Daniel Greer

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EDUCATION

Spring 2019 **B.A. Sustainability Studies**
The University of Texas at Austin
Sustainability Studies – Natural Resource Management

Spring 2019 **Elements of Computing Certificate**
The University of Texas at Austin awarded Certificate

Spring 2022 **M.S. Energy and Earth Resources**
The University of Texas at Austin
Concentration: Economics and Finance

RESEARCH EXPERIENCE

Energy Analyst Intern **June 2019 – Present**
National Renewable Energy Laboratory
Mentor: Wesley Cole, Ph.D.

- Helped develop sequel version of NREL flagship capacity expansion model (ReEDS 2.0) for use in analysis of future U.S. power system expansion
- Utilized ReEDS 2.0 model for research of various scenarios for future buildout of U.S. electricity sector
- Evaluated multiple metrics, such as system costs and flexibility, to assess challenges of a high renewable penetration grid
- Conducted study to assess the ability of battery storage to serve as a peaking capacity resource
- Assessed the implications of storage duration requirements on their ability to provide reliable capacity to the grid and improve grid flexibility
- Gained skills in data gathering and analysis while developing figures for use in Standard Scenarios Report published annually by NREL ReEDS team
- Collaborated with outside team on study to assess ability of solar photovoltaics to meet load during extreme weather events
- Learned skills for analyzing complex datasets and performing high level research using statistical modeling

Research Assistant, Data Analysis **August 2018 – May 2019, August 2020 - Present**
The University of Texas at Austin Energy Institute
Energy Infrastructure of the Future
Supervisor: Carey King, Ph.D.

- Constructed, organized, and managed large data sets from FERC and EIA data sources

- Assisted in comprehensive study of U.S. energy infrastructure in order to obtain better understanding of future infrastructure development needs and obstacles
- Effectively communicated findings and analysis through team meetings and technical reports
- Developed multiple sills for performing effective research including statistical analysis, critical thinking, data visualizing, and technical writing.
- Developed a web app for projecting future costs of electricity generation based on user defined generation mixes

TECHNICAL REPORTS

Brown, M., Cole, W. J., Eurek, K. P., Becker, J., Bielen, D. A., Chernyakhovskiy, I., ... & **Greer, D.** (2020). *Regional Energy Deployment System (ReEDS) Model Documentation: Version 2019* (No. NREL/TP-6A20-74111). National Renewable Energy Lab.(NREL), Golden, CO (United States).

Cole, W. J., Gates, N., Mai, T. T., Greer, D., & Das, P. (2020). *2019 Standard Scenarios Report: A US Electric Sector Outlook* (No. NREL/PR-6A20-75798). National Renewable Energy Lab.(NREL), Golden, CO (United States).

WHITE PAPERS

Greer, Daniel, King, Carey W., Mendez, Andres, and Gülen, Gürcan. "U.S. Transmission Miles in Relation to Electricity Generation, Peak Power, and Number of Customers." *Energy Infrastructure of the Future,* The University of Texas Energy Institute, January 2019, https://energy.utexas.edu/sites/default/files/UTAustin_EIoF_Transmission_2019-02-21.pdf.

Mendez, Andres, King, Carey W., **Greer, Daniel,** and Gülen, Gürcan. "Local Distribution Companies: Relationship between Pipeline Miles and Number of Customers, and Different Pipeline Diameter Sizes." *Energy Infrastructure of the Future,* The University of Texas Energy Institute, January 2019, https://energy.utexas.edu/sites/default/files/UTAustin_EIoF_Pipeline_Miles_and_Customers_2019-02-21.pdf

JOURNAL ARTICLES

Cole, W., **Greer, D.**, & Lamb, K. (2020). The potential for using local PV to meet critical loads during hurricanes. *Solar Energy*, *205*, 37-43.

Cole, W., **Greer, D.**, Ho, J., Margolis, R. (2020) Considerations for maintaining resource adequacy of electricity systems with high penetrations of PV and storage. *Applied Energy*, *279*, 115795.

Frazier, A. W., Cole, W., Denholm, P., **Greer, D.**, & Gagnon, P. (2020). Assessing the potential of battery storage as a peaking capacity resource in the United States. *Applied Energy*, 275, 115385.

PENDING PAPERS

Main, Trieu, Cole, Wesley, Gates, Nathaniel, **Greer, Daniel**. "The Prospective Impacts of 2019 State Energy Policies on the U.S. Electricity System." *Energy Policy*, In Review.

ADDITIONAL EXPERIENCE

Recruitment Chair, Vice President, President **May 2017 – December 2018**
Longhorn Racing, Collegiate Chapter of Society of Automotive Engineers International
The University of Texas at Austin

- Managed 100+ people working on innovative projects in energy and automotive
- Projects included: Formula One Race Care, Battery Powered Formula One Race Car, Solar Powered Vehicle, Underwater Remote Operated Vehicle
- Oversaw the management of $100,000+ in donations
- Delegated responsibilities to senior officers and ensure tasks were completed in a timely manner
- Participated in community outreach events to promote the organization and university
- Promoted STEM fields to K-12 students by participating in A World in Motion (AWIM) where members teach customized lesson plans in the classroom

Leasing Agent **June 2016 – March 2018**
Housing Scout

- Met with and interviewed clients to assess housing needs (size, budget, location, etc.)
- Researched market databases and compiled listings that met clients' requests
- Participated in weekly meetings to discuss market changes and strategies for assisting clients
- Served as intermediary between clients and leasing companies

INTERNATIONAL EXPERIENCE

Ecuador Study Abroad Program
Nature Society and Sustainability
Ecuador
Professor: Gregory Knapp, Ph.D.

- Studied the relationships between nature, society, and sustainability throughout multiple regions in Ecuador
- Learned about sustainable agriculture and land management from indigenous communities
- Developed strong communication skills in spite of language barrier with host family
- Visited local and indigenous communities in order to better understand to how sustain and share unique cultures around the world
- Stepped outside of comfort zone to gain new experience and insight into the world

RESEARCH INTERESTS

- Renewable/sustainable energy generation and integration
- Grid expansion and optimization
- Energy policy and economics

CONFERENCE PRESENTATIONS

Frazier, A. Will, **Greer, Danny,** Gagnon, Pieter, Cole, Wesley (2019, October). *Assessing the Role of Energy Storage as a Peaking Capacity Resource in the United States*. Presented at the 9th Annual Energy Policy Reserch Conference (Also presented at the 37th Annual USAEE/IAEE North American Conference, 2019, November). Boise, ID.

CONFERENCE ATTENDANCE

KBH Center and McCombs Energy Initiative **February 2019**
Permian 2025 Conference
Austin, TX

Austin Electricity Conference **March 2019, 2020**
Austin, TX

United States Association for Energy Economics **November 2019**
Energy Transitions in the 21st Century
Denver, CO

SKILLS

Computer Programming

- Proficient in Python, R, SQL
- Familiar with C++, HTML, JavaScript, GAMS

Computer Software, Tools and Skills

- RStudio
- PostgresSQL
- Google Cloud Platform
- Microsoft Office
- ArcGIS
- FRAGSTATS
- PLEXOS
- Data Analysis and computer modeling

Professional

- Project Management
- Technical Writing
- Research
- Effective Communication

Licensees/Certifications

- OSHA Safety Certified
- TREC Licensed Real Estate Agent