Joe Hooker

44 Montgomery Street, Suite 1500, San Francisco, CA 94104   415.391.5100, ext. 420
joe.hooker@ethree.com

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

Mr. Hooker joined E3's asset valuation practice in 2018. He helps clients navigate complex electricity industry dynamics and achieve goals related to reliability, affordability, decarbonization, and value creation. On a recent project, he helped design a policy for a western state to achieve steep greenhouse gas emissions through the promotion of a variety of low-carbon resources. At another consulting firm prior to joining E3, Mr. Hooker helped build a new "Utility of the Future" practice that helps transmission and distribution utilities develop new strategies and approaches for rate design, distribution planning, product and service offerings, and integration of distributed energy resources. Mr. Hooker earned an M.S. in Energy Engineering from Ecole Polytechnique and a B.S. in Industrial Engineering from Northwestern University.

ÉLECTRICITÉ DE FRANCE (EDF)   Paris, France
Intern – Energy Modeler   April 2018 – August 2018

- Developed a model in Python to determine the economic implications of moving to an electricity system in France with a very high penetration of renewable generation (from 10% up to 100%)
- Optimized renewable energy, energy storage, thermal power plant, and grid-related investment decisions, as well as real-time grid operations, to obtain a desired penetration of renewable energy at least cost in 2030
- Performed separate optimizations for France's twelve mainland regions, as well as the country as a whole, to determine how locally-optimized investment decisions could influence the cost and energy mix of a national system with high levels of renewable energy

THE NORTHBRIDGE GROUP   Concord, MA
Energy Consultant   September 2013 – June 2017

- Consulted for 13 different clients in the U.S. electricity industry, including utilities, power producers, a non-profit, and battery developers
- Supported partners at NorthBridge by performing research, synthesizing information, conducting rigorous quantitative modeling, and communicating insights to clients
- Modeled the optimal operations of 52 utility-scale battery projects, totaling 334 megawatts. Maximized revenues across energy, capacity, and ancillary services markets while still allowing operations of the battery to defer a "traditional" distribution grid investment
- For a potential entrant to California's Energy Imbalance Market (EIM), assessed the prevalence of negatively-priced hours and quantified the benefits of joining the EIM and shifting load to these hours
- Presented in-person to two utility executive boards on utility-scale batteries and challenges to the current utility business model. Together, these utilities serve more than 5 million customers

- o For a foreign battery manufacturer, developed an overview of the energy storage market in the U.S. and provided an outlook for batteries participating and earning revenues in the PJM frequency regulation market
- o Built a model to value the components of a microgrid, including a solar project, a battery storage system, a fuel cell, and a gas microturbine
- o For several utilities across the U.S., catalogued national developments regarding departures from net metering and provided guidance on how to appropriately value and compensate distributed solar

PEPSICO   Chicago, IL
Intern - Global Supply Chain Analyst   June 2012 – September 2012

AGINITY   Evanston, IL
Intern - Data Analytics Consultant   June 2011 – September 2011

Education

École Polytechnique   Palaiseau, France
M.S., Energy Engineering   2017 – 2018

Harvard University, Extension School   Cambridge, MA
Professional Development   2014 – 2017
Coursework in Monte Carlo Methods for Inference and Data Analysis, Data Visualization,
Managerial Finance, Financial Statement Analysis

Northwestern University   Evanston, IL
B.S., Industrial Engineering   2009 – 2013
Minor in Economics
Kellogg School of Management Undergraduate Certificate in Managerial Analytics

Citizenship

United States