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FROM THE CHAIR

Planning for pandemic— a business imperative

We have been warned about the possible spread of bird, or avian, flu. Despite the warnings, it doesn't appear that we are fully informed or prepared to deal with risks of such an event.



Powers

Elsewhere in this issue of *electroindustry*, it is reported that NEMA has received a request from the Department of Homeland Security and two other federal agencies to alert its members about the risks of an influenza pandemic and the need to be prepared should such a disaster occur. The industry needs to respond if we are to keep our businesses running and our employees protected during a potential breakout in this country or places overseas where we do business.

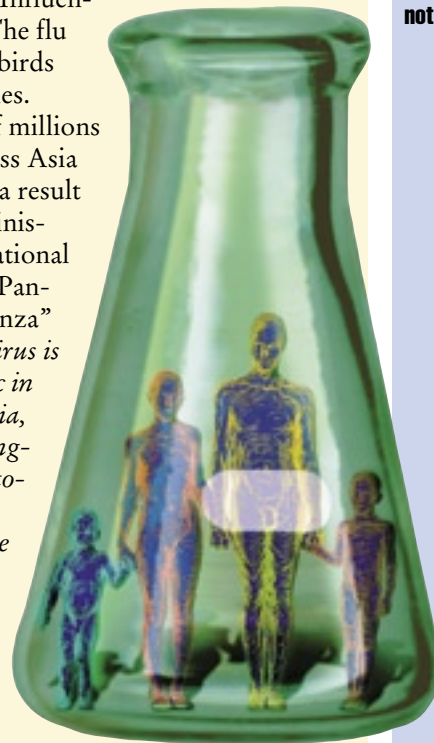
It is not common knowledge that the U.S. suffers approximately 36,000 deaths and over 200,000 hospitalizations due to one form of influenza or another each year. This happens despite the availability of flu shots and flu treatments. Imagine a worldwide pandemic that would make those numbers look exceedingly small.

The avian influenza that has been found in Europe and Asia is caused by the H5N1

strain of the Influenza A virus. The flu has infected birds in 16 countries. Hundreds of millions of birds across Asia have died as a result and the administration's "National Strategy for Pandemic Influenza" states *"the virus is now endemic in Southeast Asia, present in long-range migratory birds, and unlikely to be eradicated soon."*

Given that statement alone, is it a stretch to say that a pandemic is only a remote possibility? Personally, I don't want to make that bet. It would be an extremely dangerous one. While

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Commercial Building Tax Deduction Coalition submits comments to DOE

The Commercial Building Tax Deduction Coalition submitted comments and recommendations to the U.S. Department of Energy (DOE) on November 18, and incorporated by reference most of the Tax Incentive Awareness Project (TIAP) recommendations. TIAP recommendations were developed for certification of energy analysts, verification inspectors, and computer software. The coalition commented, however, that the interim lighting provision should not require software to determine compliance. The coalition also addressed public buildings, which TIAP had not.

The coalition, convened by NEMA in October 2005 to educate the community about the commercial buildings tax deduction provision of the Energy Policy Act of 2005. Its dialogue with officials from DOE and the U.S. Department of Treasury will continue as tax guidelines for the legislation are crafted and prepared for release.

The Energy Policy Act of 2005 establishes a new deduction for expenses incurred to affect energy-efficient commercial building property. The deduction is equal to energy-efficient commercial building property expenditures made by the taxpayer, subject to a cap. The provision applies both to new construction and retrofits that are placed in service from January 1, 2006, through December 31, 2007. It is expected that a Department of Treasury notice on how to implement the tax provision will be promulgated by mid-February 2006, with a more detailed regulation anticipated later in 2006.

“It is very exciting that we are hearing more and more questions about this important energy-efficient tax provision,” said Kyle Pitsor, NEMA’s vice president of government relations. “This tells me that more businesses are looking into how to improve the efficiency of buildings and that

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EU stands pat on chemicals regulation that would hurt equipment manufacturers

In December, European Union member states amended a proposed scheme to regulate chemicals sold in EU markets. The amendments remove some requirements and lessen compliance costs for chemical producers. The states did not, however, remove a provision that stands to hamper downstream users of chemicals, including manufacturers of electrical and electronic equipment and components. If approved, the regulation will become effective as early as 2007.

The proposed regulation, known as REACH (Registration, Evaluation, and Assessment of Chemicals), has been the subject of intense debate for several years. The stated purpose of the regulation is “to ensure a high level of protection of health and the environment as well as the free circulation of substances on the internal market while enhancing competitiveness and innovation.” But chemical manufacturers and the electrical and electronic equipment industry have consistently stressed that certain provisions are inconsistent, unnecessarily restrictive, or fraught with uncertainty.

Under Article 6 of REACH, for instance, manufacturers or importers of “articles” (i.e., products that contain and may potentially release hazardous chemicals during normal use or disposal) will be required to register the substances within them and pay fees to an oversight agency. It is not clear, however, on what grounds authorities will determine whether a chemical release from an article would “present a risk to human health or the environment.” Experts say it is a crucial consideration in a rule with such enormous implications for trade and industry.

Another uncertainty lies in the proposal’s definition of an “article” as



“an object, which during production is given a special shape, surface, or design that determines its function to a greater degree than does its chemical composition.” Industry has lobbied the Parliament and Member States to remove the “articles” provision, which contains many ambiguities. Another lingering issue is whether the regulation will ban the most dangerous chemicals and require the development of substitutes.

NEMA and other industry groups are raising the alarm that REACH could result in restricted or more costly EU market access for equipment manufacturers. “NEMA member companies have traditionally been leaders in addressing whatever environmental health and safety concerns may be associated with their products,” said Mark Kohorst, NEMA senior manager of environment, health and safety. “But REACH is the latest of a lengthening line of Brussels regulatory initiatives that restrict market access and impose costly burdens on electrical and electronic equipment manufacturers with no certainty of a significant benefit to public health.

“Our companies want to comply,” he said, “but we also place utmost priority on ensuring that our products remain safe and meet stan-

dards of performance. Through our Environmentally Conscious Design program, NEMA is working hard to promote sensible regulations and to help companies implement voluntary, industry-driven solutions.”

Opponents of the proposed REACH framework have problems with the precautionary principle, which presumes that governments should regulate to minimize perceived risk even in the absence of scientific evidence supporting that perception. The regulation places the burden on manufacturers, importers, and downstream users to prove that they manufacture, place on the market, or use substances that do not adversely affect human health or the environment. It requires that companies “prove a negative,” in other words, which is scientifically not possible.

The REACH regulation will not have to be implemented identically in all EU member states—the proposal specifically allows individual countries to exempt certain substances when necessary. For imported products, it is the importer who must take on the burden of compliance. Non-EU manufacturers may designate another EU entity, such as a distributor, to fulfill the obligations placed on the importer.

The European Commission will issue an opinion this spring on the member states’ December agreement. Parliament and member states then are expected to debate the REACH proposal through 2006 before they come to a formal compromise agreement. While the authorities have amended some provisions in response to industry concerns, few if any interested parties believe all major issues have been resolved. ■

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NEMA submits comments to FERC on rate incentives for transmission investment

NEMA was one of about 80 entities, including utilities, state regulators, technology developers, financial institutions, and trade associations that commented on the Federal Energy Regulatory Commission Notice of Proposed Rulemaking (NOPR) on incentives for transmission investment. The resulting rule will implement Sections 1223, *Advanced Transmission Technologies*, and 1241, *Transmission Infrastructure Investment*, of the Energy Policy Act of 2005 (EPA 2005). NEMA drafted both of these provisions in 2001 and shepherded them through the four-year legislative process.

In its comments, NEMA agreed that the transmission system has experienced significant underinvestment for decades, but that EPA 2005 provides a unique opportunity to reverse the trend.

NEMA noted that while the FERC-proposed rule on mandatory transmission reliability standards addresses operational reliability of the existing system, it does not address adequate future transmission capacity. Consequently, NEMA felt capacity must be covered in the rate incentive rulemaking.

NEMA stressed that in writing the provision, it included the term "capacity and efficiency" in addition to "reliable and economically efficient transmission" to add the consideration of energy efficiency, something NEMA felt the NOPR failed to address. Because about five percent of electricity generated is lost in transmission, NEMA thought it important to give consideration to increasing energy efficiency during transmission upgrades. Energy efficiency in utilities

is getting high level government and industry attention, but transmission efficiency is not.

