

QUALIFICATIONS

I am a Certified Energy Manager (CEM) who works with clients to maximize profitability through effective utilization of natural resources and the development of ground-breaking energy efficiency and carbon reducing solutions. During my career, I have developed a unique vision of the economic and energy efficiency synergies possible through innovative business, infrastructural, financial, policy, and community organizing strategies.

EMPLOYMENT HISTORY

- 2011 – Present** **Midwest Clean Energy Enterprise, LLC**
Co-founder, Member, Director of Energy and Carbon Policy
PO Box #1, Frankfort, Ky 40602
- 2009 – Present** **Interdependent Energies, LLC**
Founder, Owner, Carbon & Sustainability Energy Consultant
335 Senate Drive, Frankfort, Ky 40601
- 2007 – 2009** **Camco International**
Carbon Consultant
390 Interlocken Crescent, Suite 490, Broomfield, CO 80021 & Beijing, China
- 2006 – 2007** **University of Cincinnati (UC) - Utilities Services**
Energy Conservation Coordinator
0390 Central Utilities – UC, Cincinnati, Ohio 45221
- 2005 – 2006** **University of Cincinnati (UC) – School of Planning**
Graduate Research Assistant
5470 Aronoff Center
PO Box 210016, Cincinnati, OH 45221
- 2004 – 2005** **Joseph-Beth Booksellers**
Graphic Design & Marketing Assistant
1727 Riverside Drive, Cincinnati, OH 45202
- 2002 – 2004** **Cubic Enterprise**
Founder, Owner, Freelance Draftsman
651A 6th Avenue, New York, NY 45220
- 1996 – 2002** **Various Architecture and Construction Firms**
Part-time Draftsman/ Construction Worker
Cleveland, OH; Sante Fe, NM & Frankfort, KY
- 1995 – 1996** **HMB Contracting, Architecture & Engineering**
Intern / Junior Draftsman
3 HMB Circle, Frankfort, KY 40601

EDUCATION & CERTIFICATIONS

Master of Community Planning (MCP), June 2007. University of Cincinnati, School of Planning.

Thesis Topic: Energy Analysis of the University of Cincinnati's West Campus

B.A. Architecture, May 2013. University of Kentucky, College of Design.

B.A. History, August 2005. Northern Kentucky University, History Department.

Association of Energy Engineers (AEE), Certified Energy Manager (CEM), 2007

Building Performance Institute (BPI), Building Analyst, 2011

DETAILED PROJECT EXPERIENCE

2013: Climate Action Plan Consultant – Transylvania University – Assisted Transy's Sustainability Director with the development and completion of the University's official Climate Action Plan to meet their obligation to the American College and University President's Climate Commitment (ACUPCC).

2013: Alternative Finance Discussion Panel Event – Louisville Downtown Partnership (LDP) – As MCEE, worked in concert with LDP to develop a quarterly joint presentation series centered on professional panel discussions around alternative financing strategies for commercial business owners.

2013: USDA REAP Energy Efficiency Grant – Capital Plaza Hotel and Other Hotels - Wrote and submitted four grants, which were all funded, leading to the awarding of \$13,000 from the United States Department of Agriculture (USDA) for installing ozone laundry systems in all four of the hotels.

2013: Phase 2: Strategic Plan Implementation – West Liberty, Kentucky – As MCEE, worked to oversee development of opportunities outlined in the Phase 1 community strategic plan.

2013: Sustaining Louisville – UofL Urban Design Studio -In partnership with UofL Department of Urban and Public Affairs and MCEE, worked to schedule a half day event which connected key city stakeholders to reiterate the central points, issues and challenges that were discovered during the Phase 1 Living City Block Assessment Work. During the event, various city stakeholders were asked to share their knowledge on topics relating to sustainability with the intent of developing strategies to be implemented in the near future.

2013: Phase 1: Community Strategic Planning Work – West Liberty, Kentucky – As MCEE worked with colleagues to assess resources and opportunities, interview key stakeholders, facilitate community meetings and developed a Strategic Planning Report for the community of West Liberty, Kentucky, which suffered massive losses due to a tornado in March of 2012. The document provides an overview of the vision of the West Liberty community and the stakeholders, opportunities and funding strategies available to assist with its implementation.

2013: Living City Block Louisville Assessment – Louisville Downtown Development Corporation (DDC) – In partnership with Living City Block and MCEE, organized over 90 interviews and conversations with key individuals, institutions, agencies and organizations throughout Louisville to define a comprehensive list of the challenges and opportunities for developing sustainability in Louisville.

2012: Energy Audit Advisor – Franklin County Fiscal Court – Assisted county officials in writing a Request for Proposals (RFP), developing a invitee list, reviewing the proposals and selecting the vendor to perform Level 2 ASHRAE audits for all of the county's facilities and a half dozen non-profits in the community. From the audit results, also identified \$30,000 worth of Energy Conservation Measures (ECMs) across all the properties that were adopted and implemented by the county. Using ARRA funds, also assisted county officials in requesting bids and analyzing results for acquisition and installation of the county's first PV solar array.

