



ABOUT FEA

Values

- Commitment to client success
- Commitment to employee growth and opportunity
- Benefit our professional community
- Teamwork, trust, integrity, enthusiasm

Mission
Resolve facility life cycle challenges with practical and cost-effective technical and management expertise.

Vision
Nationally recognized by facility owners and managers as the preferred consultant for total asset management.

Introduction



Facility Engineering Associates (FEA) was founded in 1992 to support owners and managers of existing facilities maintain these assets with practical engineered solutions. Since then, we have grown to a national engineering and facility management consulting firm with over 50 employees whose education and experience allows us to deliver the answers you need, not simply observations. Our corporate office is located near Washington, DC, with additional offices located in Boston, MA; Dallas, TX; Denver, CO; and San Francisco, CA. These offices allow us to provide our services to our national client base on a regional or local level.

Office Locations

- Washington, DC
- Boston, MA
- Dallas, TX
- Denver, CO
- San Francisco, CA

1.877.322.4589
www.feapc.com

Our mission is to provide our clients with tools to help extend the service life of existing facilities and building systems. FEA's client-centered culture thrives on communicating effectively with our clients and making them a priority.

- With every engagement we strive to exceed expectations and develop a long term relationship and with nearly 80% repeat business
- FEA's commitment to developing effective solutions to life-cycle challenges is remarkable; our client satisfaction rating has exceeded 95% for the last five years
- We do not deliver off the shelf solutions. Each of our projects is unique, and we pride ourselves in taking the additional steps up front to uncover your desired outcomes and objectives

At FEA, we practice energy management and sustainability every day. FEA has a 16-year history in existing buildings. With an emphasis on operational and organizational excellence in the built environment, we have helped dozens of clients deal with the challenges of energy management and sustainability in millions of square feet of facilities nationwide. Our team of Certified Energy Managers, LEED Accredited Professionals, and Commissioning Agents has extensive experience in conducting energy and sustainability audits, LEED consulting services, developing and implementing energy management and sustainability policies, and providing education to an audience ranging from clients to industry experts through training programs, workshop, articles, and world-wide conferences. Our team brings not only the knowledge of building rating systems, but also building systems, energy management, and facility operations. Regardless of the assignment, FEA always looks for opportunities to improve operational performance and save resources.



SUSTAINABILITY CONSULTING SERVICES

Certification Consulting – LEED

Leadership in Energy and Environmental Design (LEED®)

FEA has been a corporate member of the US Green Building Council since 2004 and our team is active in various local chapters. Our team is intimately familiar with the various LEED rating systems, having worked on projects with the New Construction (NC), Commercial Interiors (CI), and Existing Buildings: Operations & Maintenance rating systems.

Approximately 25% of FEA employees have LEED Accreditations testing under both New Construction (LEED-NC) and LEED for Existing Buildings: O&M.



Project Experience:

LEED Certification Consulting Clients

- City of Austin
- Hines Interests
- Inter-American Development Bank
- Jones Lang LaSalle
- National Education Association
- Organization of American States
- Raytheon
- VSP Vision Care
- Western Corporate Federal Credit Union
- World Bank

Our team has seen these rating systems from all sides, working with facility managers and owners desiring certification as well as working with the contractors and engineers designing and implementing the requirements. FEA has worked with clients on LEED-NC projects providing general consulting services and also serving as the Commissioning Agent. We also have experience working with the LEED-CI rating system, including working with the tenants on certification, as well as working with construction contractors. For example, FEA provided guidance to a general contractor on a LEED-CI renovation project at the Smithsonian National Museum of Natural History preparing waste management and indoor air quality plans and tracking the progress of the required LEED criteria.

However, our strongest and most applicable experience is the application of the LEED® for Existing Buildings: Operations and Maintenance rating system. We have successfully assisted clients in achieving LEED certification and can show you how to go green, while staying out of the red. Our experience ranges from performing initial audits to assess current status to guiding clients through the certification process. As part of our sustainability assessments and LEED audits, we assess recommended sustainability initiatives in terms of feasibility,

implementation cost, return on investment, and their impact to the triple bottom line. Our opinions of cost comes from our experience not only with sustainability, but with implementation of MEP, facility management, and repair and restoration projects across the country for over 15 years. We have developed an interactive tracking tool that clients can use throughout the process to track costs and implementation status.



