

PROFESSIONAL EXPERIENCE

Project Management

- **Marketing** of utility services and end-user studies
- **Presentation** of analysis results and evaluations of program effectiveness
- **Client satisfaction** assurance
- **Quality control** of major projects
- **Technical review** of in-house and third party energy analyses

Energy Analysis and Studies

- **Custom energy model** development and troubleshooting for industrial systems and processes
- **DOE-2 building simulations** and comparison of energy alternatives
- **Economic analysis** to determine life cycle cost and savings
- **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



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
- **Iowa Energy Bank, Des Moines, Iowa:** Feasibility studies for state, local government and non-profit facilities
- **Itron, Liberty Lake, Washington:** Evaluation of the California statewide Standard Performance Contracting program
- **Itron, Liberty Lake, Washington:** Evaluation of We Energies' Ag and Commercial and Industrial programs
- **Itron, Liberty Lake, Washington:** Evaluation of Wisconsin Public Service Corporation's Efficient Large Business Economic Development program
- **Minnesota Department of Commerce, St. Paul, Minnesota:** Impact, environmental, and economic development study for ground source heat pump systems in residential and institutional facilities
- **Wisconsin Department of Administration, Madison, Wisconsin:** Evaluation of the Wisconsin Focus on Energy commercial and industrial programs
- **Wisconsin Energy Conservation Corporation, Madison, Wisconsin:** Energy efficient new construction design assistance for commercial and industrial end users, including building simulations

EMPLOYMENT HISTORY

- **17 years experience**
- Energy Division Manager – Michaels Engineering
- Energy Engineer – Michaels Engineering
- Fluid Systems Engineer – Naval Nuclear Propulsion Headquarters, Arlington, Virginia

EDUCATION

- **Master of Science, Mechanical Engineering** – University of Wisconsin, Madison, Wisconsin
- **Graduate, Bettis Reactor Engineering School, Nuclear Engineering** – Bettis Atomic Power Laboratory, West Mifflin, Pennsylvania
- **Bachelor of Science, Mechanical Engineering** – South Dakota State University, Brookings, South Dakota

REGISTRATIONS

- **Professional Engineer** – Wisconsin, Minnesota, Iowa, California
- **Leadership in Energy and Environmental Design (LEED)** - Accredited Professional