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Energy Efficiency, Sustainability, Labor Shortage

Key issues at the Future of Manufacturing Congress Conference

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By Adrienne Selko

Solutions, rather than problems, were the focus of the presentations at the Future of Manufacturing Congress held Aug. 5-7 in Montreal.

Here is a brief roundup of some of the key presentations:

Tom Murray, Chief of Prevention Analysis, U.S. Environmental Protection Agency **Topic: Green Suppliers Network**

Utilizing the extensive MEP infrastructure, this governmental agency has created a [Green Suppliers Network](#) whose mantra is "Lean and Clean." Beginning with the automotive sector, but now expanding to all manufacturing industries, companies joining this network are seeing a 3 to 1 return on their investment, said Murray.

They get these results by working with manufacturers and their suppliers to "identify strategies for improving process lines and using materials more efficiently." Using technical reviews as the basis for analysis, the EPA will help customize solutions and provide hands-on training on the shop floor.

Companies on the bandwagon include: Abbott Laboratories, Baxter International Inc., Bristol-Myers Squibb Co., DaimlerChrysler, Eaton Corp., Eli Lilly and Co., General Motors Corp, Haworth, Inc, Herman Miller, Inc, Hoffmann-La Roche Inc., Johnson & Johnson, Lockheed Martin, Northrop Grumman Corp, Pfizer Inc., Pratt & Whitney, Raytheon Co, Rockwell Collins, Inc, Steelcase Inc., The Boeing Co. and United Technologies Corp.

Douglas Kaempf, Program Manager, U.S. Department of Energy **Topic: Industrial Technologies Program**

The DOE is diligently working to help U.S. manufacturers improve their processes and become more energy efficient. Currently, 16,000 plants are using technology created by this government arm. Over 170 technologies are in the marketplace as a result of their efforts.

And the results of these technologies are:

- Emissions reduction of 86 million metric tons of carbon equivalent
- Nearly 5 quadrillion Btus of energy saved since program inception
- 156 patents created between 1994-2005

- 39 R&D awards between 1991-2006

One of its signature programs is [Save Energy Now](#) which offers low cost assessments whose purpose is to identify immediate opportunities to save energy and money, primarily by focusing on energy intensive systems -- including process heating, steam, pumps, fans and compressed air.

Gary S. Toyama, Vice President, Southern California Region, Boeing

Topic: Workforce Of The Future

The fact that Toyama chose to address the impending labor shortage as a critical issue looking forward underscores how difficult it will be for manufacturers to find employees with the right set of skills to ensure future viability. One striking example Toyama cited was when he asked how many of the executives in a meeting he attended planned to retire in the next 4 years he discovered that 40% said they would be retiring. That's a lot of experience to fill, noted Toyama.

Aside from the critical issue that his state is not producing the number of engineers necessary to fill positions is the fact that the generation of workers following the Baby Boomers have different needs and work differently. Toyama said that their generation is more collaborative and Boeing is building work spaces to reflect that business model. Additionally the line between business life and personal life is blurring and Boeing is adapting by offering services on campus to accommodate its workers.

The company is also heavily involved in improving the education system and actively participates in programs that will help improve the pipeline of future workers, including asking retirees to share their enthusiasm in the field with children as young as elementary school to get them interested in pursuing these fields.

Andrew R. (Drew) Fellon, CEO, Fellon-McCord & Assoc. Inc.

Topic: Energy Workshop

Fellon predicted that LNG (Liquefied Natural Gas) will be the swing fuel for the U.S. as needs for natural gas exceed its production ability. While the U.S. currently has 6 sites to produce LNG, more facilities will be added as the global supply might not always be reliable due to a variety of factors include geopolitical risks. In the near future 6 new terminals will come on line at a cost of \$2-\$6 billion a piece.

And where is the LNG coming from? In 2006, the U.S imported an estimated 12.1 million tons of LNG, or the equivalent of 580 billion cubic feet (bcf), which was about 8% lower than the 631 bcf received in 2005. Through the end of October 2006 LNG imports to the U.S. were from a mix of source countries: Trinidad and Tobago (67.6%), Egypt (18.8%), Nigeria (10%), and Algeria (3.6%). In 2008 Qatar will provide 1/3 of the global LNG, according to the U.S Energy Information Administration.

For a more detailed analysis of LNG see http://www.eia.doe.gov/emeu/steo/pub/LNG_Jan2007.pdf

Thomas V. Easterday, Sr. VP, Secretary, General Counsel, Subaru of Indiana Automotive Inc.

Topic: Subaru's Sustainability Programs

Easterday summed up his company's diligent sustainability efforts by telling the audience that "each

of you sends more to the country's landfills than our manufacturing plant does." That's because they send nothing to the landfill. It was in May 2004 that Subaru of Indiana Automotive sent its last load of waster to a landfill. Now everything that comes into the plant exits as a usable product. Everything is reused, recycled or burned to general power.

If that's not enough the plant was designated in 2003 as a Backyard Wildlife Habitat by the National Wildlife Federation. Easterday showed photos of ducks taking their young out for a swim right next to their painting operation.

And the financial community is recognizing their efforts as well since Subaru took the top spot in the Nikkei environmental management survey which rates overseas facilities of Japan-based automotive companies.

For information about the FMA Congress contact J. Henry Petersen at henryp@fmaintl.com

*Editor's Note: In the next few weeks **IndustryWeek** will provided expanded coverage of the topics and speakers featured at this conference.*

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