NEMA agreed with FERC that there may be administrative regulatory steps that could be taken to reduce the reluctance of transmission companies to seek rate relief, including the incentive-based rate measures enumerated in the NOPR.

NEMA agreed that the proposed incentives discussed in the NOPR will help stimulate investment in new transmission facilities. But the association did not believe that the deployment of innovative technologies for transmission facilities will necessarily follow. If rate incentives are only

applied to assure cost recovery, then there is no incentive to install advanced technology because there is no consideration of risk and reward. Rate incentives must go beyond cost recovery; rates to encourage advanced technology can be a vehicle to accelerate the evolution toward the "smart grid" of the future.

Ed Gray, NEMA's director of energy infrastructure, said "the investment rate incentive rule should add another tool to several already in EPA 2005 to add much needed transmission capacity. Other EPA 2005 provisions include a shorter asset tax life, federal backstop siting, and streamlined environmental review." ■

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ANSI board approves 2006 Framework

The ANSI board of directors recently took a step toward planning for the future by approving its *2006 Framework for Action*, which addresses all of the institute's activities and forms the basis for the annual budget. This strategic document will guide the institute's operations, management, and budgetary processes. It reflects key elements of the current *U.S. Standards Strategy* (USSS), conformity assessment principles, and the International Policy Committee's international and regional strategic plan. Strategic initiatives identified by the board, the executive committee, and policy committees are incorporated.

ANSI will maintain a governance structure that provides for broad participation in the development of policy positions and a more cohesive, inclusive, and efficient decision-making process. They will lead communication and promotion efforts related to the introduction and implementation of the strategy (see accompanying article). ANSI will also support a new Intellectual Property Rights Policy Committee that will serve as a broadbased policy group to address national, regional, and international intellectual property matters.

In the international arena, ANSI's goal is to enhance global competitiveness of U.S. business, advance U.S. influence in all relevant national, regional, and international bodies, and work to meet the needs of and responsibilities to global society. Money has already been appropriated for a new position at ANSI, one that will be focused principally on China.

ANSI's domestic goal is to provide access to standards processes to meet market needs, facilitate participation in the processes, coordinate and provide the forum to address diverse member interests, and advocate positions on behalf of member interests.



The institute will define strategic conformity assessment objectives in accordance with member needs and facilitate their implementation. It will attempt to enhance recognition of ANSI's accreditation services by attracting government certification programs to ANSI accreditation, identifying government funding opportunities for ANSI programs, and increasing collaboration with selected agencies.

ANSI will work to secure increased funding from grants, government contracts, and foundations to provide increased support for ANSI's international and domestic activities. (A prime example is a \$250,000 contract received from NIST to translate titles and scopes of Chinese standards.) It will also make certain that the Department of Homeland Security is aware of the resources available within the standards community to assist government agencies in achieving security objectives.

One of ANSI's goals is to develop and present education and

training programs to increase the awareness of standards, and to help companies and organizations effectively participate in national, regional, and international voluntary consensus standardization activities. The institute is already developing and maintaining publicly available, free educational content for delivery via the internet. It is also implementing a university outreach program to make material available, including complementary ISO and IEC standards.

Finally, ANSI will expand its public awareness campaign to include basic messages about the institute, the U.S. and global standards systems, and the value of voluntary consensus standards and conformity assessment.

New U.S. Standards Strategy published

The newly published *United States Standards Strategy* (USSS) establishes a framework that will be used by U.S. stakeholders to improve trade issues in the global

marketplace, enhance consumer health and safety, meet the needs of diverse industries, and advance U.S. viewpoints in the regional and international standardization arenas.

The U.S. standardization system functions under the belief that standards should meet societal and market needs and should not be developed as technical barriers to trade. The *U.S. Standards Strategy* promotes standards that are technically suitable, applied globally, and developed in accordance with the principles of openness, transparency, consensus, and due process within the World Trade Organization's Technical Barriers to Trade Agreement.

The *U.S. Standards Strategy* is the result of a collaborative process that began in 2004 when the American National Standards Institute (ANSI) convened a committee to review and revise the previously published *National Standards Strategy for the United States*. The up-

dated and renamed *U.S. Standards Strategy* reflects the contributions of hundreds of representatives of industry; small, medium, and large enterprise; standards developers and consortia; consumer groups; and federal and state government that contributed to the revision process.

The document addresses several areas of concern:

- the role of government;
- health, safety, and environmental responsibilities;
- consumer interests;
- prevention of standards as trade barriers;
- responsiveness to cross-cutting technologies;
- efficiency in standards development; and
- the priority of standards education.

Key updates to the strategy relate to intellectual property rights, funding models for the standards system, national priorities, and global trade issues.

"The United States standardization system is an intricate and vital infrastructure that promotes the public good, enhances the competitiveness of U.S. industry, and contributes to a liberalized global trading system," said S. Joe Bhatia, president of ANSI and chair of the United States Standards Strategy Committee. "Providing a strategic standards framework for a nation as complex as the U.S. is an essential element that helps to maintain and improve the system. The *United States Standards Strategy* was developed to serve as this framework."

The involvement of key stakeholders in implementing the strategy, said Bhatia, will help to secure U.S. competitiveness and capitalize on new opportunities to deliver innovative solutions to the global marketplace.

The strategy and accompanying frequently asked questions and answers can be found online at www.us-standards-strategy.org. ■

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Businesses told to plan for a pandemic

NEMA has been asked by the heads of the Department of Homeland Security, Health and Human Services, and the Department of Commerce to make its members aware of the *National Strategy for Pandemic Influenza*. Homeland Security's Michael Chertoff, HHS's Michael Leavitt, and Commerce Secretary Carlos Gutierrez noted in a recent letter to NEMA President Evan Gaddis that, "As with any risks that we face as a country—including natural disasters and the ongoing possibility of another terrorist attack—it is imperative that all segments of society be prepared for such a threat."

Asking for NEMA's assistance, the letter explains, "In order to ensure maximum preparedness, businesses should develop specific plans for the ways that they would protect and maintain operations during a pandemic. Companies

that provide critical infrastructure services, such as power and telecommunications, also have a special responsibility to plan for continued operation in a crisis and should plan accordingly."

The introduction to the strategy notes that "influenza viruses are notable for their resilience and adaptability. While science has been able to develop highly effective vaccines and treatments for many infectious diseases that threaten public health . . . the U.S. faces a burden of influenza that results in approximately 36,000 deaths and more than 200,000 hospitalizations each year. In addition to this human toll, influenza is annually responsible for costs of over \$10 billion in the U.S."

A pandemic, or worldwide outbreak of a new influenza, could dwarf those numbers, overwhelming health and medical facilities,

and potentially resulting in hundreds of thousands of deaths, millions of hospitalizations, and hundreds of billions of dollars in direct and indirect costs.

The *National Strategy* report says, "Pandemics happen when a novel influenza virus emerges that infects and can be efficiently transmitted between humans. Animals are the most likely reservoir for these emerging viruses; avian viruses played a role in the last three influenza pandemics. Two of these pandemic-causing viruses remain in circulation and are responsible for the majority of influenza cases each year."

Those three pandemics, in 1918, 1957, and 1968, killed approximately 40 million, two million, and one million people worldwide, respectively. The current pandemic threat stems from an unprecedented outbreak of avian influenza in Asia and Europe, caused by the H5N1



strain of the Influenza A virus. According to the national strategy document, "To date, the virus has infected birds in 16 countries and has resulted in deaths, through illness and culling, of approximately 200 million birds across Asia. While traditional control measures have been attempted, the virus is now endemic in Southeast Asia, present in long-range migratory birds, and unlikely to be eradicated soon."

So, the threat is very real. Of great concern is the H5N1 strain's ability to infect a wide range of hosts, including birds and humans. While the number of infected people is still small, around half the people who have contracted it have died. The strategy document notes that "although the virus has not yet shown an ability to transmit efficiently between humans, as is seen with the annual influenza virus, there is concern that it will acquire this capability through genetic mutation or exchange of genetic material with a human influenza virus."

But even if this does not happen, forestalling catastrophic consequences, the government says history suggests that a different influenza virus will emerge and result in the next pandemic.

