Elspeth McGarvey, Principal Associate

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PROFESSIONAL EXPERIENCE

Synapse Energy Economics, Cambridge, MA. *Principal Associate*, April 2026 – Present.

- Expert in energy policy and regulation specializing in development and analysis in cost-benefit analysis, utility planning, and stakeholder engagement.

MISO Energy, Indianapolis, IN. *Planner III - Resource Adequacy*, Oct. 2024 – Mar. 2026; *Planner III - Strategic Assessments*, July 2024–Oct. 2024; *Planner II - Strategic Assessments*, Jun. 2022 – Jun. 2024.

- Modeled MISO's annual loss-of-load expectation study using SERVM to analyze grid reliability, resource adequacy, and production costs.
- Managed the implementation of indicative direct-loss-of-load accreditation results and resource adequacy modeling enhancements to ensure sufficient power generation and reserves.
- Led the Economic Policy Planning team's adoption of PLEXOS, managing model development for seasonal expansion and dynamic accreditation.
- Directed the 2024 Regional Resource Assessment and 2023 survey initiatives while performing probabilistic analyses for the Resource Adequacy Subcommittee.

ACES Power Marketing, Indianapolis, IN; Quantitative Analyst, Oct. 2019–Jun. 2022.

- Quantified and reported energy risks for major ISO/RTO markets, including PJM, MISO, SPP, ERCOT, and CAISO.
- Updated and optimized stochastic portfolio models to enhance accuracy in risk analysis and client reporting.
- Communicated complex model results to clients through detailed technical reports and professional presentations and developed long-term analyses for resource valuation and what-if scenarios to guide strategic planning efforts.

Walker Consultants, Indianapolis, IN; Analyst III, May 2018–Oct. 2019; Analyst II, May 2017–May 2018.

- Developed financial valuation models for parking systems to facilitate acquisitions, sales, and debt service assessments.
- Created financial forecasts and research reports on the impacts of autonomous vehicles.

Purdue University, Lafayette, IN; Graduate Research Assistant; Aug. 2015 – May. 2017

- Developed a probabilistic cost-benefit analysis of a $150 million aviation biofuel plant to determine the financial feasibility of the project and develop a distribution of breakeven prices. Results were published in Biofpr.
- Modeled future conventional jet fuel and diesel prices to account for risk in the market.

EDUCATION

Purdue University, West Lafayette, IN
Master Science in Agricultural (Applied) Economics, 2017

University of Chicago, Chicago, IL
Bachelor of Arts in Political Science, 2010.

PUBLICATIONS

Knight, P., S. Sharaf, S. Chavin, E. Ashley, A. Zeng, E. McGarvey, S. Shenstone-Harris, R. Aidun. 2026. *Assessing Electricity Resource Adequacy in Pennsylvania and PJM*. Synapse Energy Economics, Mondre Energy, and Aspen Technologies for the Pennsylvania Public Utility Commission.

McGarvey, E. and Tyner, W.E., "A stochastic techno-economic analysis of the catalytic hydrothermolysis aviation biofuel technology." Biofuels, Bioprod. Bioref., 12: 474-484, 2018.

McGarvey, E., T. Jung, "Enhanced Resource Adequacy Modeling in PLEXOS." Presentation at Xcelerate Orlando, 2024.

Resume updated April 2026