2012: Public Relations Plan – Capital Plaza Hotel - Worked with hotel staff and marketing consultant, developed a public relations campaign and press release centered on the greening of the hotel and money savings resulting from the implementation of energy and water efficiency strategies.

2012: Strategic Planning Work - West Liberty, Ky – Worked with colleagues to assess resources and opportunities, interview key stakeholders, facilitate community meetings and developed a Strategic Planning Report for the community of West Liberty, Kentucky, which suffered massive losses due to a tornado in March of 2012. The document provides an overview of the vision of the West Liberty

community and the stakeholders, opportunities and funding strategies available to assist with its implementation.

2012: Phase 2 Carbon Lifecycle Budget Study of Biomass Fuel Supply – A National Utility Company - Working with a colleague, expanded the results from the Phase 1 study to include a much larger dataset, automated the calculations in excel and developed multiple new variable options.

2012: New Director of Facilities and Sustainability Position – Capital Plaza Hotel - Worked with hotel manager/ owner to develop job description and used networks to find eligible candidates, leading to the hiring of a highly-qualified Director.

2012: Regional Energy Tour - University of Cincinnati (UC) – Worked in collaboration with UC staff, I envisioned, planned and executed a daylong tour of biomass and cogeneration energy facilities and LEED buildings at UC for top facility, sustainability and financial officials from University of Kentucky (UK), University of Louisville (UofL), Centre College, Murray State University, Western Kentucky University (WKU), Eastern Kentucky University (EKU), Northern Kentucky University (NKU), Transylvania University and Bellarmine University.

2012: Explorative Visit to Louisville – Living City Block’s (LCB) – As MCEE, invited executives from Living City Block (<http://www.livingcityblock.org/>) for a 3 day visit to Louisville for consideration as a participating city for their program. During the visit, MCEE arranged meetings with key government, economic development, utility, neighborhood association and university stakeholders and organized tours of various neighborhoods. After the visit, MCEE assisted LCB in the development of a TRIP report and fundraising prospectus to evaluate the potential for Louisville’s participation in the program.

2012: City of Berea’s Energy Savings Plan – City of Berea, Ky – Served as the Energy Advisor to the project lead, providing energy supply and usage information and analysis.

2011 – 2012: High Level Regional Professional Networking - Ky’s Energy & Innovation Roundtable – Co-founded and organized a bi-monthly energy dinner for early career professionals in Kentucky with high level dinner guests to share their experiences in the field of energy. Past dinner guests have included Ky Finance Secretary Jonathan Miller, Energy Secretary Dr. Len Peters, Mayor Jim Gray, LG&E Director David Huff, President of the Ky Coal Association Bill Bissett and many others.

2011: University Climate Action Plan Update – University of Cincinnati – Rehired to update this plan using new carbon footprint baselines and to develop a template for the overall report for ease of updating it in future years.

2011: Phase 1 Carbon Lifecycle Budget Study of Biomass Fuel Supply – A National Utility Company - Co-authored this report, which quantified the carbon budget associated with the supply of biomass to a converted utility power plant based on numerous harvesting scenarios.

2011: Utility Assessment Program – Frankfort Plant Board – Worked with municipality staff to develop a pilot energy usage assessment project working with their largest industrial and commercial customers.

2011: Kentucky Biomass Industry Strategy Group – AS MCEE, organized this group of a diverse range of organizations focused on the development of a thriving biomass cultivation, transportation and end-use market in Kentucky. MCEE facilitates this group, recruits additional stakeholders, organize its monthly stakeholder conference calls and quarterly meetings at the UK’s Center for Applied Energy Research (CAER).

2011: Lighting Retrofit Management - Capital Plaza Hotel– Oversaw the preliminary audit, RFP, selection, awarding and installation of \$98,000 lighting retrofit. Taking into account EAct, REAP grant and other cost savings the project had a 0.9 year simple payback.

2011: Introductions to Key Kentucky Stakeholders - International Energy Company – As MCEE, worked on behalf of an international energy company to introduce development team to dozens of key high level stakeholders throughout Kentucky in order to evaluate the potential of developing utility-scale renewable energy projects in the state.

2011: Water Audit and Reduction Plan – Capital Plaza Hotel - Working with colleague, performed an in-depth audit of all bathroom fixtures in the hotel and developed a water reduction plan involving low flow showerheads and aerators.

2011: Smart Water & Energy Meter Installation – Capital Plaza Hotel – Worked with local utilities to install smart meters and established an interval data collection process.

2011: State Energy Management Software Event - 2011 IdeaFestival – Co-organized a full day energy learning and real-time game play event at Louisville's Center for the Performing Arts in collaboration with the Ky Department of Energy Development and Independence and the Ky Energy & Innovation Roundtable professional group.