SUSTAINABILITY CONSULTING SERVICES

VSP Vision Care, LEED Assessment, Planning, & Certification Consulting Services

LEED Consultant

FEA was the LEED consultant for VSP who achieved LEED Platinum Certification under the existing buildings rating system. FEA worked with VSP to identify policies and practices that would help reach the goal of LEED Platinum as well as enhance the performance of their facility. FEA guided VSP through the certification process, evaluated and analyzed energy consumption, and developed tools to help track and measure energy use, water use, waste stream, purchases, and the effects of implemented measures on building occupants. **VSP's headquarters building was certified LEED Platinum by the USGBC in August of 2008!** FEA is also working to certify another building on the campus under the 2009 LEED for Existing Buildings: O&M rating system, which has been submitted for Platinum certification.



City of Austin Convention Center, Austin, TX Sustainability and LEED Consulting

FEA has been working with the Austin Convention Center facility management team since 2009 as they pursue LEED for Existing Buildings certification of the 1,000,000+ square foot convention center. Our work included guiding the City of Austin through the LEED certification process and performing retro-commissioning for the Austin Convention Center. With FEA's retro-commissioning work, the convention center has already achieved 10% in energy savings in the first year. **The convention center achieved LEED Gold in 2011!**

National Education Association, Washington, DC

LEED Consultant

FEA led a multi-service LEED for Existing Buildings: O&M project for the National Education Association. Our work outlined the prerequisites and points the facility met based on their current practices as well as identified sustainable practices that increased their LEED certification level. Each sustainable practice recommendation was prioritized to fit their organization's needs and included cost estimates to implement each practice. In addition, FEA performed an energy audit to determine how to increase the building's ENERGY STAR rating. Not only did NEA achieve the ENERGY STAR label in 2009 implementing the recommendations of FEA's audit, but **NEA was certified LEED Gold by the USGBC in 2010!**

National Education Association LEED for Existing Buildings: O&M Certification

- 19% first year energy consumption
- Over \$300,000 in energy cost savings
- Trending 12% additional annual energy savings
- 13% annual water savings
- Achieved Gold Certification in 2010



SUSTAINABILITY CONSULTING SERVICES

Over the last five years, FEA has provided sustainability and energy related consulting services to government, commercial, and institutional clients nationwide. The following table illustrates the range of our experience.

Project	Location	Project Year	Energy Management Strategy	Sustainability Strategy & Audits	Commissioning Services	Energy Audit Services	Water Conservation	Facility & Capital Program Management	ENERGY STAR Certification	LEED Consulting
Westchester Corporation Energy Study	Washington, DC	2005	✓			✓				
American University Sustainability & Energy Plan	Washington, DC	2005		✓				✓		
Hilton Anatole Hotel Comprehensive Energy Services	Dallas, TX	2006	✓			✓				
Howard Hughes Medical Institute (HHMI) Commissioning Services	Chevy Chase, MD	2006-2010			✓					
World Bank LEED-EB Consulting	Washington, DC	2007	✓					✓		✓
Inter-American Development Bank (IADB) LEED-EB Consulting	Washington, DC	2009	✓	✓			✓	✓		✓
Cassidy & Pinkard Colliers Energy Audits	Washington, DC	2007	✓			✓	✓			
National Education Association (NEA) LEED-EB and Energy Management Consulting	Washington, DC	2007	✓	✓		✓	✓	✓	✓	✓
Organization of American States (OAS) LEED-EB Consulting	Washington, DC	2008		✓			✓	✓		✓
Jones Lang LaSalle Energy & LEED-EB Consulting	Bethesda, MD	2008 - 2011	✓	✓		✓	✓			✓
VSP Vision Care HQ1 & HQ4 LEED-EB Consulting	Rancho Cordova, CA	2008-Present	✓	✓		✓	✓	✓	✓	✓
Non-profit Corporation Sustainability and Energy Audit	Alexandria, VA	2008	✓			✓				
Smithsonian LEED-CI Consulting Services (FEMCO)	Washington, DC	2008-2009								✓
WesCorp Headquarters Energy & LEED-EB Consulting	San Dimas, CA	2009	✓			✓			✓	✓
Raytheon LEED-EB Consulting Services	Tewksbury, MA	2009	✓			✓				✓
eTeck LEED Consulting	Trinidad	2009	✓					✓		✓
City of Austin - Austin Convention Center	Austin, TX	2009-Present	✓	✓	✓		✓			✓



