

PROFESSIONAL EXPERIENCE

Project Management

- **Marketing** of utility services and programs
- **Quality control** of major projects

Energy Analysis and Studies

- **Custom energy model** development and troubleshooting for industrial systems and processes
- **Economic analysis** to determine life cycle cost and savings
- **Energy analysis** to determine potential energy saving and energy cost saving projects for commercial, industrial, and institutional buildings
- **Measurement and verification** of energy efficiency projects with metering and calculation review
- **Peer review energy conservation project** calculations
- **Report writing**, including utility reporting to customers and regulators
- **System investigation** and construction document review to identify energy saving opportunities



SELECTED PROJECTS

- **Alliant Energy, Madison, Wisconsin:** Demand Side Management technical support for utilities serving Iowa, Minnesota and Wisconsin, including energy analysis, program support, and reporting
- **Alliant Energy, Madison, Wisconsin:** Measurement and verification of custom efficiency projects for large commercial and industrial customers
- **Alliant Energy, Madison, Wisconsin:** Minnesota small business energy audits with energy cost and savings estimates
- **Fox Lake Correctional Facility, Fox Lake, Wisconsin:** Energy analysis for facility wide lighting, HVAC, domestic hot water and energy management controls, cost and savings estimates
- **Itron, Liberty Lake, Washington:** Evaluation of the California statewide Standard Performance Contracting program
- **Luther College, Decorah, Iowa:** Investment grade energy analysis of campus wide energy management control system, cost and savings estimates
- **Xcel Energy, Minneapolis, Minnesota:** Energy assessments, walkthrough audits, project identification and cost and savings estimates for large commercial and industrial customers
- **Schweigert Foods, Albert Lea, Minnesota:** Developed and analyzed energy efficiency projects including ammonia refrigeration plant controls and variable frequency drives, and energy recovery from process lines
- **Quaker Oats, Cedar Rapids, Iowa:** Developed and analyzed dehumidification system upgrades for process areas and energy recovery from waste condensate to displace electric resistance heating
- **General Mills, Cedar Rapids, Iowa:** Analyzed numerous energy efficiency upgrades including air compressor replacements and controls and plant upgrades, conversion of process HVAC dehumidification to ammonia plant, and ammonia plant compressor controls, and condenser upgrades
- **Cargill, Eddyville, Iowa:** Analyzed energy efficiency upgrades including variable frequency drives for process fans, dewatering/drying system upgrades, and compressed air plant improvements
- **Walzcraft Industries, Inc., La Crosse, Wisconsin:** Wisconsin Department of Natural Resources air permit application submittal
- **Frank-Len, Inc., La Crosse, Wisconsin:** Several soil and groundwater remediation systems and natural attenuation monitoring sites

- **Madison Metropolitan School District, Madison, Wisconsin:** Soil and groundwater remediation at several schools in the Madison district
- **Rail Systems, Inc., La Crosse, Wisconsin:** Storm water pollution prevention plan design, air permitting, and solid waste permitting

EMPLOYMENT HISTORY

- **11 years experience**
- Environmental Engineer – Michaels Engineering
- Energy Analyst – Michaels Engineering

EDUCATION

- **Bachelor of Science, Civil and Environmental Engineering** – University of Wisconsin, Madison

REGISTRATIONS

- **Professional Engineer** – Wisconsin, Minnesota, Iowa
- **DCOM Site Assessor** – Wisconsin
- **OSHA HAZWOPER Certified**
- **Leadership in Energy and Environmental Design (LEED)** - Accredited Professional