



IEEE

MADISON SECTION NEWSLETTER

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SERVING IEEE MEMBERS OF SOUTH CENTRAL WISCONSIN

NOVEMBER 2005

West Campus Cogeneration Facility Tour

Evening Tour - note time and location!

- Date/Time:** Thursday, November 17, 2005, 5:00 PM - 6:00 PM, please plan to arrive no later than 4:45 PM
- Speaker:** Don Peterson, Executive Director - Energy Products & Services, Madison Gas & Electric
- Location:** 515 Walnut, UW-Madison Campus. Meet near facility in parking lot 59 near the UW greenhouses north of the West Campus Cogeneration Facility. Additional parking is available in lot 67 across Walnut Street. See map below.
- Menu:** Members can optionally arrange to go out to dinner, on their own, after the tour.
- RSVP:** by November 14th to Les Schroeder via email (l.schroeder@ieee.org) or call 608.444.9144



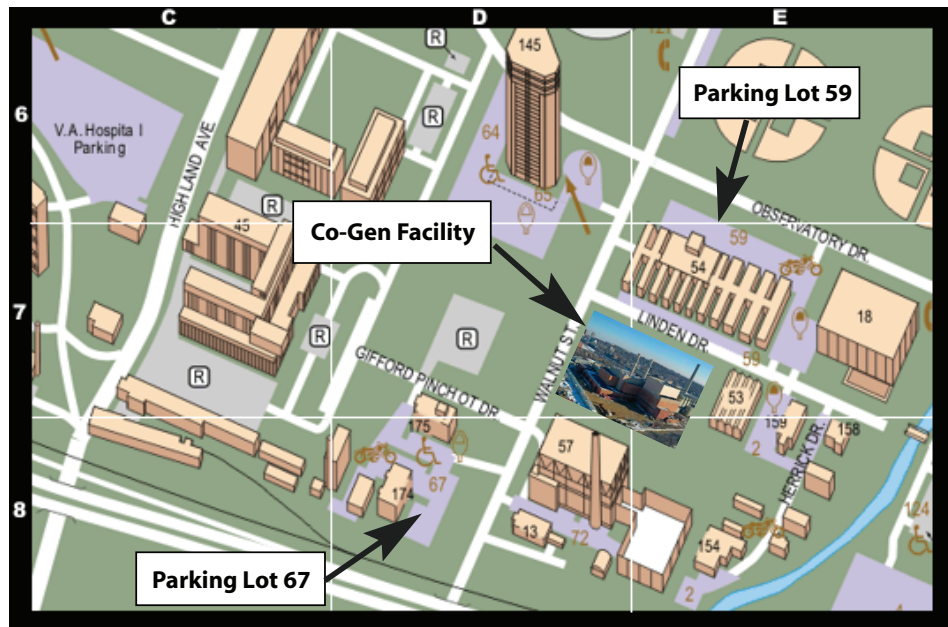
Non-member guests are always welcome!

The West Campus Cogeneration Facility began serving the Madison community in spring 2005. This new, natural gas-fired facility provides 150 megawatts of electricity to MGE customers while producing 20,000 tons of chilled water capacity and up to 500,000 pounds per hour of steam capacity to the UW-Madison campus.

Through the efficiencies of cogeneration and state-of-the-art emissions controls, it is one of the cleanest power plants in the Midwest. For information on how cogeneration works please see the following URL <<http://www.mge.com/about/powerplants/cogen/works.htm>>.

Major components of this new cogeneration facility include:

- Two General Electric LM600, dual-fuel, combustion turbines with generators
- Two Deltak duct-fired, HRSGs with SCR-based NOx control systems
- One General Electric steam turbine generator, condensing, extraction and induction
- 20,000 tons of electric-driven chillers with provision for an additional 30,000 tons
- Piping systems for high-pressure steam and chilled water
- Required electrical and control infrastructure
- State-of-the-art noise mitigation and aesthetics that blend into campus architecture.



