

Lucy Metz, Associate

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PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. *Associate* April 2023 – Present; *Research Associate*, July 2022 – April 2023

- Consults on energy-sector issues, including building decarbonization, electric utility resource planning and power plant economics, and state and local climate policy
- Supports the development of comments and testimony in integrated resource planning dockets across the country
- Conducts analysis using Synapse’s Building Decarbonization Calculator (BDC), a stock turnover model that calculates the emissions and energy impacts of heat pump adoption
- Produces data visualization tools in R, including interactive webtool of U.S. industrial emitters
- Assists with power sector dispatch modeling using EnCompass
- Co-developer of Synapse spreadsheet model comparing the lifetime cost and performance of district geothermal systems and air-source heat pumps across a variety of climate zones

Laboratory of Dr. Alexander Barron, Department of Environmental Science and Policy, Smith College, Northampton, MA. *Research Assistant*, June 2020 – May 2022

- Co-authored paper on carbon neutrality initiatives in higher education
- Designed data visualization and analysis for USREP-ReEDS modeling of Clean Air Act policy
- Calculated CO₂ emissions reductions achievable under Massachusetts climate legislation and drafted white paper with results

Co-Equal, Washington, D.C. *Policy Intern*, February 2021 – March 2022.

- Performed analysis on a wide range of policy topics requested by members of Congress
- Finalized economic modeling study for public release and presented results
- Coordinated with research team at MIT and Co-Equal to meet policy-relevant deadlines

EDUCATION

Smith College, Northampton, MA

Bachelor of Science in Engineering Science, *Magna Cum Laude with Highest Honors*, 2022

SKILLS

Computer: Excel, R, EnCompass, MATLAB, Mathematica, ENERGY STAR Portfolio Manager

Languages: Spanish (proficient)

TESTIMONY

Public Service Commission of Wisconsin (Docket No. 6690-UR-128): Surrebuttal testimony of Lucy Metz in the matter of the Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates. On behalf of Sierra Club. September 18, 2024.

Public Service Commission of Wisconsin (Docket No. 6690-UR-128): Direct testimony of Lucy Metz in the matter of the Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates. On behalf of Sierra Club. August 19, 2024.

Georgia Public Service Commission (Docket No. 55378): Direct Testimony of Devi Glick and Lucy Metz in re: Georgia Power Company's 2023 Integrated Resource Plan Update. On behalf of Sierra Club. February 15, 2024.

PUBLICATIONS

DeLeon, S., K. Takahashi, E. Carlson, A. S. Hopkins, S. Kwok, J. Litynski, C. Mattioda, **L. Metz**. 2024. *Minnesota Building Decarbonization Analysis: Equitable and cost-effective pathways toward net-zero emissions for homes and businesses*. Synapse Energy Economics for Clean Heat Minnesota.

Shenstone-Harris, S., A. Zeng, **L. Metz**, M. Whited. 2024. *On the Road to Fleet Electrification: A Framework for Estimating Distribution System Impacts of Medium- and Heavy-Duty Vehicle Electrification*. Synapse Energy Economics for Advanced Energy United.

Eash-Gates, P., **L. Metz**, K. Schultz, S. Kwok, A. Hopkins. *Connecticut Comprehensive Energy Strategy: Buildings White Paper*. Prepared by Synapse Energy Economics for Connecticut Department of Energy and Environmental Protection. Forthcoming.

Eash-Gates, P., **L. Metz**, S. Kwok, K. Schultz, K. Takahashi. *Pathways for Connecticut Building Decarbonization: Analysis of Thermal Decarbonization Scenarios Aligned to the Global Warming Solutions Act*. Prepared by Synapse Energy Economics for Connecticut Department of Energy and Environmental Protection. Forthcoming.

Metz, L., A. Napoleon, P. Eash-Gates. *Memo: Equity Metrics for Building Thermal Decarbonization in Connecticut*. Prepared by Synapse Energy Economics for Connecticut Department of Energy and Environmental Protection. Forthcoming.

Metz, L., E. Carlson, O. Griot. 2023. *Methane Waste and Pollution State Factsheets*. Synapse Energy Economics for the Environmental Defense Fund.

Eash-Gates, P., O. Griot, A. Hopkins, **L. Metz**, E. Sinclair, J. Smith. 2023. *Coming Clean on Industrial Emissions: Challenges, Inequities, and Opportunities in U.S. Steel, Aluminum, Cement, and Coke*. Prepared by Synapse Energy Economics for Sierra Club.

Frost, J., P. Knight, S. Sharaf, **L. Metz**, and S. Kwok. 2023. *RGGI's Economic Benefits for Pennsylvania: Exploring the benefits of the Regional Greenhouse Gas Initiative*. Prepared by Synapse Energy Economics for Evergreen Collaborative.

Metz, L., M. Whited, P. Rhodes, E. Carlson. 2023. *Distribution System Investments to Enable Medium- and Heavy-Duty Vehicle Electrification*. Synapse Energy Economics for the Environmental Defense Fund.

Knight, P., J. Frost, T. Fitch, E. Sinclair, J. Taberner, O. Griot, B. Havumaki, J. Smith, **L. Metz**, S. Chavin. 2023. *TVA's Clean Energy Future: Charting a course to decarbonization in the Tennessee Valley*. Synapse Energy Economics for GridLab and Center for Biological Diversity.

Yuan, M., A. Barron, N. Selin, P. Picciano, **L. Metz**, J. Reilly, and H. Jacoby. 2022. "Meeting U.S. greenhouse gas emissions goals with the international air pollution provision of the Clean Air Act." *Environmental Research Letters* 17 (5): 054019.

Barron, A., M. Domeshek, **L. Metz**, L. Draucker, and A. Strong. 2021. "Carbon neutrality should not be the end goal: Lessons for institutional climate action from U.S. higher education." *One Earth* 4 (9): 1248–1258.

Longnecker, E., **L. Metz**, R. Miller, and A. Berke. 2021. "Probing Liquid–Liquid Phase Separation in Secondary Organic Aerosol Mimicking Solutions Using Articulated Straws." *ACS Omega* 6 (49): 33436–33442.

Figuroa, L., M. Blinder, C. Grincavitch, A. Jelinek, E. Mann, L. Merva, **L. Metz**, A. Zhao, R. Irwin, S. McArt, and L. Adler. 2019. "Bee pathogen transmission dynamics: Deposition, persistence and acquisition on flowers." *Proceedings of the Royal Society B*, 286: 20190603.

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