

Charlie Duff

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ENERGY AND ENVIRONMENTAL ECONOMICS, INC. *Consultant I*

San Francisco, CA

Mr. Duff recently joined E3 after completing his M.S. in Civil and Environmental Engineering at Stanford University, and earning his B.S. in Mechanical Engineering at the University of Wisconsin. Mr. Duff's graduate studies at Stanford focused on energy optimization and power systems modeling, which he utilized in an internship with the California Independent System Operator (CAISO). He is inspired by the climate benefits of renewable energy and holds a strong interest in projects that promote a cleaner environment in this rapidly-changing industry. At E3, Mr. Duff works primarily in the Planning and Markets groups.

STANFORD UNIVERSITY *Teaching Assistant*

Stanford, CA
September 2017 – March 2018

- Led office hours, lab sections, and review sessions
- Graded tests, homework, and reports
- Lectured on occasion and managed field trips to energy sites in California

CALIFORNIA INDEPENDENT SYSTEM OPERATOR (CAISO) *Market Quality and Renewable Integration Intern*

Folsom, CA
June 2017 – August 2017

- Analyzed grid performance during solar ramps by finding correlations with CPS1 violation
- Provided recommendations for ramp rate design and determined effects on California's RPS goals
- Ran production simulation models to investigate the addition of other balancing authorities into the CAISO market
- Developed tools to interpret results and track energy and money

WISCONSIN ELECTRIC MACHINES AND POWER ELECTRONICS CONSORTIUM *Research Assistant*

Madison, WI
December 2015 – May 2016

- Set up tests and analyzed data for new electric motor design
- Designed parts on SolidWorks
- Assembled and disassembled dynamometer
- Replaced and installed equipment in electrical engineering lab

THE BOLDT COMPANY

Field Engineer Intern

Madison, WI
May 2013 – August 2013

- Checked weekly tasks and updated planner schedules
- Maintained correspondence with architect and subcontractors by writing RFIs and updating drawings

Professional Activities

Stanford Energy Journal / Wisconsin Engineer Magazine

September 2012 – March 2018

Head Editor

- Managed, edited, and wrote articles for the Stanford Energy Journal/Wisconsin Engineer Magazine about energy/ engineering topics locally and globally. Attended and contributed to executive meetings.

Engineers Without Borders

Project Assistant

Madison, WI
January 2015 – May 2016

- Seek out potential partnerships to start project, analyze the engineering cost, environmental and social aspects of the project, communicate with NGO and community, organize fundraisers, recruit members.

Education

Stanford University

M.S., Civil and Environmental Engineering (Atmosphere and Energy)

Stanford, CA
2018

University of Wisconsin

B.S., Mechanical Engineering

Minor in Engineering for Energy Sustainability, International Engineering, and Mathematics

Madison, WI
2016

Citizenship

United States