



Joshua Spooner

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ENERGY AND ENVIRONMENTAL ECONOMICS, INC.
Senior Consultant

San Francisco, CA

Joshua Spooner advises state agencies, utilities, and other major players in the energy industry as part of E3's integrated system planning practice. Joshua's work focuses on integrated resource planning (IRP) processes, long lead-time technologies, and the linkages between supply-side and demand-side planning. They are a core member of the team supporting the California Public Utilities Commission IRP and was E3's technical manager for the 2024-2026 inputs and assumptions. Throughout their time at E3, Joshua has also supported IRPs and capacity expansion modeling for other California agencies and multiple out-of-state jurisdictions. Prior to joining E3 in 2022, Joshua worked at the National Resources Defense Council and Pacific Gas & Electric, focusing on building electrification and decarbonizing California's gas system. They also completed an M.S. in Energy Systems Management culminating with an integrated resource plan that outlined pathways for Arizona Public Service to achieve net-zero emissions.

Select E3 experience includes:

California Public Utilities Commission Integrated Resource Plan experience (2022-Present). Technical manager for the 2024-2026 IRP cycle Inputs and Assumptions report and workshop; supported the design of a streamlined and automated data input pipeline in parallel. Has contributed major roles in scenario design, RESOLVE capacity expansion modeling, presenting results, and responding to stakeholder feedback for the 2023 Preferred System Plan (PSP), 2024 AB1373 Need Determination, and 2025-26 Transmission Planning Portfolio (TPP); this includes a lead role designing Long Lead-Time (LLT) resource scenarios and presenting 2025-26 TPP results to CPUC President Reynolds and ALJ Fitch

California Energy Commission 2028 Codes & Standards Modeling (2024 – present). Adapted the CPUC IRP RESOLVE model and the IEPR forecast; modeled the optimal electric system portfolio under the impact of proposed California building codes to inform cost-benefit tests; explained technical modeling results to a non-electric sector audience.

California Energy Commission Climate Resilience Study (2023 – present). Conducted cross-sectoral modeling for economy-wide load forecasting, load shaping for building and transportation electrification, and electric sector capacity expansion; supported work to incorporate the impacts of various climate scenarios at each stage of modeling; served as the technical manager for RESOLVE modeling, leveraging the CPUC IRP model

Manitoba Hydro Integrated Resource Plan (2023 – present). Supported Manitoba Hydro's 2023 and 2025 IRPs at multiple stages, including scenario design, modeling emerging technologies, stakeholder engagement, and integrated planning with the gas system

Confidential Technology Company, Emissions Accounting (2024). Supported adaptations of the CPUC IRP RESOLVE model to model clean energy requirements for large commercial and industrial loads under annual matching and hourly matching.

Sacramento Municipal Utilities District (SMUD) Zero Carbon Plan Sensitivity (2023). Primary RESOLVE modeler examining the impacts of Carbon Capture and Storage (CCS) adoption on SMUD's system and the role of CCS in meeting SMUD's Zero Carbon by 2030 target.

Public Service Company of New Mexico (PNM) IRP (2022-2023). Supported PNM’s 2023 IRP at multiple stages including scenario design, reviewing modeling inputs for emerging technologies and reliability, stakeholder engagement, and report writing.

Nova Scotia Power Hydrogen Study (2022). Supported RESOLVE analysis on the impacts of Hydrogen production on the Nova Scotia Power electric system, leading to the development of the first green Hydrogen facility in Atlantic Canada

PACIFIC GAS & ELECTRIC COMPANY

Decarbonization Strategies Intern

Oakland, CA
May – September 2022

- Utilized GIS to map PG&E’s hard-to-electrify gas customers and estimated the supply of zero-emission fuels required in 2045
- Contributed to engagements with the CPUC on zonal electrification and decarbonized gas
- Analyzed data on upcoming gas system maintenance to assist CCA planning processes

NATURAL RESOURCES DEFENSE COUNCIL

Energy Policy & Equity Staff

San Francisco, CA
October 2021 – May 2022

- Assisted in preparing public comments to California regulators; preformed research, analysis, and writing for public policy briefs and memos
- Major Topics of work include estimating customer impacts & incentive planning for widespread transportation & building electrification

Education

University of San Francisco
M.S., Energy Systems Management

San Francisco, CA
May 2022

St. Mary’s College of California
B.S., Environmental Science

Moraga, CA
May 2018