The strategy notes that while a pandemic will not damage power lines, it will ultimately threaten all critical infrastructure by removing essential personnel from the workplace for weeks or months. This makes a pandemic a unique circumstance, according to the document, "necessitating a strategy that extends well beyond health and medical boundaries, to include the operation of critical infrastructure, the private sector, the movement of goods and services across the nation and the globe, and economic and security considerations."

The strategy notes that "The private sector should plan an integral role in preparedness before a pandemic begins, and should be part of a national response." The strategy has three pillars at its base:

While the number of infected people is still small, around half the people who have contracted it have died.

Preparedness and Communication:

Preparedness is the underpinning of the entire spectrum of activities, including surveillance, detection, containment and response efforts. We will support pandemic planning efforts, and clearly communicate expectations to individuals, communities and governments, whether overseas or in the United States, recognizing that all share the responsibility to limit the spread of infection in order to protect populations beyond their borders.

Surveillance and Detection: *Early warning of a pandemic and our ability to closely track the spread of avian influenza outbreak is critical to being able to rapidly employ resources to contain the spread of the virus. An effective surveillance and detection system will save lives by allowing us to activate our response plans before the arrival of a pandemic virus to the U.S., activate additional surveillance systems and initiate vaccine production and administration.*

Response and Containment: *We recognize that a virus with pandemic potential anywhere represents a risk to populations everywhere. Once health authorities have signaled sustained and efficient human-to-human spread of the virus has occurred, a cascade of response mechanisms will be initiated, from the site of the documented transmission to locations around the globe.*

The private sector represents an essential element of any strategy, the

report says, "because of the essential goods and services that it provides. Moreover, it touches the majority of our population on a daily basis, through an employer-employee or vendor-customer relationship. For these reasons, it is essential that the U.S. private sector be engaged in all preparedness and response activities for a pandemic."

The report says the U.S. private sector has several tasks before it if it is to effectively prepare for an influenza pandemic:

- *Establishing an ethic of infection control in the workplace that is reinforced during the annual influenza season, to include, if possible, options for working offsite while ill, systems to reduce infection transmission, and worker education.*
- *Establishing contingency systems to maintain delivery of essential goods and services during times of significant and sustained worker absenteeism.*
- *Where possible, establishing mechanisms to allow workers to provide services from home if public health officials advise against non-essential travel outside the home.*
- *Establishing partnerships with other members of the sector to provide mutual support and maintenance of essential services during a pandemic.*

"Fully implementing this strategy will require extra time and extra effort," says NEMA's Gaddis, "but unlike natural disasters like hurricanes and earthquakes, a pandemic, if managed properly, can be minimized and thousands, even millions of lives can be saved. In addition to loss of life and sickness on a grand scale, a pandemic can also adversely affect our business and the nation's business. We need to honor this call to assistance from the administration."

More detailed information on the strategy, including a business planning checklist, can be found at www.pandemicflu.gov, www.cdc.gov/business. ■

Supreme Court overturns antitrust case; NEMA's concerns addressed by court

The United States Supreme Court issued a ruling on January 10, 2006 in the case of *Volvo Trucks North America, Inc. v. Reeder-Simco GMC, Inc.*, reversing the decision of the U.S. Court of Appeals in St. Louis, which upheld an approximately \$4.0 million treble damage judgment under Section 2 of the Robinson-Patman Act. The case pitted a dealer of heavy-duty Volvo trucks against its supplier, the manufacturer of Volvo trucks. The Court of Appeals decision was of considerable concern to many NEMA members and NEMA thus submitted a friend-of-the-Court brief to the Supreme Court conveying those concerns. Those concerns have been largely eliminated.

The case was brought by a dealer of Volvo heavy duty trucks, and while the facts of the case pertained to the distribution of a

built-to-order product pursuant to a customer-sponsored bidding process, the Court of Appeals opinion would have had an impact on long understood rules and practice for legally providing price concessions to distributors in a variety of other contexts.

The Supreme Court held that for a dealer to prevail against a supplier in a price discrimination case, the dealer must establish that it was in actual competition with another dealer who received a preferential discount from the same supplier. In the traditional retail channel where retailers are supplied from inventory, there is a presumption that the retailers are in actual competition for the same general customer and might be affected by a supplier's discriminatory pricing. But in this case, discounts were not offered by Volvo until after the customer has determined the

limited range of suppliers who will compete and invited them to bid. "Once a retail customer has chosen the particular dealers from which it will solicit bids, the relevant market becomes limited to the needs and demands of a particular end user, with only a handful of dealers competing for the ultimate sale," the court said.

Of considerable concern to the Supreme Court was that Reeder's proof of competition with other Volvo dealers was based on evidence of price comparisons representing a "mix and match [of comparative sales] of manipulable quality." "Reeder simply paired occasions on which it competed with non-Volvo dealers for a sale to Customer A with instances in which other Volvo dealers competed with non-Volvo dealers for a sale to Customer B." These comparisons did not reveal any systematic discrimination and they were often separated by substantial periods of time. In the typical retail paradigm, there is no risk of manipulating the comparisons to show discrimination. The Supreme Court reiterated its prior rulings that the Robinson-Patman Act did not "ban all price differences charged to different purchasers of commodities of like grade and quality." Furthermore, the court also cited favorably a statement in a legal treatise to the effect that the Robinson-Patman Act does not guarantee dealers equal profits on sales actually made.

NEMA's *amicus* brief pointed out that the distribution of some electrical products sometimes shared the same characteristics of the distribution model for Volvo trucks: build to order product in the context of competitive bidding. The brief also pointed out that there was not a single model for the distribution of

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ELECTROTECHNOLOGY UPDATE

Free-electron lasers push current, create new technologies and applications

The invention of the laser in 1960 opened a new world of opportunities for science and industry, leading to such ubiquitous technologies as low-cost telecommunications, compact disc players, supermarket checkout scanners, and laser printers. But entire new realms of laser-based technologies await discovery, limited only by researchers' ability to test individual wavelengths of laser light for new applications. Now, free-electron lasers are providing multiple wavelengths at high power, a researcher's dream in terms of laser light research and development.

A laser provides monochromatic, coherent, and directional light: that's light in just one color with all the particles of light, photons, moving in lockstep in one direction. Standard lasers accomplish this by exciting electrons in atoms or molecules (in a solid, liquid, or gaseous medium). These electrons give off organized photons in a wavelength dictated by the material's atomic structure.

In contrast, a free-electron laser (FEL) uses electrons that have been stripped away from atoms. In the world's most powerful FEL, located at the U.S. Department of Energy's Jefferson Lab in Newport News, Virginia, the electrons are coaxed into niobium accelerating cavities held at a cool -456 degrees Fahrenheit. Niobium metal is superconducting at this temperature, allowing a radio frequency electric field to efficiently "accelerate" the electrons, or essentially stuff them with extra energy. The electrons are then "wiggled" with a magnetic field, which forces them to emit photons, and a special mirror allows

only those photons that are moving in the right direction out of the machine in a tight beam of laser light. The seed beam of electrons, after exiting the optical cavity, then travels back into the accelerator, where they give up most of their energy to a new batch of electrons, making the process highly efficient.

The result is high-power laser light that may be dialed, or tuned, to a specific wavelength with the turn of a knob. The research opportunities provided by a tunable laser are boundless—from applications in medicine, with laser light tuned to attack certain tissue while leaving the rest undisturbed, to prospective applications in defense, with laser light tuned to local atmospheric conditions for defending a ship against an incoming missile.

Other exciting, potential applications exist in national security, materials science, photobiology, photochemistry, and high sensitivity spectroscopy through specific capabilities such as microfabrication, nanotube production and characterization, nanoelectronics, environmentally friendly material surface modification, and medical imaging. The Laser Processing Consortium, an industry-led private/public partnership for radically advancing the use of light as a manufacturing and research tool, is banking on the ability of FELs to provide proof-of-principle for new applications in these radically different areas.

There are just under a dozen FEL facilities available for this type of research worldwide, and five of those are located in the U.S. at Duke, Vanderbilt, and Stanford Universities, the University of



A view down the pipe view (the beam goes down the middle) of the infrared wiggler. Courtesy of Jefferson Labs.

California at Santa Barbara, and at Jefferson Lab. Each offers a unique range of laser light tunability for research. The Jefferson Lab FEL, for instance, currently offers a wide range of wavelengths in the infrared and the ultraviolet, from 15 microns down to 300 nanometers, in sub-picosecond pulses and available in high average power—10 kilowatts at present—in seven user labs.