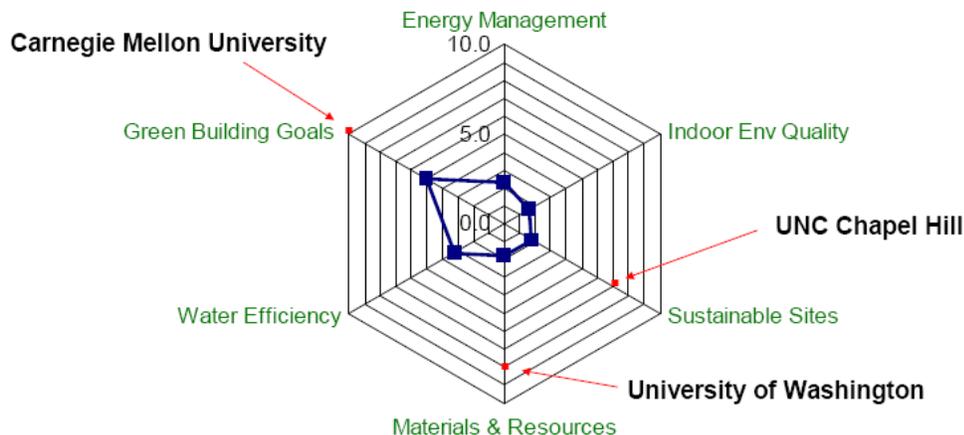
SUSTAINABILITY CONSULTING SERVICES

Sustainable Strategy Development, Implementation and Benchmarking

FEA understands the need for a sound sustainability policy that aligns the operation of facilities with the organization's commitment to sustainability. We work with our clients to develop a sound strategy that minimizes the impact of existing facilities on the environment. We do that by assessing current policies and practices and developing operational practices that fit with the organization's strategy and commitment to Corporate Social Responsibility (CSR), and within their operational budget. With a thorough understanding of the goals of the organization, we can create a Sustainability Scorecard[®] that aligns facility management strategy with the concepts of CSR. This approach allows our clients to measure their progress in sustainable practices and benchmark their facilities against others in their industry. Our strategy team works with clients to create comprehensive Energy and Sustainability Policies that are in sync with the *best practices* of the industry. Below is a brief summary of one of our relevant project experiences:

American University, Washington DC, Energy & Sustainability Plan

FEA performed a sustainability assessment of current AU policies and procedures regarding energy management, water efficiency, sustainable sites, materials and resources, indoor environmental quality, green building goals, and educational awareness. FEA prepared an Energy and Sustainability Policy that encompassed the sustainable strategies already implemented by AU as well as recommended practices to bring AU to the forefront of the university leaders in sustainability. In addition we scored the university's current sustainability practices using our Sustainability Scorecard[®], which allowed us to compare AU's sustainability policies and procedures to that of other top universities. The campus sustainability scorecard includes graphic representation of our findings, such as the radar graph below.



Through benchmarking and prioritization of sustainability initiatives, we were able to determine short-term and long-term goals for the University. The implementation strategy set forth a plan to increase their sustainability score by implementing key sustainability projects as well as identifying performance indicators to measure the success of their sustainability program. Additionally, FEA worked with AU to complete the required plans, organizational structure review, and greenhouse gas emissions inventory as required by the American College & University Presidents' Climate Commitment (ACUPCC).



ENERGY MANAGEMENT CONSULTING SERVICES

Energy Management Consulting

FEA's team brings a unique approach to energy management consulting. Our knowledge of facility management and building operations assists us in targeting energy conservation practices that will allow your facility to operate efficiently and effectively, resulting in cost savings. Smart energy management starts with building a comprehensive energy management strategy. That strategy encompasses building systems, operation and maintenance improvements, energy audits, commissioning and retro-commissioning, building instrumentation and monitoring, and building modifications and upgrades that promote both energy efficiency and use of financial resources.

The building blocks of an energy management strategy include:

- Establish baseline performance
- Identify opportunities for improvement, set goals
- Program development and implementation

We have saved our clients energy and money! A few examples are highlighted below:

Energy projects identified and implemented by FEA included:

- Lighting retrofits
- EMS Upgrade
- Lighting controls upgrade
- Chiller replacements
- Guestroom Energy Controls

Utility Co. Incentive: \$1,136,740
Energy Savings: \$757,000/Year

Hilton Anatole Hotel, Dallas, TX *Energy Management Consultant*

After performing an energy audit on this 2-million square foot convention center and hotel, several projects were identified, analyzed, and implemented by FEA. We prepared the documentation required to obtain the utility cost incentive, prepared project specifications, served as "Project Director" for implementation of the various projects, and prepared a Metering & Verification Plan and Savings Report. Over the past few years FEA has also assisted the hotel in negotiating favorable electric rates which have resulted in savings of over \$1 million with an immediate payback.

