

## 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, state and local climate policy, and the future of gas
- 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 CO<sub>2</sub> 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

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Languages: Spanish (proficient)

## TESTIMONY

**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.

Synapse Energy Economics and Connecticut Department of Energy and Environmental Protection. "Buildings and Industry." In *Connecticut 2023 Comprehensive Energy Strategy*. 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.

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**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.

Figueroa, 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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