

Appendix C

Resources

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Resources for Energy and Facilities Professionals

The references and resources provided below are by no means all-inclusive. The listed organizations are not endorsed by the authors of this guide and are provided for your information only. To locate additional resources, the authors of this guide recommend contacting relevant trade groups, databases, and the world-wide web.

Organizations

American Society for Healthcare Engineering (ASHE)

Website: www.ashe.org

Description: ASHE serves as an advocate and resource for continuous improvement in healthcare engineering and facilities management and is the largest professional group affiliated with the American Hospital Association. ASHE provides its members with information and education through comprehensive publications and educational programming.

American Society of Mechanical Engineers (ASME)

Website: <http://www.asme.org/>

Description: The work of ASME is performed by its member-elected Board of Governors and through its 5 councils, 44 boards, and hundreds of committees in 13 regions throughout the world. There are a combined 400 sections and student sections serving ASME's world-wide membership. ASME's vision is to be the premier organization for promoting the art, science, and practice of mechanical engineering throughout the world.

Association for Facilities Engineering (AFE)

Website: <http://www.afe.org/>

Description: AFE provides education, certification, technical information, and other relevant resources for plant and facility engineering as well as O&M professionals.

Association of Energy Engineers (AEE)

Website: www.aeecenter.org

Description: AEE is a comprehensive provider of information serving the fields of energy efficiency, energy services, deregulation, facility management, plant engineering, and environmental compliance.

American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE)

Website: www.ashrae.org

Description: ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning, and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing, and continuing education.

Association of Higher Education Facilities Officers

Website: <http://www.appa.org/>

Description: APPA (formerly the Association of Physical Plant Administrators) is the association of choice serving educational facilities professionals. An international association dedicated to maintaining, protecting, and promoting the quality of educational facilities, APPA represents more than 1,500 learning institutions serving over 4,700 individuals. APPA's membership includes facilities professionals from public and private, two-year and four-year colleges and universities; medical and law schools; seminaries; public and private K-12 schools and districts; museums and parks; military installations; Federal, state, and city-county governments.

BetterBricks Professional Education

Website: www.betterbricks.com

Description: BetterBricks Professional Education and its partners offer a variety of professional education options at low or no cost throughout the Northwest to improve understanding about the benefits and elements of high-performance building.

Boiler Efficiency Institute

Website: www.boilerinstitute.com

Description: BEI is the nationally recognized leader in training for optimizing facility systems to minimize costs. Currently BEI is a partnership composed of its two founders: Drs. Glennon Maples and David Dyer and Tom Burch. Collectively, these individuals have written a dozen textbooks, authored five patents, published over fifty scientific papers, and developed numerous computer software packages in their areas of expertise. They have taught more than a thousand workshops involving more than 100,000 people. More than 125,000 facility operation personnel use their textbooks.

Building Commissioning Association (BCA)

Website: www.bcxa.org

Description: BCA promotes building-commissioning practices that maintain high professional standards and fulfill building owners' expectations. The BCA provides information and resources to its members and to the public to increase awareness and promote building commissioning.

Building Operator Certification (BOC)

Website: www.theboc.info

Description: BOC is a nationally recognized training and certification program for building operators offering improved job skills and more comfortable, energy-efficient facilities. Certification is competency-based and offered at two levels. Level I emphasizes energy-efficient building maintenance practices, while Level II emphasizes equipment troubleshooting and maintenance for energy savings.

Building Owners and Managers Association (BOMA)

Website: www.boma.org

Description: The mission of BOMA International is to enhance the human, intellectual, and physical assets of the commercial real-estate industry through advocacy, education, research, standards, and information. Local associations are in Boise, Portland, Seattle, South Puget Sound, Tri-Cities, and Spokane.

Energy Facility Contractors Group (EFCOG)

Website: www.efcog.org

Description: EFCOG promotes excellence in all aspects of the operation, management, and integration of DOE facilities in a safe, environmentally sound, efficient and cost-effective manner through the ongoing exchange of information on lessons learned.