National Education Association, Washington, DC *LEED-EB and Energy Management Consultant*

FEA has been working with NEA since 2007 and led the effort to achieve LEED Gold under the United States Green Building Council (USGBC) LEED-EB rating system. A major component of this was energy management consulting. FEA established baseline energy use information, benchmarked the energy performance with ENERGY STAR's Portfolio Manager, and performed an energy audit. The audit identified ten low-cost/no cost operational improvements and several capital intensive projects. Over 2008 and 2009, using a combination of operational and capital expenditure efficiency improvements recommended by FEA, NEA successfully reduced the building energy consumption further, raised their ENERGY STAR rating, and earned the ENERGY STAR Label in 2009, 2010, and 2011.

Year	Annual Energy Costs
2007	\$1,287,769
2008	\$1,161,042
2009	\$1,050,303
2010	\$987,284
2011	\$972,012

Over \$315,000 in Direct Savings!!



ENERGY MANAGEMENT CONSULTING SERVICES

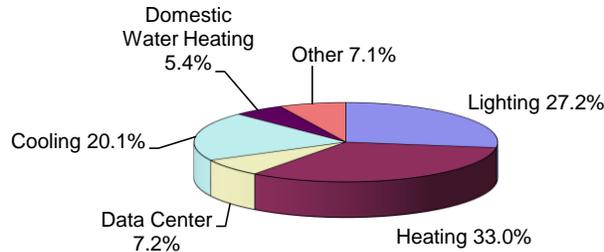
ENERGY STAR

FEA is a proud ENERGY STAR partner. We have used ENERGY STAR's online Portfolio Manager tool to help facility managers around the country track their building's energy and water consumption, as well as their carbon emissions. Our team can benchmark your building's energy performance, generate your ENERGY STAR rating, determine your baseline energy consumption, and help you develop a path for improvement. If you are seeking the ENERGY STAR label for your building, **FEA's Professional Engineers can perform the required on-site building systems review** – the final step to building labeling.



Energy Audits

FEA can develop master energy management programs for individual buildings, entire campuses, or company portfolios. These programs consider current and projected energy rates, remaining service life of equipment, comfort and indoor air quality, and building and energy codes. FEA can analyze your facility from a “big picture” standpoint while preparing a plan that considers your priorities. Utilities are the single largest expense in most facilities. Together we can take the guess work out so that you will know your opportunities and have the ability to monitor your success.



A typical energy audit includes identifying the breakdown of electricity use by function, identifying opportunities for energy savings in operations and control of the existing heating, ventilating, and cooling systems and lighting systems. The report includes recommended energy saving opportunities that will require little to no-cost to you and capital-intensive projects which can be analyzed to determine payback.

In addition to identifying energy and cost saving opportunities, the American Society of Heating, Refrigerating, and Air-Conditioning Engineers' (ASHRAE) Level I & II energy audits performed in accordance with ASHRAE *Procedures for Commercial Building Energy Audits* satisfy part of the USGBC's LEED – EB Operations & Maintenance program requirements.

Alternative Energy Resources

As energy resources become more expensive and incentives become available to decrease dependence on primary utilities as the sole source of power, the options need to be identified and evaluated. FEA can help identify alternate energy resource providers, potential program incentives, and feasibility for installation various technologies including solar energy collection, wind power generation, and ground water source heating and cooling, to help you determine the best course of action for your facilities.





ENERGY MANAGEMENT CONSULTING SERVICES

Some highlights of our experience with energy management consulting are listed below:

United States Patent Office Energy, Water, and Sustainability Audit

Facility Engineering Associates (FEA) evaluated the energy use, water use, and overall sustainability of The United States Patent and Trademark Office (USPTO) campus in Alexandria, Virginia which totaled over 2.5 million square feet. The work was completed in general accordance with Section 432 of the Energy Independence and Security Act of 2007 (EISA) and ASHRAE Level II energy audit protocol. Summaries and comparisons for energy and water audits were reported in an easy to read table portraying the current progress within each category including savings, ROI, simple payback, and Life Cycle Cost Analysis. **Overall, it is projected that implementation of the recommended conservation measures could result as much a 12,350,000 kWh per year and as much as 16,300,000 gallons of water per year!** FEA outlined an energy management strategy including methods of energy metering and monitoring, energy auditing scheduling recommendations, energy conservation measure prioritization, and energy education and awareness programs and techniques.

Sentinel Real Estate Corporation, Washington, DC – Energy Management Consulting

Sentinel Real Estate Corporation owns and operates the building at 1201 Pennsylvania Avenue, N.W. The building is a 450,000 square foot office building with approximately 33,000 square feet of below-grade parking located in Washington, DC. The thirteen-story building has three main office tenants as well as restaurant tenants requiring electrical, water, and sewer services according to terms of their respective leases. FEA was requested to act as Sentinel's energy consultant and review and process utility related purchases, evaluate utility consumption, and develop tenant-related HVAC, water, and sewer service costs.



