

JESSICA DUNN

www.linkedin.com/in/JessicaDunn1

EDUCATION

University of California, Davis

Davis, CA

Doctor of Philosophy in *Energy Systems*

2019 – 2022

- Relevant Courses: Life Cycle Assessment, Energy Systems, Applied Data Analysis, Energy and Transportation Modeling for Policy Analysis, Sustainable Energy Industry Immersion, Energy and Climate Policy
- Used material flow analysis and life cycle assessment to analyze lithium-ion battery material circularity and assess recycling and reuse processes.

University College London

London, England

Master's of Science in *Economics and Policy of Energy and the Environment*

2015 - 2016

- Relevant Courses: Policy Assessment and Environmental Law, Energy Modelling Methods and Scenarios, Energy and Environmental Economics, Behavioral Economics.
- Explored the reporting themes and valuation methods of corporations using internal water valuation and reported findings to the CDP.

Western Washington University

Bellingham, WA

Bachelor of Arts in *Business and Sustainability*, Minor in *Environmental Economics*

2012 - 2015

PUBLICATIONS

Dunn, J., Anair, D., Reichmuth, D., Shen, K., 2024. Making the Most of Electric Vehicle Batteries: How recycling, innovation, and efficiency can support a sustainable transportation future. <https://doi.org/10.47923/2024.15617>

Dunn, J., Anair, D., Reichmuth, D., Pinto de Moura, Maria C., 2025. Reducing battery electric vehicle mineral demand through efficiency, range, and new technology. *Transportation Research Part D: Transport and Environment*, 149, 105035, 1361-9209, <https://doi.org/10.1016/j.trd.2025.105035>.

Dunn, J., Ritter, K., Velázquez, J. M., & Kendall, A. (2023). Should high-cobalt EV batteries be repurposed? Using LCA to assess the impact of technological innovation on the waste hierarchy. *Journal of Industrial Ecology*. <https://doi.org/10.1111/jiec.13414>

Dunn, J., Kendall, A., & Slattery, M. (2022). Electric vehicle lithium-ion battery recycled content standards for the US – targets, costs, and environmental impacts. *Resources, Conservation and Recycling*, 185, 106488. <https://doi.org/10.1016/j.resconrec.2022.106488>

Dunn, J., Slattery, M., Kendall, A., Ambrose, H., & Shen, S. (2021). Circularity of Lithium-ion Battery Materials in Electric Vehicles. 1–30. <https://doi.org/10.1021/acs.est.0c07030>

International Energy Agency (2020). Global EV Outlook 2020, Chapter 5. <https://www.iea.org/reports/global-evoutlook-2020>.

Kendall, A., Slattery, M., & Dunn, J. (2022). Lithium-ion Car Battery Recycling Advisory Group Report. https://calepa.ca.gov/wp-content/uploads/sites/6/2022/03/AB-2832-Final-Draft-Policy-Recommendations-Lithium-ion-Car-Battery-Recycling-Advisory-Group-As-of-3-11-22.a.hp_.pdf

Reichmuth, D., Dunn, J., & Anair, D. (2022). Driving Cleaner Electric Cars and Pickups Beat Gasoline on Lifetime Global Warming Emissions. www.ucsusa.org/resources/driving-cleaner.

Slattery, M., Dunn, J., & Kendall, A. (2021). Transportation of electric vehicle lithium-ion batteries at end-of-life: A literature review. *Resources, Conservation and Recycling*, 174, 105755. <https://doi.org/10.1016/j.resconrec.2021.105755>

Slattery, M., Dunn, J., Kendall, A. (2023). Charting the Electric Vehicle Battery Reuse and Recycling Network in North America. *International Journal of Integrated Waste Management, Science and Technology* 174. <https://doi.org/10.1016/j.wasman.2023.11.018>

PRESENTATIONS

Guest lecturer: Lithium-ion Battery Material Circularity: Reduce, Reuse, Repurpose, and Recycle. Dartmouth Irving Institute, New Energy Speaker Series. 2022. <https://www.youtube.com/watch?v=Neiei9qsuCc>

Speaker series developer and host: Energy Justice Speaker Series. University of California, Davis. 2022. https://www.youtube.com/playlist?list=PLf0YrhswmzeyZ_SsbhENp4l25omusJ4B5

Guest lecture: Resource Recovery for a Circular Economy. Princeton Andlinger Center Engineering School and the High Meadows Environmental Institute. 2022.

Guest lecture: Industrial Ecology. Columbia Precollege Intro to Engineering. 2022

Conference presentation: Battery Recycling and Second-life, Industry and Policy Development. Advanced Automotive Battery Conference. 2022.

Podcast: Electric Vehicle Battery Reuse and Recycling. This is Science. 2023. <https://www.ucsusa.org/resources/ev-battery-reuse-and-recycling>

Conference presentation: Circularity and Electrification, Institute of Scrap Recycling Industries, Inc. (ISRI). 2023.

Conference presentation: Transportation Electrification, Climateworks Battery Forum Conference, 2023.

Webinar: Policies to Increase EV Battery Recycling, Senate Energy and Environment Committee, 2023.

Guest lecturer: Lithium-ion Battery Material Circularity, Western Washington University, Institute for Energy Studies Speaker Series and Resource Economics. 2023 & 2024

Conference presentation: European Union Battery Directive, Global Alliance for Incinerator Alternatives (GAIA) Teach-in. 2024

EXPERIENCE

Union of Concerned Scientists

Scientist

April 2022 – Current

- Use environmental engineering methods to analyze electric vehicle batteries and recommend routes to decrease environmental impacts.
- Educate policymakers, regulators, and UCS members on electric vehicle battery reuse and recycling through in-person teaching and [materials](#).

Washington State University

Consultant

2021

- Developed a report for the Washington Department of Ecology which assessed end-of-life policy for retiring solar photovoltaic modules.

International Energy Agency

Consultant

2020

- Drafted the electric vehicle lithium-ion battery end-of-life solutions and policy chapter of the Global Electric Vehicle Outlook with fellow researchers at UC Davis.
- Specialized in assessing the current state of recycling and reuse policy and recommended policy proposals.

3Degrees

San Francisco, CA

Environmental Markets Analyst

2018 - 2019

- Created economic forecasts of renewable energy compliance markets throughout the US.

The Breakthrough Institute

San Francisco, CA

Generation Fellow

Summer, 2018

- Researched the effect of electricity market deregulation in the US on carbon emissions and fuel sourcing.

Customized Energy Solutions

Philadelphia, PA

Renewable Energy Operator

2017 - 2018

- Scheduled and monitored wind energy and battery ancillary services in the United States energy market.

Kiwi Powered

London, England

Energy Demand Analyst

2015 - 2016

- Dispatched behind the meter energy resources in response to peaking electricity demand in the United Kingdom.