Jefferson Lab's FEL began as a one-kilowatt infrared demonstration machine. In the initial construction and subsequent upgrade of the machine to ten kilowatts, first demonstrated in July 2004, its designers sought out or developed state-of-the-art power supplies for both DC and radio frequency power, new mirrors capable of handling the fantastic optical loads created by high-power laser light, and an improved system for accelerating the

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Evan Gaddis of NEMA and Yang Qiming of CEEIA sign the Memorandum of Understanding, with Michelle O'Neill of the Commerce Department (center) observing.

NEMA signs MOU agreement with its Chinese counterpart

In early January, officials of the China Electrical Equipment Industry Association (CEEIA) signed a memorandum of understanding with NEMA that calls for the two associations to cooperate on common projects such as standards, anti-counterfeiting, energy efficiency, and hazardous substance requirements.

The signing occurred during a meeting with members of a Chinese delegation to the U.S., which, aside from CEEIA, featured senior representatives from the China Qual-

ity Certification Center (CQC), the General Administration of Quality Supervision and Quarantine (AQSIQ), the Shanghai Electrical Apparatus Research Institute, the Shenyang Transformer Research Institute, the Shenyang Electrical Drive Research Institute, and Delixi Group Co., Ltd.

The signing ceremony was presided over by Michelle O'Neill, deputy undersecretary of commerce for international trade. The U.S. Department of Commerce and NEMA are now in the third year of their cooperative project in support of the electroindustry's China Initiative and establishment of its Beijing office.

NEMA to conduct China mission in March 2006

This spring NEMA will sponsor a series of events in Beijing and Shanghai for its China Initiative subscribers. It will be an important opportunity—for both newcomers and well-established players—to discuss pressing issues with Chinese officials and industry colleagues.

Events being planned include:

Shanghai

- March 1—Evening reception hosted by the U.S. Foreign Commercial Service.
- March 2—Intellectual property rights/anti-counterfeiting seminar, featuring government officials from China and the U.S., as well as industry representatives.

Beijing

- March 6—Evening reception hosted

by U.S. Commercial Counselor.

- March 7—Morning seminar on energy efficiency issues associated with the European Union directive on Restriction of Hazardous Substances, conducted in cooperation with the Standardization Administration of China, featuring specialists from NEMA and U.S. industry.
- March 7—Afternoon seminar on energy efficiency issues, conducted in cooperation with the China National Institute of Standards (CNIS), featuring specialists from NEMA and U.S. industry.

Additional programs and meetings will be tailored in each city for individual companies as requested.

During the signing ceremony, CEEIA General Secretary Yang Qiming encouraged more NEMA members to visit China. He also said the organization would be willing to offer its services in making arrangements and putting companies in touch with counterparts throughout China. Such arrangements can be made care of NEMA's Beijing Office Chief Representative Shanlin Wen (wen@nema-beijing.org).

After Washington, the delegation visited several China Initiative subscribers in the Midwest, notably Rockwell Automation and Cooper Power Systems in Wisconsin, and G&W Electric and Master Controls in Illinois.

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NEMA names Stephen Gold as senior vice president of industry programs

NEMA recently announced that it has named Stephen Gold as senior vice president of industry programs. Gold previously served as vice president and executive director for the Council of Manufacturing Associations of the National Association of Manufacturers (NAM).



Gold

According to NEMA President Evan Gaddis, "Stephen is eminently qualified for this position. At the Council of Manufacturing Associations, he acquired special knowledge of the challenges now confronting the nation's manufacturers. He fully understands the policy-making apparatus in Washington and has shown an ability to get things done in this city. He's a great fit for NEMA."

Prior to working at NAM, Gold practiced law at Collier Shannon Scott, where he represented trade association and corporate clients on regulatory and legislative issues, including consumer protection, cyberspace law, tax policy, antitrust law, online and offline marketing practices, and energy and environmental law.

Gold's management credentials are impressive. He served as executive director of Citizens for a Sound Economy, dedicated

to promoting market-based solutions to environmental challenges, and as a communications and public affairs executive for the American Hotel and Motel Association, the Commission on the Bicentennial of the U.S. Constitution, and the Grocery Manufacturers of America.

Gold earned a doctorate in law, *cum laude*, from the George Mason University School of Law, a master of arts from George Washington University, and a bachelor of science, *magna cum laude*, from Arizona State University.

Industry report shows broadening skills gap threatens U.S. ability to compete internationally

The National Association of Manufacturers, The Manufacturing Institute, and Deloitte Consulting recently published the *2005 Skills Gap Report*, which details the depth of the skill shortage in U.S. manufacturing, the negative impact of the shortages on business operations, and the extraordinary increase in employee performance requirements. The report spells out what many fear, that the outlook for the future security of American manufacturing is not promising.

According to the report, more than 80 percent of manufacturers surveyed are experiencing an overall shortage of qualified workers that cuts across industry sectors. On the front line, 90 percent report a shortage of qualified skilled production employees, including machinists, operators, craft workers, distributors, and technicians. Engineers and scientists are also in short supply, with 65 percent of respondents reporting current deficiencies. These skills shortages have an affect on manufacturers' abilities to achieve production levels, increase productivity, and improve customer service; 83 percent of respondents indicated that the shortages are undercutting their ability to serve customers. All of these issues undermine the ability of the U.S. to compete in a global economy.

The report says there is now a gap between the supply of skills available and the performance requirements of the workforce needed for modern global manufacturing: "This human capital performance gap threatens our nation's ability to com-

pete in today's fast-moving and increasingly demanding global economy."

Nearly 75 percent of surveyed manufacturers said that having a high-performance workforce is the most important driver of future business success. "Without a sufficient supply of these types of employees, the manufacturing sector will suffer—which in turn will have a detrimental impact on the nation's overall economic health."

According to the report, research has shown that young people's negative image of manufacturing, which comes from the old stereotype of the assembly line, has led to a decrease in the number of students pursuing careers in the industry. Manufacturers are now spending more money than ever on training in the hopes of reducing turnover. But the real challenge for manufacturers is how to attract, retain, and motivate a high-performance workforce.

In summary, the report says that this skills gap is emerging as the U.S.'s most critical business issue. "This situation calls for urgent action by both public and private stakeholders. If our country is to remain competitive, the issues of education and training reform now must be given at least as much focus as top business concerns of trade, tax, energy, and regulatory reform."

To read the full report, go to www.nam.org/s_nam/bin.asp?CID=89&DID=235731&DOC=FILE.PDF.

IEC Centenary Challenge registration deadline is set for March 3

During the past 100 years, there have been more inventions than in all of the previous history of mankind. This unprecedented technological advancement coupled with worldwide trade liberalization demands close examination of the connection between standards and business development. The impact of standards and standardization will play a significant role in how business and markets develop.

To mark the occasion of its centenary this year, the International Electrotechnical Commission launched the IEC Centenary Challenge. Ronnie Amit, IEC General Secretary and chief executive officer, says, "The aim of this paper competition is to draw attention to and raise awareness in academia of the value of standards to technical and

business development." The project is supported by IEE, IEEE, and VDE, and is organized in association with *The Economist*.

The deadline to register one's intention to submit is March 3, 2006. Submissions will be accepted from May 31 through September 1, 2006. Results will be announced October 31. The authors of the top three papers will receive prizes of \$15,000, \$5,000, and \$2,000, respectively. The winning paper will be distributed to leading international technical and business journals for publication worldwide.

Dr. Arden Bement, director of the U.S. National Science Foundation and former director of NIST, will serve on the Executive Review Council.

More information and registration information can be found at www.iechallenge.org.

IDEA offers new EDI capabilities information

The Industry Data Exchange Association recently added to its website an Electronic Data Interchange (EDI) capabilities information resource to increase awareness of the types of Business-to-Business (B2B) and EDI transactions that IDEA customers send and receive.

The EDI capabilities information resource at www.idea-inc.org lists the types of B2B and EDI e-business documents and transactions that participating IDEA customers are capable of processing—as well as future plans for other EDI documents. IDEA customers using the IDX2, an Internet based document exchange that enables them to exchange business documents securely and error free with their trading partners worldwide, or IDEA customers using other VANs or services, are encouraged to submit their EDI capability information for inclusion in the EDI information bank.

