

Rebecca Ciez

Andlinger Center for Energy and the Environment
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EDUCATION

Carnegie Mellon University, College of Engineering, Pittsburgh, PA

Ph.D. Engineering and Public Policy, March 2018

Columbia University, School of Engineering and Applied Science, New York, NY

B.S. Mechanical Engineering, Economics & Sustainable Engineering Minors, May 2013

RESEARCH EXPERIENCE

Andlinger Center for Energy and the Environment, Princeton University, Princeton, NJ

Distinguished Postdoctoral Fellow (2018 – Present)

Carnegie Mellon University, Engineering and Public Policy, Pittsburgh, PA

Graduate Research Assistant (2013 – 2018)

ASME, Washington DC

Public Policy Research Intern (2014)

Columbia University Water Center, New York, NY

Undergraduate Research Intern (2012)

PUBLICATIONS

Brian Sergi, Matthew Babcock, Nathaniel J. Williams, Jesse Thornburg, Aviva Loew, **Rebecca E. Ciez***, *Institutional Influence on Power Sector Investments: A Case Study of Distributed and Centralized Energy in Kenya and Tanzania*, *Energy Research and Social Science* **41**, (2018)

Rebecca E. Ciez, J.F. Whitacre*, *Comparison between cylindrical and prismatic li-ion cell costs using a process based cost model*, *Journal of Power Sources* **340**, 273-281 (2017)

Rebecca E. Ciez, J.F. Whitacre*, *The cost of lithium is unlikely to upend the price of Li-ion storage systems*, *Journal of Power Sources* **320**, 310-313 (2016)

Rebecca E. Ciez, J.F. Whitacre*, *Comparative techno-economic analysis of hybrid micro-grid systems utilizing different battery types*, *Energy Conversion and Management* **112**, 435-444 (2016)

CONFERENCE PRESENTATIONS

The Costs and Environmental Impacts of Lithium-Ion Battery Production and Recycling. International Battery Seminar & Exhibit. Fort Lauderdale, FL, March 26-29, 2018.

Evaluating food-energy-water systems with a concurrent assessment method. Energy Policy Research Conference. Santa Fe, NM, September 8-9, 2016.

Prospects for lithium ion battery recycling in a changing market. Energy Policy Research Conference. Santa Fe, NM, September 8-9, 2016.

Process-based cost modeling of cylindrical lithium-ion batteries. ASME Power & Energy Conference & Exhibition: Energy Storage Forum. Charlotte, NC, June 26-30, 2016.

How do different battery chemistries perform in a hybrid microgrid? ASME Power & Energy Conference & Exhibition: Energy Storage Forum. Charlotte, NC, June 26-30, 2016.

Energy Storage Optimization: A Techno-economic Analysis of Battery Chemistries in Hybrid Microgrids. USAEE/IAEE North American Conference, Pittsburgh, PA, October 27, 2015.

POSTER PRESENTATIONS

Recycled batteries for electric vehicles: A first look at EV owner preferences Carnegie Mellon Innovation with Impact Exhibition, Pittsburgh, PA, April 12, 2018.

Analyzing Food-Energy-Water systems with a concurrent assessment method International Conference on Energy Research and Social Science, Sitges, Spain, April 2-5, 2017.

Lithium-ion battery costs: Can manufacturing economies of scale deliver cost goals? Carnegie Mellon Electrochemical Energy Symposium, Pittsburgh, PA, October 21, 2016.

Lithium-ion battery costs: Using process-based cost modeling to capture the manufacturing costs of recent battery trends. Carnegie Mellon Energy Week, Pittsburgh, PA, March 14-18, 2016.
Optimizing Energy Storage: A Techno-Economic Analysis for Hybrid Microgrid Systems. Center for Climate and Energy Decision Making Annual Meeting, Pittsburgh, PA, May 20-21, 2015.

Optimizing Energy Storage: A Techno-Economic Analysis for Hybrid Microgrid Systems. Engineering Sustainability: Innovation and the Triple Bottom Line, Pittsburgh, PA, April 20, 2015.

The (Not So) Little Engine That Could: Implementing Multifunction Energy Platforms in Uganda. National Sustainable Design Expo, Washington, DC, April 18-19, 2013.

OTHER PRESENTATIONS

Reducing BEV battery costs: contributions from manufacturing and recycling. UC Davis Sustainable Transportation Energy Pathways Seminar. June 20, 2017

Battery reuse and recycling in a changing energy storage market. Carnegie Mellon Electricity Industry Center Advisory Committee Meeting. October 26, 2016.

Policies Shaping Power Africa: Perspectives on Energy Policy for the Developed and Developing World. ASME Board on Government Relations. November 16, 2014.

Early Career Engineer Mini-Talks, Panel Moderator. ASME Board on Career Development, November 16, 2014.

The Techno-Economics of Distributed Hybrid Micro-grid Systems: Optimizing the Energy Storage Element. Carnegie Mellon Electricity Industry Center Advisory Committee Meeting. October 21, 2014.

TEACHING AND MENTORING EXPERIENCE

Engineering for Change

Expert Fellow advising Water, Energy, and Transport Research Fellows (2017)

Carnegie Mellon University – Teaching Assistant Assignments

Energy Policy and Economics (Spring 2016, Spring 2017)

Materials for Energy Storage (Spring 2016)

LEADERSHIP AND SERVICE

World Bank Technology Futures Workshop (April 24, 2018)

Reviewer for Sustainable Production and Consumption, Energy Conversion and Management
ASME

Nominating Committee Voting Member (2018-2020)

Nominating Committee Alternate Member (2017-2018)

Society of Women Engineers

WE Local Pittsburgh Conference Host Committee Chair (2016-2017)

Pittsburgh Section Representative (2016-2017)

HONORS AND AWARDS

Carnegie Mellon GSA/Provost Office Graduate Small Project Help Research Grant (2017)

Best Poster Award, Electrochemical Energy Symposium (2016)

NSF Graduate Research Fellowship (2015)

Neil and Jo Bushnell Fellowship (2014)

Friedman Fellowship (2014)

Columbia University King's Crown Civic Responsibility Award (2013)

Columbia University King's Crown Gold Crown Leadership Award (2012)

MEDIA

IEEE Spectrum: [2017 Is the Make-or-Break Year for Tesla's Gigafactory](#), December 30, 2016.

Green Car Congress: [CMU study suggests difficulties in reaching target low price points for Li-ion batteries](#), December 11, 2016.

Charged: [New study: Lithium cost swings unlikely to impact battery prices](#), May 26, 2016.

Green Car Congress: [CMU study concludes lithium market fluctuations unlikely to impact Li-ion battery prices significantly](#), May 5, 2016.