Facilities Net

Website: <http://www.facilitiesnet.com>

Description: Organization and web site for professionals in facility design, construction, and maintenance.

Federal Energy Management Program (FEMP), U.S. Department of Energy (DOE)

Website: www1.eere.energy.gov/femp

Description: FEMP helps Federal agencies find innovative solutions to their most difficult energy challenges and address their full range of energy management responsibilities.

Industrial Efficiency Alliance

Website: www.industrialefficiencyalliance.org

Description: The Industrial Efficiency Alliance and its partners offer business and technical training courses that are designed to equip attendees with the knowledge and tools to improve competitiveness and enhance system performance through increased energy efficiency.

Institute of Asset Management (IAM)

Website: <http://www.iam-uk.org/>

Description: An independent organization for professionals dedicated to furthering our knowledge and understanding of Asset Management. In particular, the institute seeks to spread good practice and develop decision support tools and techniques.

Institute of Industrial Engineers (IIE)

Website: <http://www.iienet.org/>

Description: IIE is the largest professional society dedicated solely to the support of the industrial engineering profession and individuals involved with improving quality and productivity. IIE is an international, nonprofit association that provides leadership for the application, education, training, research, and development of industrial engineering.

International Council for Machinery Lubrication (ICML)

Website: <http://www.lubecouncil.org>

Description: A vendor-neutral, not-for-profit organization founded to facilitate growth and development of machine lubrication as a technical field of endeavor. Among its various activities, ICML offers skills-based certification testing for individuals in the fields of machine condition monitoring, lubrication, and oil analysis.

International Facility Management Association (IFMA)

Website: www.ifma.org

Description: IFMA is a professional association for facility managers. IFMA membership comprises more than 17,500 facility professionals in 56 countries. Their members have a voice in 125 chapters, 15 councils, and one Special Interest Group.

International Maintenance Institute (IMI)

Website: www.imionline.org

Description: The philosophy of the IMI to professionalize the maintenance function by helping maintenance managers to work smarter through the exchange of ideas and education. The IMI is a goal-driven organization made up of decision making maintenance leaders as well as related sales and service professionals – all dedicated to keeping a nation’s infrastructure operating smoothly.

International Training Institute (ITI)

Website: www.sheetmetal-iti.org

Description: ITI has a variety of curricula that teach the students how to operate and service HVAC equipment. This includes the refrigeration system and its components, all types of heating systems (oil, gas, and electric) and their components, as well as the electrical fundamentals required by all of these systems.

International Union of Operating Engineers (IUOE)

Website: www.iuoe.org

Description: IUOE is a progressive, diversified trade union that primarily represents operating engineers who work as heavy-equipment operators; mechanics and surveyors in the construction industry; and stationary engineers who work in operation and maintenance in building and industrial complexes, and in the service industries. Founded in 1896, the IUOE today is the 12th largest union in the AFL-CIO and has 400,000 members in some 170 local unions throughout the United States and Canada. They offer apprenticeships and training to IUOE members.

Lighting Design Lab

Website: www.lightingdesignlab.com

Description: The Lighting Design Lab in Seattle, WA provides assistance to commercial lighting designers, facility managers, and specification writers that seek the most efficient lighting technologies and strategies.

Machinery Information Management Open Systems Alliance (MIMOSA)

Website: <http://www.mimosa.org/>

Description: Advocates open exchange of equipment condition related information between condition assessment, process control, and maintenance information systems through published, consensus, conventions and to gain greatest value by combining vital condition information from multiple sources for collective evaluation, reaching accurate determinations of current condition, and projected lifetime and communicating results in a useful, understandable form. MIMOSA is committed to preserving the advantages, effectiveness, and rich detail contained in specialized applications such as vibration, temperature, lubricating oil, and electric motor monitoring and analysis systems within an integrated enterprise information structure.