Prior to the recent launch, IDEA customers were asked to provide a list of their transactions and capability, such as inbound, outbound, or two-way e-traffic. The resultant chart provides current EDI document capabilities and future transactions for the companies that responded to the initial request for information.

The information will help customers identify company transaction set capabilities, facilitate an increase in the use of

continued on page 21

Senior USTR official discusses the year ahead with NEMA trade group

Assistant U.S. Trade Representative Justin McCarthy told NEMA's Trade Task Force at its January meeting that World Trade Organization trade talks are not going as well as the U.S. would like. Those in attendance included several electrical industry counterparts from outside the U.S., as well as NEMA's Brazil and Mexico office directors.

Foremost in everyone's mind was the status of the current WTO round of negotiations. Reflecting on the December 2005 WTO Ministerial meeting in Hong Kong, McCarthy counted off some successes, but conceded that Washington is quite frustrated with the rate of progress. All aspects of the negotiations—including industrial goods and services—feature fundamental differences between various countries, but no immediate obstacle looms larger than the European Union's refusal to make further concessions in negotiations on agriculture trade. The U.S. will be trying to move matters forward at a series of WTO meetings this winter and

spring, but the December 31, 2006 deadline (which corresponds to the end of the U.S. "fast track" process for getting free trade agreements through Congress) is clearly in jeopardy. All governments need to engage immediately, and McCarthy urged all those taking part in the meeting to urge their governments accordingly.

McCarthy also gave a quick overview of progress on various bilateral free trade agreements. He noted that the administration is submitting free trade agreements with Oman and Peru to Congress for ratification in the first half of this year, and said it hopes that some negotiations—such as those with Panama, Thailand, and the United Arab Emirates, which are all close to completion—will wrap up soon. Legislation related to WTO membership for Russia and Ukraine may also soon be sent to Capitol Hill. Furthermore, he said, new free trade negotiations may soon be announced with already important trading partners such as South Korea, Malaysia, Switzerland, and Egypt.

Task force members welcomed McCarthy's report and said they were grateful for the benefits for the electroindustry

included in recent U.S. free trade agreements, particularly the elimination of foreign tariffs. They did note, however, their concerns over rule-of-law and transparency issues. Many of the countries with which the U.S. has been negotiating have dysfunctional legal systems that have already hampered member efforts to do business in them. It will be hard for the electroindustry to lobby Congress for passage before various company disputes in these countries are cleared. McCarthy responded that USTR is making an effort to accomplish this.

NEMA's Trade Task Force advises the association's Government Relations Policy Committee on trade issues. For further information on participating in the task force's activities, contact John Meakem at joh_meakem@nema.org or (703) 841-3243.

2006 sees Bahrain free trade agreements enter into force; other approved FTAs still are in limbo

While one U.S. free trade agreement came into effect on January 1, 2006, pursuant to



NEMA lobbying and subsequent Congressional passage, others are still lying dormant. Morocco, for one, has not yet fully approved and implemented its FTA. Meanwhile, the more substantial agreement with the Dominican Republic and five Central American countries, for which NEMA and its members pushed strongly en route to a hard-fought congressional victory last year, has been left floundering south of the border. Costa Rica has not yet ratified the agreement, and other governments that already have ratified it are said to be seeking ways to opt out of attendant regulatory changes. U.S. officials now maintain that Washington will implement DR-CAFTA "on a rolling basis" as the signatory countries "make sufficient progress to complete their commitments."

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Congress agrees to end "Byrd Amendment" program

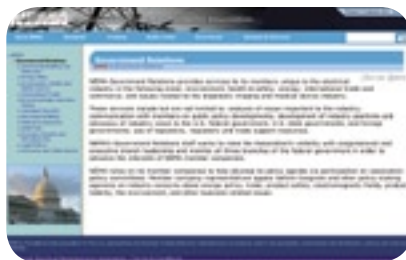
As part of the budget compromise package in December, Congress agreed to phase out and terminate in 2007 the "Byrd Amendment" program, which funnels penalties paid by foreign competitors to distressed U.S. competitors. The World Trade Organization had earlier found the Byrd Amendment to be illegal, and most of Washington's major trading partners had pledged to impose sanctions on various U.S. exports until Congress rescinded it. Final approval of the budget package was expected in early February.

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State mercury laws mapped, loaded on NEMA's website, www.nema.org

Visitors to the Government Relations section of the NEMA website can now view an interactive map of the U.S. that provides state-by-state information on existing and pending mercury content laws. By clicking on a state, viewers will be taken to a page that summarizes current law and provides links either to the statutes themselves or to legislative web sites that contain the text of proposed bills.

The new site is accessible on www.nema.org



nema.org by going to the Government Relations section and clicking on the "Environmentally Conscious Design" link. NEMA Senior Manager for Environment, Health, and Safety Mark Kohorst says the site will be kept as current and accurate as possible and invites visitors to notify him if they believe something is in error. Meanwhile, NEMA is hoping to expand the site as resources allow to include other topics of interest to members, such as additional chemical substances or electronic recycling requirements.

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California announces decision to "sunset" toxic waste rule exemptions

The California Department of Toxic Substances Control (DTSC) announced on January 10, 2006 that it has decided not to extend the exemption from the state's universal waste rule requirements that had existed for electronic waste and for

mercury-containing thermostats, lamps, and batteries. Universal waste rule regulations impose special handling and disposal requirements on materials designated as "universal wastes," which includes the aforementioned products. When it adopted its universal waste rules in 2001, however, the state chose to temporarily exempt these products from the rules because of the lack of an infrastructure within the state to facilitate collection and recycling. The exemption was intended to provide time for this infrastructure to develop.

DTSC justified its January decision by declaring that an adequate infrastructure is now in place and that extending the exemptions would discourage expansion. Mark Kohorst of NEMA and Charlie Monahan of Panasonic participated in a DTSC workshop held in Sacramento in October and spoke in favor of extending the exemptions for lamps and batteries. They noted that existing mechanisms needed to support collection and recycling of these products are far from sufficient, especially with regard to households and small businesses. There is no practical or economically viable way to collect at this level and doing so would provide little, if any, environmental benefit, they said.

NEMA is investigating options for further action on this matter within the California state government. ■

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Insulating Resins Section holds workshop at EIC

The Insulating Resins Section, at its annual spring meeting, held in March 2005, decided that resins manufacturers could receive enhanced visibility with their end-use customers by sponsoring a technical session during the 2005 EIC/EME Expo, held October 24–26, 2005 in Indianapolis, Indiana. The EIC/EME Expo is a biennial industry trade show jointly sponsored by EMCW, IEEE, and NEMA (Insulating Materials Division and Magnet Wire Section). The Magnet Wire Section's Technical Committee has been presenting a successful short course on magnet wire issues at the show for many years.

Initially, the resins section members felt a panel or seminar presentation would provide the type of exposure they sought. After toying with the concept for some time, however, manufacturers decided that an industry workshop would be the most effective format. The workshop concept would provide maximum opportunity for interaction between speakers and audience members through a series of de-

tailed slide presentations. Industry experts could also answer specific questions and expand on pertinent comments raised by audience members during the presentations as required.

Manufacturers agreed to divide the presentation into three parts: resin basics, selection process, and application recommendations. NEMA staff added a short introductory overview of NEMA and the Insulation Resins Section's primary activities and interests.

John Marcario, Insulating Materials Division industry director, moderated the session. Marcario noted, "We had a number of interested attendees and they had some very insightful comments and raised some very interesting questions." After the presentations, Nancy Frost, EIC technical co-chair and one of the presenters, discussed the presentations with audience members and reported that they found the discussions informative and educational. Resins manufacturers intend to make the workshop available to attendees at future EIC/EME Expo shows.

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U.S. hosts NEMA-supported international meeting on electrical boxes

Outlet boxes, device boxes, and floor boxes produced by members of NEMA's Outlet and Switch Box Section have helped set the standards in North America for more than 100 years.

