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ENERGY AND ENVIRONMENTAL ECONOMICS, INC.
Consultant

Boston, MA

Mr. Santoni-Colvin supports E3's Climate Pathways and Electrification practice area. He joined E3 after completing a master's degree in technology and policy from Massachusetts Institute of Technology. While at MIT, he worked at the MIT Energy Initiative where he conducted modeling and analysis to investigate the integrated electric and gas system impacts of heating electrification in New England. At E3, he has focused on resource planning and electrification, future of gas, and rate design. In addition to his M.S. from MIT, Mr. Santoni-Colvin holds a B.S. in Mechanical Engineering from the University of Texas at Austin.

Selected E3 projects include:

Massachusetts Local Distribution Companies, Non-Pipeline Alternative Stakeholdering Process (2024-Ongoing). Serves as an analyst providing technical support to stakeholder processes focused on the feasibility of non-pipeline alternatives (NPA) in Massachusetts. Supporting quantitative case studies and literature review used in multiple stakeholder working groups focused on establishing statewide processes for identifying and executing NPA-eligible projects.

NYSERDA, State Energy Plan (2024-Ongoing) Serves as an analyst supporting E3's capacity expansion and resource adequacy modeling for New York's State Energy Plan. Assisted in developing inputs and scenarios to improve the analysis' representation of NYISO's interactions with other RTOs as well as improved resource cost estimates used in the analysis.

California Public Utilities Commission, Integrated Resource Plan (2024-Ongoing) Developed new methods to reduce the temporal complexity of E3's large CPUC IRP capacity expansion model. Developed tools to validate the downsampled model's representation of load profiles, renewables generation, hydro availability, and their interactions.

MIT ENERGY INITIATIVE
Graduate Research Assistant

Cambridge, MA
September 2021 – September 2023

- Constructed bottom-up building energy models to project the regional impacts of electrification for the decarbonization of building heating in the northeastern United States
- Interpreted power and gas infrastructure model results to determine best system plans under future scenarios
- Evaluated state-level regulatory processes, barriers, and opportunities for beneficial electrification
- Collaborated with utilities and grid operators to inform regional system planning and policy

RECURVE*Graduate Public Policy Intern*

Bay Area, CA

June 2022 – August 2022

- Evaluated potential for Recurve to integrate its demand flexibility modeling methods and data pipelines into California's integrated energy resource planning and resource adequacy proceedings
- Researched opportunities for regulatory reform to fully integrate distributed energy resources in Texas' wholesale electricity market

BREAKWATER FORENSICS, LLC*Case Assistant*

Austin, TX

June 2020 – August 2020

- Dissected construction management and permitting documents for evidence to support expert testimony in arbitration, especially on a dispute involving a multi-billion-dollar energy resource project
- Analyzed financial statements to determine sources of overruns for projects of various magnitudes

EEA CONSULTING ENGINEERS*Energy Engineering Intern*

Austin, TX

June 2019 – August 2019

- Designed HVAC and plumbing systems on projects for nationwide commercial and retail clients
- Employed modeling software to calculate thermal loads for buildings of different characteristics

Education

Massachusetts Institute of Technology

M.S., Technology and Policy

Cambridge, MA

September 2023

The University of Texas at Austin

B.S., Mechanical Engineering

Austin, TX

May 2021

Publications

1. Khorramfar, Rahman, **Morgan Santoni-Colvin**, Saurabh Amin, Leslie K. Norford, Audun Botterud, Dharik Mallapragada (2023) "Cost-effective Planning of Decarbonized Power-Gas Infrastructure to Meet the Challenges of Heating Electrification," (under review).