

**ENERGY AND ENVIRONMENTAL ECONOMICS, INC.**  
*Senior Consultant*

New York, NY

Louis joined E3's New York office in 2019, where as a member of E3's resource planning and asset valuation groups he helps investors, state agencies, and utilities prepare for a clean energy economy. Louis' work focuses on the intersection of decarbonization policy, reliability, and resource economics. Recently he charted a path for a Midwest utility currently relying on coal generation to transition to meeting deep decarbonization goals. Additionally, he is currently investigating the impact of New York's evolving electricity industry on the prices and market behavior within the NYISO capacity market. Louis joined E3 after working in Southern California Edison's resource planning group. He holds a M.S. in Mechanical Engineering from UCLA and a B.S. with a double major in Economics and Integrated Science & Technology from James Madison University. Recent E3 projects include:

- **Southeast Gas Plant Benchmarking** – Supported investment firm considering acquisition of gas plants within the Southeast U.S. by comparing selected gas plants across qualitative and quantitative economic and operational metrics.
- **Eastern Market Solar and Storage Due Diligence** - Provided due diligence support for a private equity firm considering investment in solar and storage assets across the mid-Atlantic which included analyzing wholesale and retail market values and the interaction of value streams with specific offtake agreement structures.
- **Microgrid Business Model Analysis** - Supported go-to-market strategy for the CA market for a microgrid developer by calculating and comparing revenues across wholesale, retail, and utility business models.
- **New York Capacity Market Modeling** – Created forecasting tool, modeling zonal NYISO capacity price formation.
- **Midwest Decarbonization Support** - Charted a path for a Midwest utility to transition from current coal operations to meeting deep decarbonization goals. Performed capacity expansion modeling to assess the optimal resource mix under deep decarbonization scenarios and used loss-of-load probability assessments to ensure the resulting portfolios also maintained system reliability.
- **Building Electrification Roadmap Modeling** – Performed building economics modeling for a Mid-Atlantic State Agency in support of the achievement of state clean energy goals. Led development of the modeling tool, which integrates building characteristics, customer economics, and adoption algorithms to inform customer incentives levels.
- **Clean System Power Calculator** - Developed a spreadsheet-based dispatch tool to consistently measure expected emissions from resource plans. This tool is used by all load serving entities as part of their filings in the California CPUC's Integrated Resource Planning process.

**SOUTHERN CALIFORNIA EDISON***Senior Analyst*Los Angeles, CA  
January 2017 – October 2019

- Led modeling for SCE's 2030 clean energy white paper incorporating integrated planning models, total cost of ownership, cost of abatement, and market potential analyses
- Forecasted ~\$4 billion fuel and purchased power budget for SCE financial planning
- Consulted as subject matter expert in loss-of-load expectation and marginal capacity cost in SCE's General Rate Case utilizing monte-carlo simulation, price dispatch, and financial modeling
- Performed novel analytics for various projects including EV incentives, transmission impacts of high renewables, hydrogen, demand response effectiveness, power system reliability, renewable energy credits, and emerging power generation technologies.

**UNIVERSITY OF CALIFORNIA, LOS ANGELES***Graduate Research and Teaching Assistant*Los Angeles, CA  
August 2015 – December 2016

- Created energy model and optimization in Matlab for a novel carbon capture and utilization process
- Engaged with cross-functional team of economists, chemists, and engineers
- Led sessions of up to 50 students teaching curriculum for Fundamentals of Thermodynamics and Economics for Engineers

**BINERA INC.***Risk Consulting Intern*Palo Alto, CA  
June 2016 – September 2016

- Evaluated extent of damage for terrorism and natural hazard risk scenarios to transportation systems
- Designed econometric model in R estimating economic impact of transportation infrastructure interruption

**JAMES MADISON UNIVERSITY***Undergraduate Research and Teaching Assistant*Harrisonburg, VA  
September 2014 – August 2015

- Teaching: Engineering Design, Thermodynamics, and Intro to Biomedical Engineering
- Research: Fluid mechanic analysis of vortex ring formation through mitral valves

**Education**University of California, Los Angeles  
*M.S., Mechanical Engineering*Los Angeles, CA  
2016James Madison University  
*B.S., Integrated Science & Technology and Economics (double major)*  
*Magna Cum Laude*Harrisonburg, VA  
2015

Citizenship

United States