Seeing a trend toward international standards some years ago, however, section members set participation in international standards development as a top priority. In November, the U.S. National Committee of IEC hosted a two-day meeting in Memphis, Tennessee, of IEC Subcommittee 23B, Maintenance Team 5. The group developed and now maintains IEC 60670-1, covering the general requirements for electrical boxes. The NEMA Outlet and Switch Box Section provided substantial funding for this meeting. Seventeen participants representing ten European countries, Canada, and the United States focused on electrical safety and reduction of unnecessary technical differences, such as different test methods, while at the same time accommodating many different product designs installed in various electrical infrastructures. The participants are mostly manufacturers, but also include test labs and representatives of national federations of installers, designers, regulators, and manufacturers.

The electrical installation infrastructures in European countries, and many other developed regions outside North America, favor different electrical box designs over standard North American products. Even trade agreements signed by the United States and Canada stipulate a preference for international standards as the means to alleviate non-tariff barriers to open markets and free trade. Some experts say that international electrical product standards have become synonymous with "IEC standards" developed within the International Electrotechnical Commission.

"It has been a difficult decision for manufacturers of many North American standard electrical products to invest in participation in the IEC standards development process," says Tim McNeive, manager of global product standards, Thomas & Betts Corporation, who also serves as the U.S. expert on SC 23B, Maintenance Team



5. "With limited potential markets for our traditional 'hard-wired' electrical products outside North America, the payback on such an investment in time and technical talent is still often difficult to measure with traditional models used for investments demanding one- to three-year payback," says McNeive. Nonetheless, leading electrical product manufacturers have taken on the role of industry leadership in international standardization in priority sectors. Although perhaps not measurable by conventional financial models, the value of direct participation is in managing the effects of globalization on products and markets.



McNeive

McNeive points out, "It has often been said that standardization is not about making everything the same, but really about managing the differences. In the world of standards, as in many other areas, the result is decided by those who show up, and are active in the process." Through industry

leadership and participation in IEC, as well as national and regional standards forums, he says, NEMA Outlet and Switch Box Section members continue to strive to meet customer expectations by ensuring that North American style products are not excluded by national, regional, or international standards, and to demonstrate compliance with relevant standards wherever possible.

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NEMA group warning of carbon monoxide hazards

The CO Detector Group of the NEMA Signaling Protection & Communication Section has accepted the difficult challenges of calling attention to hazards associated with carbon monoxide poisonings and of bringing to the public's attention the need for adequately equipping residential, public, and industrial facilities with proper carbon monoxide detection equipment. The product group thus is searching for means to bring these serious dangers to public attention and to offer life safety solutions in environments where such hazards are likely to occur.

Carbon monoxide is a colorless, odorless, and extremely poisonous gas that is formed by incomplete combustion of carbon-containing fuels such as gasoline, coal, natural gas, and wood products. Although hazardous incidents involving carbon monoxide are generally more prevalent during the winter months than in warmer weather, they can and do occur at any time of the year, which means that precautions against carbon monoxide poisoning is a pressing concern for everyone.

According to the U.S. Environmental Protection Agency, carbon monoxide is produced whenever any fuel such as gas, oil, kerosene, wood, or charcoal is burned. If appliances that burn fuel are maintained and used properly, the amount of carbon monoxide produced is usually not hazardous. If appliances are not working properly or are used incorrectly, however, dangerous levels of carbon monoxide can result.

Hundreds of people die accidentally every year from carbon monoxide poisoning caused by malfunctioning or improperly used fuel-burning appliances, including devices such as portable electrical generators, malfunctioning heating appliances, and even in some situations, from external boat engine exhausts. Even more die from carbon monoxide produced by idling cars. Fetuses, infants, elderly people, and people with anemia or with a history of heart or respiratory disease can be especially susceptible.



Evidence of carbon monoxide exposure is manifested by flu-like, non-feverish symptoms such as headache, fatigue, shortness of breath, nausea, and dizziness. Serious long term neurological problems or death can result from more severe carbon monoxide exposures.

According to the Carbon Monoxide Headquarters website <http://www.coheadquarters.com/>, each year in the U.S., tens of thousands of people seek medical attention or lose several days, weeks, or even months of normal activity resulting from carbon monoxide exposure; over 40,000 emergency room visits for carbon monoxide poisoning-related problems are estimated; and more

than 450 people die from unintentional carbon monoxide exposure.

The NEMA CO Detector Group is engaging a diverse range of organizations and drawing attention to the importance of carbon monoxide hazard prevention and the need for the installation of carbon monoxide detection devices in all types of public and residential occupancies. This group of NEMA manufacturers worked diligently for the acceptance and adoption of NFPA 720, *Standard for the Installation of Household Carbon Monoxide (CO) Warning Equipment*, in late 2004 and is strongly supporting the development of a new standard applicable to all types of residential occupancies.

The NEMA CO Detector Group is also working closely with the NEMA Government Relations Department to coordinate with federal, state, and local authorities to foster public safety awareness and to promote the installation of carbon monoxide detectors in environments where they are most needed, such as residences, schools, and work places.

NEMA is also actively engaged with government entities such as the Consumer Product Safety Commission, the United States Coast Guard, federal and state legislatures, and Authorities Having Jurisdiction across the United States. ■

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These and all NEMA standards may be purchased by visiting www.nema.org or by contacting Global Engineering Documents at (800) 854-7179 (within the U.S.), (303) 397-7956 (international), (303) 397-2740 (fax), or on the Internet at www.global.ihs.com.

NEMA releases first revision of 2003 magnet wire standard

NEMA has published MW 1000-2003, Revision 1, 2005, *Magnet Wire*, the first revision of this publication, which was reformatted in 2003.

Significant changes in Revision 1 include 1) the addition of bare wire dimensions, minimum insulation builds, and performance requirements for half-wire sizes 4.5–29.5 AWG; 2) new MW 37-C and MW 38-C specifications for round and rectangular copper magnet wire, class 220 polyester (amide)(imide) overcoated with polyamideimide; 3) expansion of specifications MW 15-C, MW 35-C, and MW 73-C to include quad build dimensions and requirements; and 4) the addition of MW 130-C and MW 131-C specifications for class 130 polyurethane and polyurethane/polyamide overcoated self-bonding magnet wire, and MW 135-C and MW 136-C specifications for class 155 versions of these materials.

In four major sections, the standard presents all NEMA standards for magnet wire in a single binder. Part 1 provides general requirements common to all types of magnet wire, including ordering information, general material requirements, general test conditions, definitions, and manufacturing data in support of thermal rating, as well as dimensions with metric equivalents for all bare, minimum insulation increase, and overall dimensions. Part 2 consists of product specification requirements (other than dimensions) for magnet wire with different types of coatings or coverings. Part 3 contains the test procedures to be followed and corresponding tables of specific test values to be attained in determining compliance with the requirements given in Part 2. *Magnet Wire* also includes Appendix B, which consists of definitions, requirements, and recommended test procedures for reusable magnet wire packaging, standardized dimensions for spools and reels, and formatting for the labeling of magnet wire products.

ANSI/NEMA MW 1000-2003, Revision 1, 2005 may be purchased for \$154.00 by visiting www.nema.org/stds/mw1000.cfm. Those us-

ers who already own MW 1000-2003 may purchase the revision pages for \$110.

NEMA introduces new fire service annunciator standard

NEMA's Signaling Protection and Communications Product Section, representing elements of the fire alarm industry, recently released SB 30-2005, *Fire Service Annunciator and Interface*.

SB 30 was developed jointly by the National Institute of Standards and Technology, Building and Fire Research Laboratory, NEMA, and the U.S. fire alarm industry. The standard facilitates the development of uniform equipment for use by the fire service to display essential information during fires and other emergencies, and is intended for use by both incident commanders and first responders.

The tragic events of September 11, 2001, and the need for obtaining and distributing information about hazardous conditions in buildings in advance of the arrival of first responders provided significant impetus in the development of this standard.

SB 30 covers the design, operation, and arrangement of equipment intended to display essential data and status of building systems for use by firefighters in the role of first responders, as well as for incident commanders. It is also intended to cover requirements for firefighter interface equipment to provide real-time information of value in making rapid assessments in support of tactical decisions and for monitoring the safety of firefighters. It also contains a set of recommended fire service display icons for use in the graphical and spatial formats that are both functional and accessible at the scene of a fire or other hazardous situation. It is intended to increase life safety conditions by providing firefighters with key parameters associated with the conditions of the building where a fire emergency is occurring prior to their arrival on the scene.

"By using the form-factor data in this standard, manufacturers will develop intuitive firefighter and first responder user interfaces that readily display building information and facilitate rapid situational assessment," says Andrew Berzowski of the Signaling Protection and Communications Section.