2011: USDA REAP Energy Efficiency Grant – Capital Plaza Hotel - Wrote and submitted a proposal which led to the awarding of a \$20,000 grant from the United States Department of Agriculture (USDA) for retrofitting the lighting of the hotel.

2011: USDA REAP Renewable Energy Grant – Earth Tools, Inc. - Wrote and submitted a proposal which led to the awarding of a \$20,000 grant from the United States Department of Agriculture (USDA) for the installation of a solar PV on the roof of the commercial entity.

2009: University Climate Action Plan – University of Cincinnati – Served as project consultant to the university's climate plan team to write the Climate Action Plan report in compliance with the 2009 requirements of the American College & University Presidents' Climate Commitment (ACUPCC).

2009: Sustainability Planning and Stakeholder Meeting Facilitation – University of Kentucky Coldstream Research Park - Served as the project consultant in interviewing multiple stakeholders, facilitating meetings and developing summation document.

2009: Greenhouse Gas Emission Mapping Project – Boston, Massachusetts - Initiated the development of a GIS-based greenhouse gas emission mapping project of the Boston metropolitan region in collaboration with MIT, Tufts University, Boston University, and the City of Boston – led to the awarding of a \$300,000 NSF Grant.

2009: Modern Industrial Revolution (MIR) - National Association of Environmental Law Societies (NAELS) - Worked extensively with the National Association of Environmental Law Societies (NAELS) to assist in the development of their sustainability education work in Boston.

2008: Greenhouse Gas Emission Assessment of the 2008 Democratic National Convention – Democratic National Convention Committee (DNCC) & Denver Host Committee – On behalf of Camco International, worked as the Project Manager for the development of the assessment over a 15 month period. The assessment included an ex-ante (before) and post ante (afterwards) emissions assessment reports of the event and the development of greening strategies and emission tracking spreadsheets for all vendors and participating organizations.

2008: Online Travel and Event Carbon Calculators - Democratic National Convention's Denver Host Committee – While at Camco International, developed the calculations, formatting and logistics for online carbon calculators to track emissions associated with travel to Denver and with organized events.

2008: South Carolina Department of Education's School Bus GHG Emission Assessment – South Carolina Department of Education – On behalf of Camco International, co-authored the emission calculations and wrote report assessing the roughly 5,000 independent school buses in South Carolina and provided proposed reduction strategies and impact of their implementation.

2008: Carbon Marketing Report – U.S. Pork Board – While at Camco International, developed graphics and wrote short educational handout on carbon and mitigation strategies that could be employed by small and large scale U.S. pork producers.

2007: Policy Analysis of California's Electricity Sector – Camco International – Researched and co-wrote 2007 in-depth analysis of California's electricity pricing and emission standards and policies.

2007: Excel-based Matrix of all State REC Programs - Camco International – Developed 2007 in-depth analysis of all US Renewable Portfolio Standards (RPS) programs in an interactive excel database which analyzed market prices and their projected impact on voluntary carbon markets.

2007: World-wide Building Energy Efficiency Policies Report - Renewable Energy and Energy Efficiency Partnership (REEEP) – While at Camco International in Beijing, developed base research on all developed countries and their national energy efficiency policies for high-level report.

2006 - 2007: Housing Conservation Challenge – University of Cincinnati – Developed, organized, managed and launched a month-long dorm challenge on UC's campus focused on monitoring and reducing energy, water and waste utilizing an online scoreboard - realized a 700% increase in recycling over the course of the competition and inspired the adoption of a campus-wide recycling program.

2006 - 2007: President's Advisory Council on Environment & Sustainability (PACES) – University of Cincinnati - Served as a key member on the council for developing university-wide sustainability programs at the request of the university's president.

2006: Fume Hood Variable Speed Drive Project - University of Cincinnati - Co-managed and tracked the results of the installation, by a service ESCO, of variable speed drives in multiple fume hoods of research building.

2005 – 2006: University-Community Partnership Report - University of Cincinnati - Oversaw creation of 500 page University-Community Partnership Report commissioned by the University's President, including research, writing and editing.

2003: Furniture Design and Development - New York City – Worked with New York furniture designer to develop innovative cubic children's furniture.

2002 – 2004: Computer Drafting, Real Estate Advertising Floor Plans & 3D Building Modeling/ Animations – New York City - Worked with various real estate and architecture companies to develop advertising floor plans, propose initial designs for renovations of private properties, produce 3D computer renderings for advertising, and oversee the renovation of nonprofit housing.

1995 – 1996: Construction Documents of Renovation/Expansion of Church - First Christian Church in Frankfort, Ky – While at HMB Contracting, Architecture & Engineering, served as secondary draftsman on developing construction document set for major renovation and expansion of church.