Mr. Peterson has a BSEE from the University of Iowa and is a registered professional engineer. During his 20+-year career he has lead the development of the West Campus Cogeneration project, MGE's Rosiere Wind Turbine Project, MGE's Back-up Generation Service distributed generation program, plus various energy efficiency programs and distributed generation projects. He is a member of IEEE and is a past Chairman of the IEEE Power Engineering Society, Wisconsin Chapter.



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January 24–25, 2006 in Las Vegas, NV
- **Introduction to Data Communications**
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- **Introduction to Planning and Designing
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March 7–8, 2006 in Las Vegas, Nevada

For further information...

Web: <http://epd.engr.wisc.edu> or E-mail: danbeck@engr.wisc.edu
College of Engineering Department of Engineering Professional Development

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Concerns About Magnetic Field Exposure Addressed by New HHA Requirement

In order to limit magnetic field exposure to individuals, a recent addition to the low voltage directive for household and similar appliances will go into affect February 2006. This requirement EN 50366:2003 establishes testing methodology and limits for magnetic field emissions from restaurant equipment, fryers, ovens, commercial scrubbers, cleaning equipment, water heaters, amusement devices, and others. D.L.S. has added the capability for this new test to their extensive testing services. For more information about the new requirement and about free testing offered by D.L.S. for this standard, go to www.dlsemc.com/EN50366 or call 847-537-6400.

EN 50366 Background Information

Over the past few years there has been a growing concern on the potential effects on the human body posed by Low Frequency Magnetic (LFM) fields. The European Union has chosen to limit these fields as a precautionary requirement for appliances. The limits and testing procedures are called out in EN 50366:2003. These requirements become mandatory February 1, 2006.

Measurements are made over the frequency range of 10 Hz to 400 kHz. The measurements are relatively simple requiring various faces of the product to be tested. The limit and test distance varies depending on the potential exposure a human operator might experience. For example, appliances where a person might be in direct contact such as a electric blanket, dental hygiene appliances, body worn vacuum cleaners are required to be tested at 0 cm test distance. Products where an operator is some distance away and not in direct contact such as battery chargers, deep fat fryers, floor polishers, food processors, ice-cream makers, vacuum cleaners, and toasters are all tested at 50 cm. An intermediate distance of 30 cm is used for handheld tools, induction hobs, hotplates, microwave, standard ovens, refrigeration appliances, etc. Other devices not described are covered by the default clause "Appliances not mentioned require a distance determined by the Operator distance."

D.L.S. has the capability to assist all appliance manufactures with a special offer for free testing for one product from each company, plus a reduced price for additional products until February 2006 as availability allows. There will be a nominal charge for test reports. For manufacturers having many different physically large products, arrangements are being made to perform on-site testing.

Press release submitted by Marilyn Sweeney D.L.S. Electronic Systems Inc. 1250 Peterson Drive Wheeling, IL 60090 847-537-6400 www.dlsemc.com

IEEE Madison Section Elections

Although the IEEE Madison Section Officer Elections will not take place until December, it's time for potential candidates to start thinking about running. Candidate nominations are welcome and encouraged for all positions. The positions include chair, vice-chair, secretary, treasurer, and multiple member-at-large positions. Job descriptions can be found online at http://www.ieee.org/organizations/rab/scs/Officer_Training/job_desc.html. Nominations may be made by telephone or via e-mail to the Chair (278-0377, rotter@ieee.org).



So Now You Are A Manager

By Robert Gluck

Not all engineers promoted to management love the job, and some don't like it at all. The likely reason for dissatisfaction is a lack of training, according to IEEE Fellow Gus Gaynor.

Most people enter management ranks without much preparation, Gaynor points out. "There are significant responsibilities to becoming a manager, but naming someone is often thought of as a trivial decision," he says. But "it's the manager who determines whether the organizational units serve the organization well or whether they squander talent and resources."

New managers should realize that they don't have to know everything at once. "Mastering the managerial role is a continuous learning process," Gaynor says. "You make mistakes, you learn from them, you own up to them. You build a track record one step at a time, and you provide leadership, or as I prefer to say, 'you take the lead.' You read, you listen, you show respect to all people, you meet your commitments, you don't make excuses and, if necessary, you take the blame."

