

DONALD G. COLLIVER, Ph.D., P.E., F-ASHRAE, PM-ASHRAE
Professor
Biosystems and Agricultural Engineering
University of Kentucky
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a. Professional Preparation.

Institution	Location	Major	Degree	Year
University of Kentucky	Lexington, KY	Ag Engr	BSAE	1974
University of Kentucky	Lexington, KY	Ag Engr	MSAE	1977
Purdue University,	W. Lafayette, IN	Ag Engr	PhD	1979

b. Appointments.

- 6/22- Present – Distinguished Lecturer (Topics: Science of Climate Change, Decarbonization), ASHRAE
- 2/21-Present- Vice Chair and Co-Chair; ASHRAE Task Force for Building Decarbonization
- 7/13-6/22 – Director, Graduate Studies, Biosystems and Agricultural Engr Dept, Univ of KY
- 6/14-1/22 - Director, Kentucky Industrial Assessment Center, Univ of KY
- 06/10-6/13 - Assistant Director, Power and Energy Institute of Kentucky, Univ of KY
- 06/08-Present - Professor; Biosystems and Agricultural Engineering Dept., Univ of KY
- 6/02-6/03-Society President; American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
- 3/94-8/94 -Visiting Specialist, Air Infiltration and Ventilation Center, International Energy Agency, Coventry, Great Britain
- 06/85-6/08 - Associate Professor; Biosystems and Agricultural Engineering Dep, Univ of KY
- 06/79-06/85 - Assistant Professor; Biosystems and Agricultural Engineering Dept, Univ of KY
- 9/76-5/79 - Graduate Research Instructor, Agricultural Engr, Purdue University.
- 1/75-8/76 - Graduate Research Assistant, Agricultural Engr, Univ of KY

c. Narrative Statement.

The primary work area is in the determination of appropriate low-carbon, energy-efficient design and operations of facilities. This is integrated across research, teaching, and outreach. The goal of the program is to provide leadership in developing programs and information that will have a high impact on a large number of users. This is accomplished by working with others in developing the programs; tools and data needed to perform appropriate, efficient designs; and analyzing real-world energy and carbon related problems. The overall, long-term objective is to minimize embodied and operational carbon and energy related expenditures with the constraints of maintaining present standards of living, acceptable environmental conditions, profitability, and utilization of renewable energy.

d. Recent Relevant Activities and Publications

- Colliver, D. 2022. Keynote Address: A Look at the Status of Building Decarbonization. International Building Decarbonization 2022 Conference. Oct 5-8. Athens, Greece.
- Colliver, D. 2022. Progress of the Task Force for Building Decarbonization. ASHRAE Annual Meeting Seminar 15. June 26. Toronto, Canada
- Colliver, D. 2022. Introduction to Decarbonization and Building Related Issues. National Healthy Schools Summit 2022. April 6. Virtual.
- 73 reports similar to: Colliver, D. G. et al. (2014-2021). Energy Analysis Report #2004 Bourbon Manufacturing Facility, (pp.95).
- Smith, B., Dvorak, J., Semmens, K., and Colliver D. . 2022. Using a Computer Based Selection Model

for Sizing of Solar Panels and Battery Back-up Systems for Use in a Floating In-pond Raceway. *Aquaculture Engineering* 97 (2022) 102238. doi.org/10.1016/j.aquaeng.2022.102238

- Gong H., Jones E. S., Alden R. E., Frye A. G., Colliver D., and Ionel D. M., “Demand Response of HVACs in Large Residential Communities Based on Experimental Developments,” *Proceedings 2020 IEEE Energy Conversion Congress and Exposition (ECCE)*, Detroit, MI, Oct 2020, 4545-4548, doi: 10.1109/ECCE44975.2020.9235465
- Gong, H., Rallabandi, V., Ionel, D. M., Colliver, D. G., Dueer, S., Ababei, C. (2020). “Dynamic Modeling and Optimal Design for Net Zero Energy Houses Including Hybrid Electric and Thermal Energy Storage,” in *IEEE Transactions on Industry Applications*, doi:10.1109/TIA.2020.2986325, *IEEE Transactions on Industry Applications*. doi: 10.1109/TIA.2020.2986325
- Jones, E. S., Alden, R. E., Gong, H., Frye, A. G., Colliver, D. G., Ionel, D. M. (2020). “The Effect of High Efficiency Building Technologies and PV Generation on the Energy Profiles for Typical US Residences,” *2020 International Conference on Renewable Energy Research and Applications (ICRERA 2020)*, Glasgow, UK, Sept 2020, 6p., *IEEE*.
- Gong, H., Jones, E. S., Alden, R. E., Frye, A. F., Colliver, D. G., Ionel, D. M. (2020). “Demand Response of HVACs in Large Residential Communities Based on Experimental Developments,” *Proceedings 2020 IEEE Energy Conversion Congress and Exposition (ECCE)*, Detroit, MI, USA, 2020, pp. 4545-4548, doi: 10.1109/ECCE44975.2020.9235465., *IEEE*, 4545-4548. doi: 10.1109/ECCE44975.2020.9235465
- Taber, Christian and D. Colliver. 2018. Simulated Impact of Energy Codes on Occupant Thermal Comfort in Heating- and Ventilation- Only Warehouses. *ASHRAE Journal* 60(12):12-18
- Lawrence E. Holloway, Z. Qu, M. Mohr-Schroeder, J.C. Balda, A. Benigni, D. Colliver, P. Dolloff, R. Dougal, O. Faruque, Z. Fei, Y. Liao, R. McCann, R.M. Nelms, A. Vosoughi, V. Singh, Q. Zhou. 2017. A Multi-Institutional Approach to Delivering Shared Curricula for Developing a Next-Generation Energy Workforce. *IEEE Access* 5:1416-1427. DOI:10.1109/ACCESS.2017.2664419
- Colliver D.G., T. Henninger and R Muller. 2017. Identification of Trends in Most Frequent Savings Opportunities Found and Subsequent Implementation of Energy Retrofits in Industrial Facilities. CIBSE.