Maintenance and Reliability Center (MRC)

Website: <http://www.engr.utk.edu/mrc/>

Description: A premier institution, headquartered at the University of Tennessee, for education, research, development, information exchange and application of maintenance and reliability engineering. Maintenance and reliability engineering focuses on the use of analysis techniques, advanced predictive and preventive technologies and management systems to identify, manage and eliminate failures that lead to losses in system function.

Motor Decisions Matter**Website:** www.motorsmatter.org/

Description: A national campaign encouraging the use of sound motor management and planning as a tool to cut motor energy costs and increase productivity. The campaign is sponsored by a consortium of motor industry manufacturers and service centers, trade associations, electric utilities, and government agencies.

National Association of Energy Service Companies (NAESCO)**Website:** www.naesco.org

Description: NAESCO is a national trade association which has been promoting the benefits of the widespread use of energy efficiency for over 20 years. On behalf of its membership, NAESCO works to help open new markets for energy services by directly promoting the value of demand reduction to customers through seminars, workshops, training programs, publication of case studies and guidebooks, and the compilation and dissemination of aggregate industry data.

National Association of State Energy Officials (NASEO)**Website:** www.naseo.org

Description: NASEO was formed by the states and through an agreement with the National Governors Association in 1986. The organization was created to improve the effectiveness and quality of state energy programs and policies, provide policy input and analysis, share successes among the states, and to be a repository of information on issues of particular concern to the states and their citizens. NASEO is an instrumentality of the states and derives basic funding from the states and the Federal government.

National School Plant Management Association (NSPMA)**Website:** <http://nspma.org/>

Description: Chartered in 1995, NSPMA was formed in the interest on enhancing and promoting the educational process. Its purpose is to provide for the exchange of information that improves school plant management, maintenance, and care through the promotion of acceptable policies, standards, and practices and to promote the professional advancement of school plant management personnel.

National Sustainable Building Advisor Program (NaSBAP)**Website:** www.nasbap.org

Description: NaSBAP offers a training program specifically designed for working professionals wishing to apply sustainable concepts to the buildings they design, develop, and construct—buildings that are energy- and resource-efficient, healthy working and living environments, environmentally responsible, and cost effective. Participants include architects, engineers, tenant and developer representatives, construction and capital project managers, other building industry professionals, and resource conservation specialists.

North Carolina State University Maintenance and Reliability Management Program**Web site:** <http://continuingeducation.ncsu.edu/mrm.html>

Description: North Carolina State University, in partnership with Marshall Institute, offers a three-week program to develop maintenance and reliability knowledge and sharpen leadership skills for today's increasingly competitive global marketplace. This program will expose you to real-world examples and will provide you with practical knowledge and skills applicable in your plant or facility.

Northwest Energy Education Institute (NEEI)

Website: www.nweei.org

Description: NEEI is located within the Science Department at Lane Community College, Eugene, Oregon. They have provided energy-efficiency training and development throughout the Northwest since 1998.

Oklahoma Predictive Maintenance Users Group (OPMUG)

Website: <http://www.opmug.net/>

Description: Established in 1992 to provide maintenance professionals throughout Oklahoma, and the surrounding states, an opportunity to share and obtain first hand knowledge about predictive maintenance.

Plant Engineering and Maintenance Association of Canada (PEMAC)

Website: <http://www.pemac.org>

Description: The national technical association devoted to plant engineering and maintenance, created by and for plant engineering and maintenance people.

Plant Operations Support Program

Website: www.ga.wa.gov/plant

Description: The Plant Operations Support Program is comprised of state agencies, educational facilities, municipalities, and port districts, and acts as a clearinghouse for best practices, organizational standards, and surplus/salvage materials. The consortium includes hundreds of professionals with varied experience and expertise who regularly share solutions and lessons learned.

Professional Thermographers Association

Website: <http://www.prothermographer.com>

Description: The mission of the Professional Thermographers Association is to provide a platform for non-biased information, professional communication and unity, for individuals and organizations involved in providing, or procuring infrared thermographic services, equipment and support.

