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### **ENERGY AND ENVIRONMENTAL ECONOMICS, INC.**

New York, NY

Director

Mr. Steinberger is an Director in E3's Integrated System Planning practice and works out of our New York City office. He helps utilities and state agencies plan for a low-carbon grid and analyzes how different policies and business models affect clean energy deployment, and has worked extensively with clients and stakeholders across the New York energy landscape. He also works with E3's Climate Pathways and Distributed Energy Resources (DER) group, helping utilities and state agencies evaluate opportunities for customers to employ DERs and address challenges related to rate design. Mr. Steinberger's recent E3 projects include analyzing the feasibility, timing, and costs associated with meeting New York's electric sector targets to inform the Climate Act Draft Scoping Plan; managing an assessment of pathways for New York City government to meet the requirements of Local Law 97; and analyzing strategies for a Midwest utility to achieve its climate and clean energy goals.

Mr. Steinberger brings extensive experience analyzing the economic and environmental impacts of federal and state energy policies, and he has managed power sector modeling efforts as well as the development of energy policy planning tools. He earned an M.S. in Mechanical Engineering from Stanford University and a B.S. in Mechanical Engineering from Princeton University.

#### Select projects at E3 include:

- New York Scoping Plan Integration Analysis, New York State Energy Research and Development Authority (NYSERDA), Ongoing. Mr. Steinberger leads E3's analysis of the electric sector impacts of New York's landmark climate law, the Climate Leadership and Community Protection Act. In 2021, NYSERDA published the Integration Analysis as a technical appendix to the State's Draft Scoping Plan, which contained a detailed exploration of achievement of a zeroemissions electric sector by 2040. Mr. Steinberger leverages E3's in-house capacity expansion model, RESOLVE, to model numerous scenarios and sensitivities that explored the role of enduse flexibility, emerging technologies such as hydrogen and long-duration storage, and other resources to help achieve New York's decarbonization goals.
- Small Clean Power Plant Adaptation Strategy, New York Power Authority (NYPA), 2021-2022. Mr. Steinberger led a project for NYPA that examined opportunities to decarbonize their natural gas-fired power plants in New York City, with a focus on opportunities for battery storage to partially or fully replace the operations of NYPA's units. Along with NYPA, Mr. Steinberger also engaged directly with environmental justice stakeholders (the PEAK Coalition), and the project successfully resulted in NYPA issuing a request for proposals (RFP) to examine storage opportunities in more detail.
- New York Energy Storage Roadmap, NYSERDA, Ongoing. Mr. Steinberger is contributing to E3's
  efforts to support NYSERDA and the Department of Public Service in the development of New
  York's Storage Roadmap. The Roadmap will outline a path to achieving Governor Hochul's target
  of deploying six gigawatts of battery storage and how this target supports New York's broader

- clean electricity goals. Mr. Steinberger has served as a lead liaison with key stakeholders, including presenting E3's technical approach at the annual New York Storage conference.
- Local Law 97 Implementation Action Plan, New York City Department of Citywide
  Administrative Services (NYC DCAS), 2020-2021. Mr. Steinberger managed the development of
  the LL97 Implementation Action Plan, a detailed roadmap to achieve the required emissions
  reductions across New York City government, including in City buildings, transportation, and
  wastewater management. The Action Plan supported an Executive Order from Mayor de Blasio
  to invest over \$4 Billion in climate action across New York City government.
- Deep Decarbonization Pathways Analysis, Confidential Midwest Utility, 2020. Mr. Steinberger managed an economy-wide analysis of deep decarbonization in the Midwest, with a focus on the implications for the electricity system under a strategy that relies on high electrification of the buildings and transportation sectors. This analysis included a detailed examination of the opportunities to decarbonize the electric sector as well as the reliability challenges associated with meeting increasingly stringent emissions limits, including an analysis of a fully decarbonized system.
- Transmission Strategy Development in New York State, Confidential Transmission Developer, 2019-2020. Mr. Steinberger worked with a transmission developer to identify new opportunities to enhance the deliverability of clean energy in New York State. As part of this work, Mr. Steinberger provided a detailed review of transmission modeling performed by the client and assisted in the identification of priority needs.
- Analysis of Resource Adequacy Procurement Options, Confidential New York Utility, 2019. Mr.
   Steinberger supported a confidential New York utility in the New York Public Service
   Commission's Resource Adequacy proceeding. Mr. Steinberger helped draft a report summarizing resource adequacy procurement and market design issues across the United States, which informed the client's strategy and comment submission in the New York docket.
- Cost-Benefit Analysis of Energy Efficiency Targets, Confidential State Agency, 2018-2019. Mr.
   Steinberger worked with a state agency to examine the costs and benefits of aggressive energy efficiency targets. This work included a detailed bill impact analysis of energy efficiency measures and an analysis of the rate impacts on non-participants.
- Testimony in Georgia Power 2019 IRP, Georgia Large-Scale Solar Association, 2019. Mr.
   Steinberger managed an analysis of Georgia Power's system and developed testimony that identified the costs and benefits of increased solar procurement. The testimony recommended higher levels of solar procurement during Georgia Power's 2019 IRP cycle and also proposed changes to Georgia Power's Renewable Cost-Benefit framework.
- Examination of Coal Plant Operations under Carbon Pricing Scenarios, Confidential Non-Profit
  Organization, 2019. Mr. Steinberger managed the development of an Excel-based tool to model
  simplified coal unit dispatch under future carbon price scenarios. The analysis was used to
  evaluate the operations and profitability of coal-fired units in the Midwest and informed the
  client's policy objectives and strategies.

#### NATURAL RESOURCES DEFENSE COUNCIL

Climate and Clean Air Program, Policy Analyst Energy and Transportation Program, Schneider Fellow New York, NY and Washington, DC August 2015 – May 2018 August 2014 – August 2015

- Analyzed the economic and environmental impacts of climate policies and researched key energy sector trends
- Presented policy recommendations to federal and state policymakers, including in Congress and at DOE, EPA, FERC, and state environmental agencies

- Commissioned and managed modeling and reports by industry-leading energy and economic analysis firms
- Directed the construction of state and city energy policy tools to inform deep decarbonization planning
- Developed 12 state-specific fact sheets on the Clean Power Plan, charting pathways to meet emissions targets
- o Authored renewable energy section of NRDC's regulatory comments on the Clean Power Plan

#### **NEW CLIMATE ECONOMY**

Palo Alto, CA

Innovation Chapter, Research Analyst

March 2014 - June 2014

- Constructed experience curves to illustrate potential cost reductions of wind and solar in key markets
- Modeled and analyzed the global emissions impact of accelerated deployment of low-carbon technologies
- Contributed research and writing on the global impacts of innovation on the electricity sector

CLEAN COALITION Palo Alto, CA

Hunter's Point Microgrid Project, Analyst

November 2013 - March 2014

- o Developed model to process local utility's feeder-level SCADA data and create load profiles
- o Simulated high penetration of distributed generation to examine impacts on the power grid

## CASSIDY & ASSOCIATES

Washington, DC

Energy and Environmental Policy Group, Intern

June 2013 - August 2013

- Monitored legislation and prepared policy briefs on issues ranging from energy efficiency to nuclear waste
- o Profiled prospective clients and crafted strategies for new business development opportunities

# **Education**

Stanford University
M.S., Mechanical Engineering

Palo Alto, CA April 2014

Stanford Graduate Fellowship, Independent Work: Investigation of Solid Carbon Fuel Cells

Princeton University

B.S., Mechanical Engineering

Princeton, NJ June 2012