



TRACEY ZIEV

Research Engineer | CARBON SOLUTIONS LLC

PROFILE

Tracey is a Research Engineer investigating carbon dioxide capture, transport, and storage. Her areas of expertise include technoeconomic analysis (TEA), policy analysis, electricity generation, nuclear power and regulation, additive manufacturing, project management, and quality assurance. She has broad experience working in the energy sector including academic, national laboratory, industry, and government positions.

CONTACT INFORMATION

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EDUCATION & TRAINING

PhD | Engineering & Public Policy
[Carnegie Mellon University](#) | 2023

MSME | Mechanical Engineering
[Georgie Institute of Technology](#) | 2016

BS | Mechanical Engineering
[Carnegie Mellon University](#) | 2010

PROFESSIONAL EXPERIENCE

Research Engineer | [CARBON SOLUTIONS LLC](#) | 2023–Present

Graduate Research Assistant | [Carnegie Mellon University](#) | 2019–2023

Developed technoeconomic models for additive manufactured (AM) heat exchangers for energy applications. Identified design and process changes to reduce costs and evaluated impacts of AM technological advances on cost. Developed life cycle analysis framework for framework for metal powder production processes.

Senior Performance Assurance Associate | [Argonne National Lab.](#) | 2018–2019

Designed streamlined performance improvement system. Lead project and change management planning and managed initial project implementation. Designed supporting software and managed development team.

Senior Quality Assurance Associate | [Sargent & Lundy, LLC](#) | 2013–2018

Managed performance improvement and root cause analysis processes and provided technical assistance for corrective action development. Lead audit teams to verify technical adequacy of deliverables and compliance with requirements as ASME NQA-1 lead auditor. Developed and taught training on nuclear and quality assurance topics. Streamlined and automated various quality assurance processes.

Project/Reactor Engineer | [U.S. Nuclear Regulatory Commission](#) | 2010–2013

Inspected commercial nuclear power plants to verify compliance with regulations and ensure safe operation.

PUBLICATIONS

- Ziev, T., Rasouli, E., Tano, I. N., Wu, Z., Rao Yarasi, S., Lamprinakos, N., Seo, J., Narayanan, V., Rollett, A.D., & Vaishnav, P. (2023). Cost of Using Laser Powder Bed Fusion to Fabricate a Molten Salt-to-Supercritical Carbon Dioxide Heat Exchanger for Concentrating Solar Power. 3D Printing and Additive Manufacturing. <https://doi.org/10.1089/3dp.2022.0188>
- Tano, I. N., Rasouli, E., Ziev, T., Seo, J., Lamprinakos, N., Vaishnav, P., Rollett, A.D., Wu, Z., & Narayanan, V. (2022). A Scalable Compact Additively-Manufactured Molten-Salt to Supercritical Carbon Dioxide Heat Exchanger for Solar Thermal Application. In Energy Sustainability. American Society of Mechanical Engineers. <https://doi.org/10.1115/ES2022-84122>
- Tano, I. N., Rasouli, E., Ziev, T., Wu, Z., Lamprinakos, N., Seo, J., Balhorn, L.S., Vaishnav, P., Rollett, A.D., & Narayanan, V. (2022). An additively-manufactured molten salt-to-supercritical carbon di-oxide primary heat exchanger for solar thermal power generation—Design and techno-economic performance. *Solar Energy*. <https://doi.org/10.1016/j.solener.2022.01.056>