Gaynor draws on the experience he gained while in management positions for 25 years at 3M Co., as well as by being the principal of his own company, G.H. Gaynor and Associates, a technology management consulting firm in Minneapolis. He is the author of *What Every Manager Needs to Know: Making a Successful Transition to Management* (American Management Association, 2004).

At first, Gaynor says, he was going to target his book at the technical community, but his editor suggested he expand it to include all managers because they all face similar problems. All managers must learn the importance of communicating effectively, building relationships, using time efficiently, and seeing the big picture. Above all, Gaynor says, managers must recognize the importance of wearing

their "people hat."

"Managers accomplish their unit's goals through people," he says. "If managers think they can do it independently, they fail. They must make sure their staff is well trained and rewarded. They also must develop individual contributors as well as team players."

A fault of many engineers who become managers is that they require too much information before they'll make a decision. "Decision-making is about choices. We never have all the information we need," Gaynor says. He suggests following the 80/20 rule: "You can get 80 percent of the information in 20 percent of the time or with 20 percent of the effort. Make a decision based on that 80 percent. You can't wait for 100 percent of the information to arrive."

BUILDING TEAMS

Wearing a people hat has been a specialty of Michael Aucoin, an IEEE senior member, because he has spent so much time organizing and motivating teams of engineers. Aucoin is president of Electrical Expert Inc., in College Station, Texas, a consultant primarily to the electric power industry. Much of his career has been spent in research and development and in managing technology projects.

"The single most important thing I've learned about management is the incredible potential of teams," says Aucoin, author of *From Engineer to Manager: Mastering the Transition* (Artech House Inc., 2002), a book geared to the engineer promoted to manage a technical team. According to Aucoin, three ingredients go into building a successful team: having a common mission or purpose, being determined to accomplish the mission, and refusing to be restrained by limitations.

Setting up a group exercise can accelerate the process of team building and illustrate the value of those three ingredients, Aucoin says. Shared experiences, especially those that involve challenges and adver-

D.L.S. Offers

Free EMC/Product Safety Testing for New Low Frequency Magnetic Requirement EN 50366:2003 for HHA Equipment

Required as of February 2006

A recent change to the HHA Low Voltage Directive added Household and Similar Electrical Apparatus (EN 50366:2003) testing requirements. This involves low frequency testing from 10 Hz to 400 kHz for magnetic fields that are emanating from electrical devices. Items applicable include, but are not limited to:

- Household and similar appliances
- Restaurant equipment, fryers and ovens
- Commercial scrubbers and cleaning equipment
- Water heaters and amusement devices

For a complete listing, go to www.dlsemc.com/EN50366.htm. There is no provision for a grandfather clause on existing certifications.

For more information call 847-537-6400 today. D.L.S. is offering a free test of one product from each company, plus reduced pricing for additional products until February 2006 as availability allows. There will be a nominal charge for test reports.



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sity, lead team members to trust and gain confidence in each other. "Exercises can range from white-water rafting trips to improvising music with percussion instruments," he says. Such group activities can channel a collection of individuals into functioning as a team; genuine, useful teamwork, however, only comes under fire on the job.

One thing team members learn while sharing experiences is communication. How can engineers turned managers communicate more effectively? To begin with, managers should listen more, Aucoin says.

"A manager must become skilled in listening and understanding, as well as in delivering messages clearly," he says. Listening to subordinates is critically important. Studies show that more than 60 percent of employees say their supervisors aren't interested in their work or don't care about them as people, Aucoin says, adding, "You must guard against giving such impressions."

The basic nature of a manager's communications is also apt to change once that promotion comes. "As an engineer, you likely focused on technical communications," Aucoin says. "But as a manager, your primary communications may shift from technical to business information. Your audience may also change from technical personnel to individuals of varied backgrounds. Your communication content and style should change accordingly."

Newly minted managers might want to join the IEEE Engineering Management Society (<http://www.ewh.ieee.org/soc/ems>) or the IEEE Professional Communication Society (<http://www.ieeepcs.org>). The EMS can help you keep abreast of management tools and techniques. The PCS helps engineers and other technically oriented professionals communicate better.

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