*Howard Hughes
Medical Institute
(HHMI)
Chevy Chase, MD*

FEA was the Commissioning Agent on the HHMI Headquarters LEED Gold Certification project. FEA prepared the Commissioning

FEA provides commissioning services for new and existing buildings. By reviewing the original design criteria and current system performance, we can help you benchmark the performance of existing systems, recognize system problems, correct problems that may reduce the useful life of equipment, and identify opportunities for energy savings. A commissioning effort typically addresses mechanical and electrical equipment performance, HVAC system air balancing, exterior air ventilation, thermal comfort, HVAC and lighting controls, and fire and life safety systems. FEA will work with you to perform commissioning and retro-commissioning that is tailored to meet the specific needs of your facility.

To help illustrate the benefits of commissioning, following are a few examples of items we have uncovered during the commissioning process:

- Ductwork disconnected from diffusers sending conditioned air to the above-ceiling space instead of the space to be conditioned
- VAV box re-heat valves stuck open, causing over-heating of zones
- Lighting controls programmed incorrectly causing lights to stay on longer than necessary
- Cross-connected HVAC sensors, causing systems to over-heat and over-cool
- Improperly installed condensate drainage systems resulting in pooling water on the roof and creating the potential for roof damage



EDUCATION & TRAINING

Thought leaders in the existing built environment

FEA was selected to provide two concurrent educational sessions at Greenbuild 2009 and one in 2010.

- *How the LEED-EB Certification Process Transforms Your Operations and Engages People: A Panel Discussion with Facility Managers and LEED APs*

The session focused on how the LEED for Existing Buildings certification process is not just a paper exercise. It requires changing the way you think about the operations of your facility. We discussed how the certification process not only transforms your operations, but that it creates dialogue and engages your company's employees.

- *Using a Room-by-Room Approach to Energy Curtailment and Greening at BAE Systems*

The session focused on how BAE approached energy management in their facilities using a room-by-room energy evaluation method. FEA and BAE highlighted success stories by looking at energy management from a practical perspective and engaging all occupants in the process.

FEA invited our clients to present with us and we used our client case studies to highlight success stories. We welcome the opportunity to help you celebrate your accomplishments and tell the story of your journey.

Our company's culture is to give back to the professional community we participate in. We have established ourselves as part of the thought leaders in sustainability in the built environment. We accomplish this through teaching, speaking, and writing on the important issues of our time that impact our built environment. Our far-reaching presence in the area of education in IFMA, APPA, and other professional organizations has positioned us as global thought leaders in the existing built environment. This enables us to better serve our clients through our understanding of the global marketplace and the trends that will impact business. Our educational focus and our hunger for knowledge gives us an edge in terms of staying ahead of new laws and regulations related to sustainability as well as keeping up with what financial incentives and other resources are available in the area of sustainability.



In the spring of 2011, Laurie Gilmer and Maureen Roskoski were selected as Subject Matter Experts by the National Renewable Energy Laboratory (NREL) for the Commercial Workforce Development project. The Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) tasked NREL with facilitating the development of national guidelines that could be used to standardize training curriculum in the commercial building industry. Both employees of FEA were part of the Job Task Analyses team, which identified and cataloged all of the activities a worker performs in a given job, and determined the essential knowledge, skills, and abilities which define the minimum requirements necessary for an individual to adequately perform their job. We are honored to be part of this team that is working to create a common body of knowledge required for those that operate buildings.

Most recently, FEA was a core contributor to the development of IFMA's new credential, the Sustainability Facility Professional (SFP) and four of our employees are among the first who have earned this prestigious designation worldwide.





PRESENTATIONS AND PUBLICATIONS

Recent Publication Highlight:

IFMA Foundation sustainability "How-To-Guide" Series *IFMA Foundation*



FEA was retained by the IFMA Foundation to write three "How-To-Guides" related to sustainability in existing buildings. The IFMA Foundation wanted to provide a user friendly tool to promote sustainable facility management and turned to FEA for help.