Society for Machinery Failure Prevention Technology (MFPT)

Website: <http://www.mfpt.org/>

Description: A Division of the Vibration Institute, MFPT acts as a focal point for technological developments that contribute to mechanical failure reduction or prevention.

Society for Maintenance & Reliability Professionals (SMRP)

Website: www.smrp.org

Description: An independent, non-profit society by and for practitioners in the Maintenance & Reliability Profession with nearly 2,000 members strong with global penetration.

Society of Reliability Engineers (SRE)

Website: <http://www.sre.org/>

Description: SRE is an organization dedicated to all forms of reliability engineering and education.

U.S. Department of Energy Industrial Technology Program (ITP)

Web site: <http://www1.eere.energy.gov/industry/>

Description: The Industrial Technologies Program (ITP) leads national efforts to improve industrial energy efficiency and environmental performance. ITP is part of the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy and contributes to its efforts by partnering with U.S. industry in a coordinated program of research and development, validation, and dissemination of energy efficiency technologies and operating practices. ITP works with industry to save energy and money, increase productivity, and reduce environmental impacts by:

- Conducting R&D on new energy efficient technologies
- Supporting commercialization of emerging technologies
- Providing plants with access to proven technologies, energy assessments, software tools, and other resources
- Promoting energy and carbon management in industry.

U.S. EPA ENERGY STAR

Website: estar7.energystar.gov/index.cfm?c=business.bus_internet_presentations

Description: ENERGY STAR is a government-backed program helping businesses and individuals protect the environment through superior energy efficiency. ENERGY STAR provides tools and resources that assist facility professionals develop a customized strategy, strengthen communication with decision makers, and gain recognition for their achievements.

Washington State University (WSU) Energy Program

Website: www.energy.wsu.edu/ten

Description: The WSU Energy Program provides support and information for Resource Efficiency Managers (REMs) or Resource Conservation Managers (RCMs). A REM or RCM is a designated individual acquired by an agency to support its energy and resource efficiency program. The sole focus of the REM or RCM is to bring about reductions in the cost of energy, water, natural gas, fuel oil, refuse disposal, and any other utilities. This is done through improved use practices, greater attention to utility billings and rate structures, and the installation and use of resource-management equipment.

University of California at Davis California Lighting Technology Center (CLTC)

Web site: <http://cltc.ucdavis.edu/content/view/132/208/>

Description: The California Lighting Technology Center's (CLTC) mission is to stimulate, facilitate and accelerate the development and commercialization of energy efficient lighting and daylighting technologies. This is accomplished through technology development and demonstrations, as well as offering outreach and education activities in partnership with utilities, lighting manufacturers, end users, builders, designers, researchers, academicians and governmental agencies.

University of Maryland Reliability Engineering Program

Web site: <http://www.enre.umd.edu/>

Description: The Reliability Engineering Program at the University of Maryland was approved to offer the MS and PhD degrees in Reliability Engineering in 1989. It provides a broad range of courses and experiences for its students, designed to prepare them to assist the nation in its ability to produce complex technological systems with ultra-high reliability and availability.

Publications

Building Operating Management

www.facilitiesnet.com

Chilton's Industrial Maintenance and Plant Operation

www.impomag.com

HPAC Engineering

1300 E Ninth Street
Cleveland, OH 44114-1503
(216) 696-7000

www.hpac.com

Industrial Maintenance and Plant Operation

www.impomag.com

Maintenance Solutions

P.O. Box 5268
Pittsfield, MA 01203-5268

www.facilitiesnet.com

Maintenance Technology

(847) 382-8100/Fax: (847) 304-8603

www.mt-online.com

P/PM Technology

SC Publishing
P.O. Box 2770
Minden, NV 89423-2770
(702) 267-3970

Plant & Facilities Engineering Digest

Adams/Huecore Publishing, Inc.
29100 Aurora Road, Suite 200
Cleveland, OH 44139
(708) 291-5222

Preventative Maintenance Magazine

Reliability Magazine

www.reliability-magazine.com/