SB 30-2005 may be purchased for \$47.00 by visiting www.nema.org/stds/sb30.cfm.

Energy costs fuel rise in prices in 2005

Despite a decline of 0.1 percent in December over November, the Consumer Price Index (CPI), driven by higher energy prices, grew by 3.4 percent on a year-to-year basis. The fourth quarter performance saw an increase of 3.7 percent compared

to the same period last year. Absent food and energy influences, the CPI for 2005 advanced by a more modest 2.2 percent over the 2004 annual level. Also influenced by the upward pressure on energy prices, the Producer Price Index (PPI) grew at an

annual rate of nearly five percent in 2005. December prices for finished goods, excluding food and energy, however, rose by only 0.1 percent relative to November. ■

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	Oct 2004	Nov 2004	Dec 2004	Oct 2005	Nov 2005	Dec 2005
INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION						
Industrial production, manufacturing (Index, 2002 = 100)	106.9	106.9	107.5	110.9	111.4	111.6
Percent change, year over year				3.8%	4.2%	3.8%
Industrial production, electrical equipment, (Index, 2002 = 100)	99.4	100.3	99.0	111.1	110.3	110.7
Percent change, year over year				11.8%	9.9%	11.8%
Capacity utilization, manufacturing (percent)	78.1	78.0	78.3	79.5	79.6	79.6
Purchasing Managers' Index (value > 50 indicates expanding economy)	57.5	57.6	57.3	59.1	58.1	54.2
CONSTRUCTION						
Housing starts, single family (thousands of units, SAAR)	1.666	1.484	1.713	1.732	1.798	1.577
Percent change, year over year				4.0%	21.2%	-7.9%
Housing starts, multi family (thousands of units, SAAR)	0.396	0.323	0.337	0.319	0.323	0.356
Percent change, year over year				-19.4%	0.0%	5.6%
Nonresidential construction, Lodging (billions of dollars, SAAR)	12.892	12.629	12.176	11.651	11.750	—
Percent change, year over year				-9.6%	-7.0%	—
Nonresidential construction, Office (billions of dollars, SAAR)	33.048	32.784	32.833	34.375	35.199	—
Percent change, year over year				4.0%	7.4%	—
Nonresidential construction, Commercial (billions of dollars, SAAR)	64.12	63.86	64.077	68.411	70.284	—
Percent change, year over year				6.7%	10.1%	—
Nonresidential construction, Healthcare (billions of dollars, SAAR)	26.671	26.995	26.709	29.788	29.757	—
Percent change, year over year				11.7%	10.2%	—
Nonresidential construction, Communication (billions of dollars, SAAR)	14.900	13.993	14.721	13.900	14.669	—
Percent change, year over year				-6.7%	4.8%	—
Nonresidential construction, Electric Power (billions of dollars, SAAR)	24.546	27.512	25.457	23.465	22.935	—
Percent change, year over year				-4.4%	-16.6%	—
Nonresidential construction, Manufacturing (billions of dollars, SAAR)	25.452	27.198	28.248	29.797	28.976	—
Percent change, year over year				17.1%	6.5%	—
EMPLOYMENT						
Employment, electrical equipment, NAICS 335 (thousands)	445.1	447.4	445.8	437.6	437.9	437.2
Percent change, year over year				-1.7%	-2.1%	-1.9%
Unemployment (percent, SA)	5.5	5.4	5.4	4.9	5.0	4.9
PRICES AND INTEREST RATES						
Consumer price index (percent change, prior period)	0.6	0.3	0.0	0.2	-0.6	-0.1
Percent change, year over year				4.3	3.5	3.4
Producer price index, finished goods (percent change, prior period)	1.5	0.7	-0.3	0.7	-0.7	0.9
Percent change, year over year				5.9	4.5	5.7
Interest rate, 3-month Treasury (constant maturity, annual yield)	1.79	2.11	2.22	3.79	3.97	3.97
Interest rate, 10-year Treasury (constant maturity, annual yield)	4.10	4.19	4.23	4.46	4.54	4.47
Spread (10-year yield minus 3-month yield)	2.31	2.08	2.01	0.67	0.57	0.50
MANUFACTURERS' SHIPMENTS AND INVENTORIES						
Value of Shipments: Electric Lighting Equipment (billions of 1996 dollars, SA)	1.027	1.030	1.023	1.052	1.046	—
Percent change, year over year				2.4%	1.6%	—
Value of Shipments: Electrical Equipment (billions of 1996 dollars, SA)	2.825	2.840	2.752	3.257	3.271	—
Percent change, year over year				15.3%	15.2%	—
Value of Inventories: Electric Lighting Equipment (billions of 1996 dollars, SA)	1.512	1.523	1.523	1.532	1.535	—
Percent change, year over year				1.3%	0.8%	—
Value of Inventories: Electrical Equipment (billions of 1996 dollars, SA)	4.096	4.131	4.148	4.426	4.451	—
Percent change, year over year				8.1%	7.7%	—
Inventory to Shipment Ratio: Electric Lighting Equipment (SA)	1.472	1.479	1.489	1.456	1.467	—
Percent change, year over year				-1.1%	-0.8%	—
Inventory to Shipment Ratio: Electrical Equipment (SA)	1.450	1.455	1.507	1.359	1.361	—
Percent change, year over year				-6.3%	-6.5%	—

SA—Seasonally Adjusted SAAR—Seasonally Adjusted Annual Rate

Chairman... *from page 1*

a relative handful of humans have been infected with the virus, approximately half of them have died.

The spread of the virus among humans, as opposed to birds, has been minimal thus far because it has not yet been able to transmit efficiently between humans. That ability to transmit is how 43 million people lost their lives during the pandemics of 1918, 1957, and 1968. Government and health officials say that even if this particular avian flu fails to materialize into a full-blown pandemic, a different virus will emerge sooner or later and learn how to pass from human to human.

I have asked NEMA staff to begin to collect and disseminate information on what NEMA members can do to help their companies and their employees. We will begin by setting aside a section of the NEMA website devoted to providing information and pointing to other resources.

So what can your company do to meet this potential threat? The same thing it would do to meet any business challenge. Because, make no mistake, it is a business challenge. Consider the possible enforced shutdown of one of your plants by

government agencies that wanted to eliminate person-to-person opportunities for the disease to spread. Or a scenario in which half your employees were down with the flu? Or the implementation of large scale quarantines limiting access to facilities and causing distribution disruption? Are you ready today to respond? Would you be in a month or two? If you knew your business could be killed by a disruptive technology, would you wait to make a plan to save it?

The plan our government is working on includes three chief components: (1) preparedness and communication; (2) surveillance and detection; and (3) response and containment.

The private sector's most valuable contribution at this time would be in the form of preparedness and communication. NEMA will do what it can to facilitate, but I encourage all of you to begin your own planning process. This is not a frivolous exercise. One of our roles as business leaders is to guide our organizations through times of crisis. We are rarely called upon to save lives. Proper planning and preparedness during this potential pandemic could do both. ■

Commercial Building Tax... *from page 3*
suppliers, specifiers, and installers of energy efficient products are working on design implementation and promotion programs."

At a January meeting of the coalition, NEMA provided a status report on the coalition's communications and outreach plan and asked coalition members to provide feedback on ways to further promote use of the provision. A new website, www.efficientbuildings.org, developed by NEMA/WEB, the web development arm of NEMA, was launched on December 15, 2005. The website contains information and guidance on how the new tax incentive works, and provides contact information for coalition members, a list of related

rules, links to resource organizations, press releases, articles, and other useful materials.

NEMA serves as the central clearinghouse for distributed information. Coalition members were urged to continue to supply information for inclusion on the website. Articles about the new provision and coalition's activities have already appeared in several trade publications and more media outreach will follow. A targeted list of about 220 trade publications and associations covering air conditioning and refrigeration, architecture, construction, energy, and lighting has been created to launch e-mail or direct mail campaigns. The next coalition meeting is scheduled for February 16. ■

Supreme Court... *from page 10*

electrical products, and that electrical product distribution was more complex than that for Volvo trucks. Manufacturers of electrical products deal with a variety of entities in the channel who have different functional roles in the distribution of product. For some electrical products, manufacturers limit the distribution of their product (in terms of territory and in terms of channel partners) and for other electrical products manufacturers may choose to adopt a saturation model of distribution.