- Getting Started In Sustainability (10/09)
- ENERGY STAR Portfolio Manager (10/09)
- International Green Building Rating Systems (11/10)

The two guides written by FEA are available for download at our website www.feapc.com

- *Operational Excellence: The Other Side of the Business Case for Sustainability*, FMLink 2012, May 2012, Maureen Roskoski
- *Energy Dashboards*, Building Operating Management Magazine 2012, May 2012, Angela Lewis
- *Sustainability Reporting: The Role of the Facility Manager in Measuring and Managing Energy, Carbon, and Water*, Maintenance IFMA Facility Fusion 2012, April 2012, Christopher Hodges and Laurie Gilmer
- *Power-Metering Application Strategies Increase Efficiency*, Maintenance Solutions Magazine 2012, April 2012, Douglas Yon
- *Latest Innovations in High Performance Buildings*, Facilities Maintenance and Hardware Acquisition Center (FMHAC) 2012, February 2012, Laurie Gilmer
- *Maintaining and Managing A Building Envelope*, SAME/IFMA: Facilities Management Workshop 2012, February 2012, Laurie Gilmer
- *Defining High-Performance: High-Performance Buildings Need High-Performance Facility Managers*, High Performance Buildings Congressional Caucus Coalition 2012, February 2012, Christopher Hodges
- *Energy Audits: Setting The Stage*, Building Operation Magazine 2012, January 2012, David Cosaboon
- *Energy Audits: Avoiding Mistakes*, Building Operation Magazine 2012, January 2012, David Cosaboon
- *Roadmap for Successful BAS Upgrades(4-Part Series)*, Maintenance Solutions, April 2011, Doug Yon
- *How Peak Demand Management and Energy Education Can Save you Energy Dollars: A BAE Case Study*, IFMA Facility Fusion, March 24, 2011, Maureen Roskoski and Sean Delehanty from BAE Systems
- *Strategies for Measuring and Reducing your Carbon Footprint*, NFMT Conference & Expo, March 15, 2011. Mayra Portalatin
- *Green Ratings Systems, The Team: Same Vision...Separate Focuses*, Federal Facilities Council December 7, 2010. Mayra Portalatin and Teena Shouse



Recent Presentation Highlight:

Jones Lang LaSalle Engineering Conference Keynote & Workshop

FEA routinely provides training on sustainability and facility management topics and was recently chosen to deliver the keynote address at the 2007 Jones Lang LaSalle Engineering Conference.

Subsequently, FEA conducted a LEED-EB workshop for a group of Jones Lang LaSalle regional engineers. The half-day workshop included a review of the current rating system, the changes to the new system, and case study examples. Our workshop was interactive and included learning exercises and real life examples of LEED-EB audits.

- *Practical Strategies For Calculating & Reducing Your Carbon Footprint*, Greenbuild, November 19, 2010. Laurie Gilmer and Mayra Portalatin
- *Case Studies in Energy Benchmarking and LEED for Existing Buildings: Meeting the Challenge of Unique Facilities*, Greenbuild, November 18, 2011. Laurie Gilmer with Kimberly Dominguez of NEA, Patrick Okamura of General Dynamics, and David Thomas of the Austin Convention Center
- *Unlocking Your Buildings Potential: The 5 Things You Need to Know to Create Sustainable Sustainability*, GBC South Africa, September 22, 2010, Teena Shouse
- *How the LEED-EB Certification Process Transforms Your Operations and Engages People: A Panel Discussion with Facility Managers and LEED AP's*, Greenbuild International Conference and Expo 2009, Phoenix, AZ. November 11, 2009 Maureen Roskoski and Teena Shouse of FEA, Cyndi Smith of VSP, and Kimberly Dominguez of NEA
- IFMA Foundation Sustainability "How-To-Guide" Series. IFMA Foundation. October 2009 – November 2010 (Various Guides). Chris Hodges, Laurie Gilmer, Maureen Roskoski, Greg Hughel, Mayra Portalatin, Teena Shouse and Kristina Koepke
- *Using a Room-by-Room Approach to Energy Curtailment and Greening at BAE Systems*. Greenbuild International Conference and Expo 2009, Phoenix, AZ. November 11, 2009. Chris Hodges and Sean Delehanty from BAE Systems
- *Saving Energy, Water, and the Environment with LEED EB*, webinar hosted by Maintenance Solutions, June 25, 2009. Laurie Gilmer and Maureen Roskoski
- *Sustainable Facility Management: It's not just about the environment! Efficient and Cost Effective Management of Your Facility in the Face of Limited Resources*. California Sustainability Mayday 2009, Sacramento, CA, May 13, 2009. Laurie Gilmer and Chris Hodges
- *Sustaining Sustainability: How To Create Long Term Sustainable Operations In Your Facility*, California Sustainability Mayday 2009, Sacramento, California, May 13, 2009. Laurie Gilmer and Bill Conley of Pacific Building Care.
- *What's Your Score? Benchmarking Energy Use through ENERGY STAR®*, California Sustainability Mayday 2009, Sacramento, CA, May 13, 2009. Laurie Gilmer
- *Efficiency on the Move: Portable Heating and Cooling*, Maintenance Solutions, April 23, 2009. Laurie Gilmer



