Cameron Morelli

44 Montgomery Street, Suite 1500, San Francisco, CA 94104
cameron.morelli@ethree.com

ENERGY AND ENVIRONMENTAL ECONOMICS, INC. San Francisco, CA
Consultant

Cameron Morelli supports E3's Integrated System Planning practice area. Her areas of focus include utility operational studies, integrated resource planning, and bid evaluation. She is a PLEXOS modeling lead, which includes contributions to modeling the WECC as part of E3's market forecasting, evaluating least cost resource portfolios to meet climate goals, and production cost modeling to assess market pricing.

Cameron joined E3 after earning a master's degree in Civil and Environmental Engineering from Stanford University. During graduate school, she worked at ACEP and helped develop decarbonization pathways for the Railbelt -- Alaska's largest regional electric grid. Prior to graduate school, she earned a bachelor's degree in mechanical engineering from UC Davis and worked as a consultant designing HVAC systems and modeling the energy systems in commercial buildings.

Notable E3 projects include:

California Public Utility Commission (CPUC), Avoided Cost Calculator (ACC), 2024. Supported model development of a new tool E3 developed for the ACC to integrate calculations of greenhouse gas emissions and capacity avoided costs, updating the fundamental revenue streams for distributed energy resources. Model development improved on E3's established ACC model, introducing an updated approach to calculate and improve avoided costs analysis.

Utility Bid Evaluation Analysis, Black Hills Energy, 2023-2024. Supported the procurement process for Black Hills as they have solicited bids to fill their resource needs, following their Integrated Resource Plan findings. This required the translation of bids into model inputs and use of E3's RESOLVE model as well as production cost modeling in PLEXOS to evaluate optimal, least-cost bid portfolios.

Operational Flexibility and Portfolio Planning Support, Confidential Utility, 2024. Evaluated key economic and reliability considerations that will impact future resource selection in a capacity expansion study. Performed PLEXOS production simulation analysis to quantify flexibility costs and benefits of different resources to recommend optimal portfolios.

ALASKA CENTER FOR ENERGY AND POWER Fairbanks, AK
Shultz Energy Fellow June 2022 – June 2023

- Created a production cost model of the Railbelt in PLEXOS to simulate dispatch of the system in 2021
- Explored decarbonization pathways for Alaska's Railbelt electric grid spanning from Homer to Fairbanks

- Modeled various decarbonization scenarios to determine economic feasibility, rate impacts, and effects on reliability

DEC ENGINEERS San Diego, CA
Mechanical Engineer July 2020 – July 2021

- Produced building energy models in EnergyPro for HVAC equipment sizing and Title 24 energy code compliance
- Performed calculations to determine central heating and cooling plant sizing for district energy systems
- Consulted architects and building owners on achieving energy code compliance and greater sustainability goals
- Performed calculations and collected documentation for LEED certifications

EXP San Diego, CA
Mechanical Design Engineer August 2019 – July 2020

- Performed life-cycle cost analyses of building energy systems to determine the most efficient design
- Performed heating and cooling load calculations and sized HVAC equipment for laboratory and hospital buildings
- Designed and modeled ductwork and piping layouts for HVAC systems in Revit and AutoCAD

UC DAVIS – FACILITIES MANAGEMENT Davis, CA
Energy Engineering Intern May 2017 – June 2019

- Completed various energy projects to improve the energy efficiency of buildings on campus as the university reaches its goal of net-zero carbon emissions by 2025
- Created a renewable energy generation profile for UC Davis by quantifying electricity generated by the on-campus solar farm and biodigester
- Analyzed building utility data and control system trends in Siemens Insight to find energy conservation measures

Education

Stanford University Stanford, CA
M.S., Civil & Environmental Engineering (Atmosphere / Energy) June 2023

University of California, Davis Davis, CA
B.S., Mechanical Engineering June 2019