forecasting based on the E3 core zonal price assessment.

- o **NYSERDA Zero Emission Vehicle (ZEV) Market Development Plan (2022)** Researched current and future state of the technology and developed consensus projections for needed/desired ZEV adoption before 2030, and consolidated policy details for near-term policy priorities for various vehicle types, fueling types and other cross-cutting policies focus specific target communities.
- o **Confidential Top Technology Company Demand Side Management Market Assessment (2022)** Advised the client on the landscape and operation of demand side management (DSM) programs, distributed energy resources (DER), and energy efficiency (EE) efforts across a number of targeted markets/utilities for the US residential customer base. Consolidated utility/market compensation mechanism within existing regulatory frameworks and identified the near-term market entrance opportunity for the client.
- o **Southern California Edison Building Electrification Filing (2021-2022)** Evaluated building electrification impact on the residential and small commercial customers from 2024-2027 regarding (a) greenhouse gas emissions (GHG) savings from energy and non-energy impacts, (b) disaggregated service panel and circuit cost information for residential and small commercial, (c) commercial building energy consumption estimation, and (d) small commercial and residential energy bill savings estimates.

WILLDAN   Chicago, IL
Energy Engineer   March 2018 – June 2021

- o Led 68 clients in optimizing energy consumptions and financial analysis for buildings across the U.S.; helped clients to obtain more than $3.1 million energy-saving incentives from major utility companies
- o Provided consulting services under a multi-stakeholder environment (i.e., utility providers, real estate investors) to propose energy efficiency solutions with a holistic approach that fulfills each stakeholder's requests
- o Produced data-driven modeling and quantitative analysis by running building energy models with multiple energy-saving scenarios in 3 sprint phases throughout the project life cycle for 89 projects and presented the final energy cost reports to stakeholder groups

WILLDAN   Minnetonka, MN
John Weidt Research Fellow   May 2016 – May 2017

- o Developed an industry-focused statistically significant model to support the firm's consulting services by conducting thorough probability and sensitivity analysis with 500,000+ simulation runs on infrastructure energy consumption across North America

Education

Georgia Institute of Technology   Atlanta, GA
Master of Science, major in Architectural Technology   July 2017

Iowa State University   Ames, IA
Bachelor of Architecture   December 2014