NEMA's message was that the Court of Appeals decision, now reversed, had significant implications for the other types of distribution not identical to the Volvo truck model. Importantly, the Court of Appeals decision made it more difficult and complex to determine when a price concession presented a risk of treble damage liability, making it more likely that price concessions on special projects or bids would not be offered in view of the legal uncertainty.

The Supreme Court's decision allows electrical manufacturers whose distribution model does not mirror the Volvo trucks model to continue to analyze the legality of their price concessions to dealers in the same manner that they traditionally looked at those allowances prior to the Court of Appeals decision. The concerns for NEMA members posed by the Court of Appeals decision have been addressed. For those manufacturers faced with quoting a special order to a customer-specific bid process, the Supreme Court noted:

The [Robinson-Patman] Act centrally addresses price discrimination between different purchasers for resale of the purchased product. Competition of that character ordinarily is not involved when a product subject to special order is sold through a customer-specific competitive bidding process. ■

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Electrotechnology... *from page 11*
 seed beam of electrons. Combining these technologies into a one-of-a-kind machine earned the designers an R&D 100 Award as one of *R&D Magazine's* picks for the 100 most technologically significant new products of 2005.

The Jefferson Lab FEL designers are now working on improving current FEL capabilities by incorporating ever-improving technologies and to take the technology forward by assisting the U.S. Navy—the Jefferson Lab FEL's major funder—to build a 100 kilowatt infrared FEL, as the next step in evaluating FEL technology for potential shipboard defense applications. Moreover, since an FEL is a device for converting electricity into laser light, if high-powered FELs can be made robust, rugged, and compact enough for sea duty, they will mesh well with the Navy's plans to build electric-drive warships. This same 100 kW power level would make the FEL a cost-effective tool for large-area materials processing of metals and polymers.

Some hurdles remain, however. For such a machine to be built, the state-of-the-art will have to be pushed even farther. New power supplies for direct current and radio frequency power that match the 100 kW machine's space and efficiency limitations will be needed. In addition, the team will once again have to create or procure even better mirrors and an even more powerful, yet compact, new system for accelerating the seed beam of electrons.

It took four years for the Jefferson Lab FEL's performance to improve by one order of magnitude. The FEL team would like to push the technology yet another order over the next four years.

NEMA encourages members who might be interested in visiting Jefferson Lab, or learning how its work might help NEMA companies meet their manufacturing goals, to contact NEMA's executive office at (703) 841-3275. ■

In the News... *from page 13*

other valuable e-business documents, help companies achieve a return on their investment for e-Commerce enabling software, etc., and identify other potential cost saving documents that can increase company productivity.

Community access to this chart will help drive eCommerce expansion. "This [initiative] can help the community recognize that eCommerce is more than exchanging purchase orders and invoices," said Barbara Prince, e-commerce systems analyst at Carlon (Lamson & Sessions) and EDI subcommittee chair for the IDEA Standards Committee.

Transaction types on the website are represented and broken down into sections that include EDI transactions, Flat File, Webform, and EDIFACT. A separate segment includes options for customers that are sending or receiving the IDEA simplified version of EDI transactions being translated to or from the IDEA Flat Files.

Customers can either revise or add their capabilities to the Webform that has been included on the IDEA website (www.idea-inc.org) under Info and Support, Standards, Transaction Capabilities.

"I think the Trading Partner Capability Chart will become a very important planning tool for companies seeking to expand their eCommerce network. We all want to get the best return for our implementation dollar, so suppliers and distributors alike

can consult this chart to find new trading partners capable of exchanging multiple transactions," said Prince.

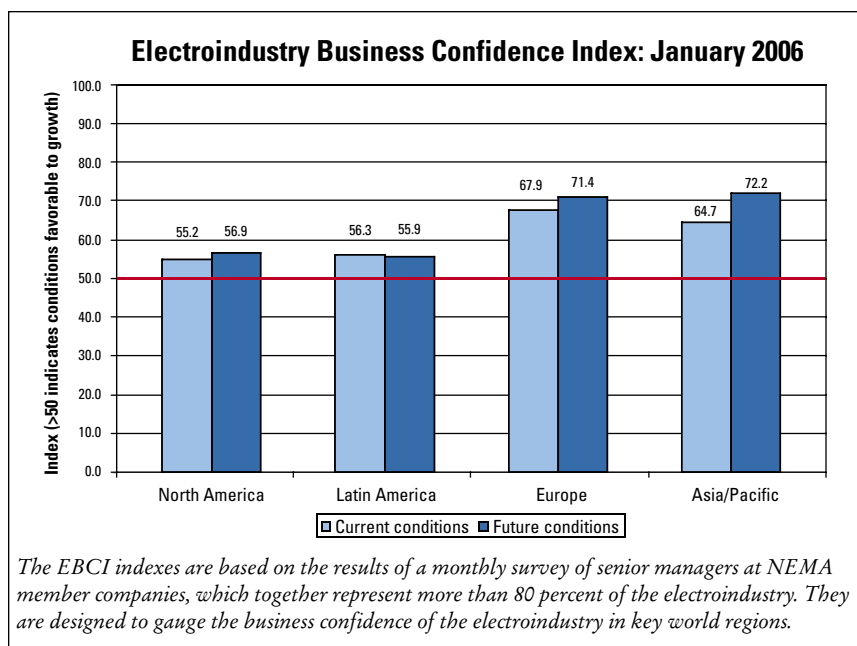
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January 2006 NEMA Electroindustry Business Confidence Index

NEMA's Electroindustry Business Confidence Index (EBCI) for current North American conditions continued to signal electroindustry expansion in January. At 55.2 points, the index topped the 50-point threshold—indicating a business environment favoring industry growth—for the 33rd month in a row. At the same time, the index has declined in each of the last four months, suggesting that conditions have moderated since reaching a near-term peak in late summer. The January EBCI for future North American conditions climbed slightly to 56.9 points, up from 56.3 a month ago.

Current sentiment and future expectations for the other three world regions included in the survey remained in positive territory for the fourth month in a row, though both indexes for Latin America were off sharply relative to December. Meanwhile, readings for Europe and the Asia/Pacific region changed only modestly from last month. ■

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Lincoln Electric named the official welding sponsor of the Bo-Dyn bobsled project

In February, the eyes of the world will be on Torino, Italy, for the start of the Olympic Winter Games. The months leading up to the competition will be a whirlwind of activity for the fabricators at Chassis Dynamics, Inc., of Oxford, Connecticut, the firm that designs, manufactures, and tests the Bo-Dyn brand of bobsleds used by the U.S. men's and women's World Cup teams.

An integral part of the preparation process is the welding fabrication of the sleds' chassis, suspension, steering, and internal components. To do this work, the Chassis Dynamics shop uses the latest Lincoln Electric welding equipment. The Lincoln Electric Company was recently named the official welding sponsor of the Bo-Dyn Bobsled Project, Inc., a non-profit organization that raises funds for the design and manufacturing of the Bo-Dyn bobsleds.

"Bo-Dyn only wants the best equipment to assist us in the manufacturing of the sleds," said Phil Kurze, president of the Bo-Dyn Bobsled Project, Inc. "When striving for a gold medal, the welds must be strong and able to withstand the high speeds associated with the sport. We count

on Lincoln Electric welding machines to give us top-rated performance."

The name Bo-Dyn reflects the roots of the project initiated by NASCAR Nextel Cup Series racer and bobsled enthusiast Geoff Bodine ("Bo" for Bodine and "Dyn" for Chassis Dynamics). After the U.S.'s relatively poor showing in the bobsled competition during the 1992 Olympic Games, Bodine requested that Chassis Dynamics, a well-known NASCAR race car design and development firm, become involved in the sport.

Chassis Dynamics will provide sleds for six U.S. teams, including a new four-man bobsled design. According to Bob Cuneo, president of Chassis Dynamics, once a design is complete, the fabrication of a sled takes four to six weeks. Chassis Dynamics hand fabricates every part of the sled in-house. "Believe it or not, these sleds are every bit as sophisticated as the NASCAR race cars we design," noted Cuneo.

Having quality welds is of the utmost importance in this sport since the vibration, g-forces, constant pounding, and speeds of 80 to 100 mph take their toll on the sled and can lead to weld cracking. ■



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