PRESENTATIONS AND PUBLICATIONS

- *A LEED Certified Building Case Study*, High Performance Buildings magazine. Spring 2009. Maureen Roskoski and Laurie Gilmer
- *What's All the Fuss About Carbon?* Facility Management Journal. March/April 2009. Chris Hodges
- *HVAC Efficiency: Steps to Savings*, Maintenance Solutions. March 2009. Greg Hughel
- *Going Green: A Roadmap for Existing Buildings*. National Facilities Management & Technology Conference (NFM&T); Baltimore, MD, March 2009. Teena Shouse, Maureen Roskoski and Laurie Gilmer
- *Improving Water Efficiency in Your Facility*, Buildings magazine. October 2008. Laurie Gilmer and Greg Hughel
- *Infusing Sustainability into Your Food Service Operation*. Society of Food Management Conference 2008; Austin, TX, September 2008. Teena Shouse



FEA KEY PERSONNEL

Below is a list of our key personnel related to energy and sustainability services:

Christopher Hodges, P.E., CFM, RRC, LEED Accredited Professional, IFMA Fellow

Chris is a Principal and co-founder of Facility Engineering Associates (FEA). Chris's educational background is in engineering, with a Bachelor's degree in Civil Engineering from Clarkson University, and a Master's degree in Materials Science and Engineering from Johns Hopkins University. Chris has 30 years of experience working with facility management clients to solve a wide variety of facility management challenges, including maintaining building systems, strategic planning, operations and maintenance, leadership and management, sustainability, green buildings, and project management. Chris was elected as an IFMA Fellow in the class of 2005. Chris has led FEA's involvement in the sustainability movement over the last several years and has developed sustainable strategies and operational guidelines for several institutions and commercial clients. He has authored several papers and articles, and presented internationally on the topic of Sustainable Facility Management.

Teena Shouse, CFM

Teena is an Associate at FEA with more than 25 years of experience in service-related fields. Her expertise is in facility management including, FM sustainability, capital planning and budgeting, operations and maintenance, quality development, sourcing and contract governance of outsourced partners, and program/process standardization. Teena was part of the design and construction team which researched, planned and built the 240-acre Overland Park HQ campus. Teena was the General Manager of Employee Services at Sprint Nextel where her responsibilities included development and management of the retail services, national audio visual operations, food services and fitness center operations. She also had oversight responsibility for the procurement and maintenance of the Sprint Nextel fine art collection, conference center services – including technology integration and executive support services. Teena currently serves as Deputy Chairman of Global FM. She was the Chairman of the IFMA Board of Directors from 2005-2007. Additionally, she is an adjunct professor at KU.

Maureen Roskoski, REPA, LEED Accredited Professional O + M

Maureen Roskoski has been an Environmental Analyst and Project Manager on a wide variety of projects during her 16+ years of practice. She is a leader in the company regarding sustainability, more recently being appointed as our Corporate Sustainability Officer. She and has worked with institutions such as American University and commercial facility managers on sustainability issues. Maureen has developed a scorecard for sustainability practices to provide a benchmark for facility managers. She has authored papers and articles, and presented on the topic of Sustainable Facility Management. Maureen is generally working with multiple client on sustainability and energy audits, commissioning & retro-commissioning, as well as LEED Certification and Sustainability & Energy Management Strategy. Maureen has presented in her area of expertise at the United States Green Building Council's Greenbuild Conference, the premier green building conference in the country, and IFMA's renowned World Workplace. In addition, Maureen has co-authored a number of IFMA "How-to" Sustainability Guides, such as "EPA's ENERGY STAR Portfolio Manager: Getting Started".



FEA PERSONNEL

Laurie Gilmer, P.E., CFM, CxA, LEED Accredited Professional O + M

Laurie is an Associate at FEA and manages FEA's northern California office. With over 10 years of experience in mechanical engineering, Laurie has assisted facility managers in improving building systems operations, identifying and implementing energy saving strategies, and LEED certification. Laurie was the Project Manager for the VSP Vision Care LEED-EB certification project at VSP's Headquarters facility in northern California. She has also provided commissioning services for several commercial projects in the central and western United States. She served as the lead Commissioning Agent for the Howard Hughes Medical Institute and the Project Manager for the WesCorp LEED-EB Certification project. Laurie has published several articles, and has presented on sustainable solutions, commissioning, energy conservation, ENERGY STAR Portfolio Manager, and facility management for IFMA, IREM, the Sonoma County Water Supply & Conservation Summit, and several other public and private organizations.

