

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

New York City, NY

*Associate*

Hugh Somerset supports E3's Integrated System Planning practice area with a focus on portfolio planning and emerging bulk-grid technologies for state agencies, utilities, and project developers. He operates E3's capacity expansion model RESOLVE, loss of load probability model RECAP, and operational reserves model RESERVE. Prior to E3, Hugh worked in storage valuation at Ascend Analytics and assessing DERs for deferring distribution grid investments at PG&E. Hugh has a degree in Energy Engineering from UC Berkeley where he focused on distribution grid planning for mitigating utility-caused wildfires.

Recent E3 projects include:

**Hawaiian Electric, Resource Adequacy and Reliability Support, 2023 – ongoing.** Analyst and RECAP modeler studying different resource adequacy framework for long-term resource adequacy planning. The project compares the reliability, cost, and suitability of energy reserve margin and planning reserve margin constructs for Hawaiian Electric's electricity system.

**Omaha Public Power District (OPPD), Near-term Resource Planning and Procurement, 2022 – 2023.** Analyst and RESOLVE capacity expansion modeler examining near-term resource planning for OPPD through 2030. E3's analysis addresses OPPD's ambitious decarbonization goals amid high load growth and limited near-term resource availability due to long interconnection queues and supply chain shortages.

**Independent Electricity System Operator (IESO), Dynamic Operating Reserves Study, 2023 – ongoing.** Analyst and RESERVE modeler studying the current and future need for imbalance (flexible) operating reserves. RESERVE is a probabilistic neural-network regression model which estimates reserve needs due to net load forecast error.

## **PACIFIC GAS & ELECTRIC COMPANY**

*Integrated Grid Planning Intern*

San Francisco, CA

May 2021 – August 2021

- Interdisciplinary team coordinating PG&E's Distribution Resource Plan pursuant to CPUC Rulemaking 14-08-013.
- Operated and improved DER Service Requirements Workbook to identify opportunities to defer traditional grid upgrades at capacity-constrained feeders using DERs.
- Analyzed and interpreted CPUC regulatory documents to verify PG&E's full compliance with regulatory requirements.
- Designed and implemented validation tests for data published in the Grid Needs Assessment (GNA) and Distribution Deferral Opportunities Report (DDOR).

## **FOWLIE RESEARCH GROUP**

Berkeley, CA

*Research Assistant*

August 2020 – May 2021

- Project estimating the co-benefits of improved air quality due to the Clean Air Act and seeking evidence of regulatory rebound.
- Applied a particle transport model, InMAP, to geospatially track plant-level emissions from over 1000 individual coal power plants.

**ASCEND ANALYTICS**

*Energy Analyst Intern*

July 2020

Oakland, CA

June 2020 –

- Analyzed strategic operation of grid-scale batteries in wholesale electricity markets.
- Created a Python model to forecast future ELCC values of wind and solar resources by ISO.
- Processed outputs of in-house electricity market simulation models.

**Education**

University of California, Berkeley

*B.Sc., Energy Engineering*

Berkeley, CA

May 2022