Aaron Burdick

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

Mr. Burdick joined E3's Integrated Systems Planning group in 2019, where he helps utilities, system operators, and state agencies prepare for a high renewables future. He has over 17 years of energy industry experience including 10 years of project management. At E3, he leads projects forming long term integrated system planning, reliability analyses, and utility and regulator strategy. His work includes electric planning in California, the Pacific Northwest, the Midwest, Hawaii, and the Caribbean with expertise in utility procurement, commercial and corporate strategy, and electricity market design. He joined E3 from the utility Pacific Gas & Electric, where he led the development of PG&E's 2018 Integrated Resource Plan and provided leadership on decarbonization efforts and renewable energy strategy. Before attending graduate school, Mr. Burdick spent four years at energy consultancy ICF International working on climate policy and energy efficiency. He has also conducted energy analysis and provided strategic advice to non-profit environmental organizations. Mr. Burdick holds an M.S. in Civil and Environmental Engineering (Atmosphere/Energy) from Stanford University and a B.S. in Environmental Studies from the University of California, Santa Barbara. Select E3 projects include:

California Public Utilities Commission, Integrated Resource Plan, 2019-current. First as Project Manager and now as Project Lead, oversees E3's comprehensive support for CPUC electricity planning for over $13M (to date) of consulting support on clean energy and reliability topics, including capacity expansion modeling, utility/LSE regulation, electricity demand forecast reviews, electrification studies, renewable grid integration, and system and local reliability analyses. Led a $1M+ cross-sector analysis examining electrification growth and electricity system needs, built the MTR Need Determination model used to order $20B+ in LSE procurement, led the E3 (and subcontractor) team to implement >500 deliverables for the CPUC IRP, and led E3's support to develop the Reliable and Clean Power Procurement Program.

Bonneville Power Authority, Lower Snake River Dams Study, 2022. Project Manager for an independent E3 study that analyzed the value of the Lower Snake River dams to the Northwest power system. E3's report examined the resource needs and costs associated with replacing the power services that the dams provide. The E3 report concluded that replacing the energy services from the dams would come at substantial financial cost to the region.

Omaha Public Power District (OPPD) Net Zero Carbon Pathways Study, 2021 - 2023. Project Manager for E3's comprehensive study on various pathways for OPPD to achieve net zero carbon by 2050. The study included multi-sector modeling of scenarios consistent with OPPD decarbonization, reliability and resiliency analysis using E3's RECAP model, and the development of optimal electricity portfolios using E3's RESOLVE model. Also Project Lead for a second project with OPPD including near-term procurement evaluation support.

Hawaiian Electric Company (HECO), Integrated Grid Planning Support, 2022-current. Project Lead and Project Manager for multiple E3 projects for HECO related to integrated planning of HECO power systems. Includes reliability modeling, capacity expansion and optimization, and technology evaluation.

PACIFIC GAS & ELECTRIC COMPANY San Francisco, CA
Principal, Policy Analysis December 2017 – May 2019
Expert Analyst, Clean Energy Analysis January 2016 – November 2017
Senior Analyst, Renewable Energy Strategy October 2014 – December 2015

- Technical, policy, and strategy leadership on electric decarbonization efforts
- Led the development of PG&E's 2018 Integrated Resource Plan
- Project management of key renewable energy compliance deliverables and technical consulting studies
- Key contributor to additional topics including cost-effectiveness, valuation, DER planning, transmission planning, vehicle-to-grid integration, and decarbonization pathways modeling

SIERRA CLUB San Francisco, CA
Campaign Analyst July 2013 – October 2014

- Developed policy analysis models to inform policy positions and regulatory comments on the EPA's Clean Power Plan
- Provided technical and market expertise on power plant economics and national electric sector trends to directors and executive leadership to inform organizational strategy

CLEAN COALITION Palo Alto, CA
Intelligent Grid Program Associate June 2012 – January 2013

- Led the technical development of the Community Microgrid Initiative to integrate high penetrations of distributed solar using storage and smart inverters; developed and ran distribution power flow models

STANFORD UNIVERSITY Palo Alto, CA
Teaching Assistant January 2013 – June 2013
Research Assistant July 2011 – December 2011

- Teaching Assistant for graduate-level courses "Air Pollution & Global Warming" and "Electric Power: Renewables & Efficiency"
- Research Assistant to Dr. Mark Jacobson on climate impacts of aviation

ICF INTERNATIONAL Sherman Oaks, CA
Analyst June 2009 – December 2011
Research Assistant December 2007 – June 2009

- Clean energy, energy efficiency, and climate change consulting projects, including technical assistance for state government clean energy efforts for DOE, IOU energy efficiency program implementation, and GHG reduction planning for the public sector and Fortune 500 firms

Education

Stanford University — Stanford, CA
M.S., Civil and Environmental Engineering (Atmosphere/Energy) — 2013

University of California, Santa Barbara — Santa Barbara, CA
B.S., Environmental Studies (with Highest Honors) — 2007