Mayra Portalatin, LEED Accredited Professional O + M

Mayra is a Project Manager at FEA and leads FEA's Sustainability & Energy Management Task Force. With over 12 years of experience in environmental and existing building concerns, Mayra has assisted facility managers with hazardous materials concerns, as well as in capital planning, sustainability, and LEED Certification. While at FEA, Mayra has participated and managed sustainability assessments, energy audits, Leadership in Energy and Environmental Design (LEED®) Certification projects and carbon emissions inventory projects. Besides from project related experience in sustainability, Mayra has spoken in various conferences, such as NAEP (2007), WMCCAI (2008), AASHE (2008), Greenbuild (2010), and NFMT (2011); and for property management groups about sustainability in the existing building environment. Mayra has also been an instructor for LEED Green Associate and LEED Accredited Professional review courses, and more recently became an instructor for George Mason University's Sustainability Certificate Program. Mayra has not only been one of the main course developers for GMU's Sustainability Certificate Program, but has also developed a number of USGBC Education Provider Courses for FEA. Mayra was also one of the authors for IFMA's "How-to" Guide: "Green Rating Systems."

Conrad Kelso, P.E., CEM, LEED Accredited Professional O + M

Conrad Kelso is a registered Mechanical Engineer in the State of California, a Certified Energy Manager and a LEED Accredited Professional EB O+M. He earned his Bachelor of Science degree in Mechanical Engineering from the University of California, Davis. He has previous work experience with the City of Sacramento's Development Services Department performing commercial building plan review and has reviewed hundreds of building projects including tenant improvements, multi-family residential buildings, and new commercial high-rises for compliance with Building, Mechanical, Plumbing, Fire and Energy Codes. Conrad has been involved with many Facility Condition Assessments and Energy Audits for buildings across the country. He has assessed building mechanical, plumbing, electrical, fire and life safety, and elevator systems. He has also provided assistance for LEED point analysis and submitting buildings for LEED certification. Conrad has performed ENERGY STAR Statement of Energy Performance Validations for numerous buildings, which have all subsequently earned their ENERGY STAR. He has extensive knowledge of both the Uniform and International Building, Fire, Mechanical, and Plumbing Codes, NFPA Standards 13, 14, 20, 72, and the California Energy Code, one of the most stringent energy codes in the country. He is member of the Association of Energy Engineers, ASHRAE & NFPA.



CLIENT TESTIMONIALS

Our clients require consultants and engineers who have expertise in the built environment, who recognize problems that arise as buildings age. We understand the capital and maintenance issues a facility manager faces, and we perform life cycle analyses to evaluate alternatives for reconditioning versus replacement of major building systems.

Client satisfaction is the key to our success and growth over the past few years. Following are a few comments from our previous clients:



“The best decision we made as we undertook the LEED certification process was to work with the FEA team. Their expertise was a key element in developing and implementing our certification process. FEA understood our goals and the resources that we were able to dedicate to the project. Accordingly, they identified our strengths and helped us to close the gaps as necessary. There is no way we could have done this without assistance. A good indicator of our satisfaction is that we recently retained FEA to work with us on a different project.”

**-Mr. Richard Nuanes, Director, Conference & Facilities Management
National Education Association**



American University
Washington, DC

“FEA worked in partnership with us as we developed our facilities audit methodology. They helped us control costs and helped us get the information into useable formats. I know of no other company with the combination of valid approach and flexibility in application of their approach. There may be bigger firms out there, but none better.”

-Mr. Willie Suter, Director Facilities Management, American University



“Our Platinum Certification is a significant achievement in sustainability and marks a milestone in VSP’s ongoing efforts to become a model of energy and resource efficiency. The team that worked on this project set the bar at the highest level and met their goal. We will benefit from this achievement for years to come.”

-Mr. Steve Hibbs, Director, Corporate Services, VSP Vision Care



Austin Convention Center
Austin, TX

“I highly recommend FEA for any Facility Management related services. I have worked with FEA since November 2009. In that time, they have done a masterful job of assisting us in our pursuit of LEED EB Gold certification. Their staff is well versed in all areas of Facility Operations and Sustainability. They bring a unique blend of experience and understanding to the project that we did not find in any other firm that we reviewed during our selection process. Their FM experience is crucial to the long term success of our operations. They understand the challenges faced in the built environment and make their recommendations with those challenges in mind.”

-Mr. David Thomas, CFM, LEED AP, Austin Convention Center