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Nationwide System Of Mfg. Extension Centers Is Put On Notice: They Will Compete With Each Other For Limited Funds

The director of the National Institute of Science and Technology dropped a bombshell on the network of Manufacturing Extension Partnership (MEP) centers during a Feb. 15 House subcommittee hearing on the agency's budget. William Jeffrey disclosed that, along with a 58 percent cut in the program's budget for next year, NIST intends to re-compete every center as a means to provide funding to the survivors.

Re-competing the centers starting early this year is necessary because the process would take between five and six months and by then the program might have already received its appropriation at the level requested by the Bush administration, Jeffrey told the House Science and Technology Committee's subcommittee on technology and innovation.

"If the budget reduction did occur and we were to start after the final appropriations, by the time we completed that competition, we'd be out of money if we had all the centers at the same spend rate," he said. "What the new competition allows is a more efficient way of trying to get through to extract where there may be some savings in the program, where there might be slightly different business models to attract additional fee extractions and where there may be efficiencies in consolidation that would allow for the maximum amount of service. If the budget cut were to occur and we waited until the end

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Ardent Foes Of Trade Authority Begin To Make Their Case With Congress

A coalition of farmers, unions and environmental organizations coalescing to mount a fight in Congress against extending Trade Promotion Authority possesses a potent weapon: passion. Take Leo Gerard, president of the United Steelworkers union. When his long-time best friend, mentor and boss George Becker, president of the steel union from 1993 to 2001, passed away on Feb. 3 of prostate cancer, Gerard was a pallbearer at his Feb. 9 funeral. "I told him when I was carrying his casket that we were going to defeat fast track for him," Gerard told a conference call with reporters.

Gerard, who represents 850,000 workers, says his union "is going to do everything humanly possible, including making lines in the sand, to throw Fast Track overboard." Trade Promotion Authority or Fast Track needs to be renewed by July 1. The law, created in 1974 and last authorized in 2002 by a three-vote margin in the House of Representatives, provides the President with the ability to negotiate trade agreements unhindered by Congress.

But a lot has changed since 2002. "We spent a lot of time and energy helping to elect this Congress and we expect and hope that they will work with us to come up with a new way to negotiate trade deals," says Gerard.

Gerard insists that his union is not against trade in any way, but is against trade that "exploits and pits country against country and worker against worker." The way it's working now trade is "ratcheting up the standard of living of fat-cat multinationals and Wall Street financiers," he said. "I think it's disgusting that Wall Street is making money on both ends of the trade deals where plants are closing in America and moving to one of the trading partners. They pay out billions of dollars in bonuses while the standard of living for industrial Americans is stagnant and

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Offshore Outsourcing Is Leading To Demise Of Aircraft Industry

The three large commercial airplane makers — Boeing, Airbus and Bombardier — are outsourcing most aspects of manufacturing to foreign companies and are morphing into firms that specialize in sales and marketing. It is a business strategy that is leading to the destruction of the domestic aircraft manufacturing industries, according to David Pritchard and Alan MacPherson of the Canada-United States Trade Center at the State University of New York in Buffalo.

By adopting a system integration mode of production, the three companies, led by Boeing, are providing foreign contractors in Japan, China, Russia and other Asian nations with "direct infusions of tacit scientific and technical knowledge," they write. The big OEMs receive a short-term financial gain, but the practice could lead to their long-term demise.

"Is this the beginning of a new industrial stage based on what we call strategic destruction?" they ask. "The high technology commercial aircraft industry is an example of trading away intellectual property to risk-sharing partners — intellectual property that took decades to mature with internal corporate investment and public support from government-funded research laboratories."

Boeing, Airbus, Bombadier and Embraer are requiring their suppliers to share the risk of developing new aircraft, thereby reducing their own financial investment. This strategy is leading to the creation of an "open architecture" aircraft in which "the knowledge from research will be made 'public' by the first- and second-tier suppliers," write Pritchard and MacPherson in a paper entitled "Strategic Destruction of the North American and European Commercial Aircraft Industry: Implications of a System Integration Business Model."

Boeing has taken this new system integrator business model to the next level with its 787 aircraft. It has outsourcing more than 90 percent of the aircraft, "even after the U.S. government provided Boeing with $1.8 billion in NASA money for the High Speed Civil Transport (HSCT) program, which was earmarked to develop the U.S. industrial base," they write. "The U.S. taxpayers reward Boeing shareholders with billions of dollars by elimination of taxes, yet there is no accounting for domestic content in return. For the first time in U.S. commercial aviation history, foreign risk-sharing partners will have full control over the selection of second- and their-tier suppliers. The technology and process improvements requirements for the 787 go far beyond raw material requirements (composites). Boeing's partners in Japan and Italy will be building composite structures that include sophisticated sub-systems that are already certified, tested and ready for final assembly. There will be minimum work content in the three-day final assembly (accounting for about 4 percent of the aircraft's value) for the less than 1,000 Boeing Everett workers on the 787 program. Although Washington State gave a $3.2-billion ($3.2 million per production employee) subsidy package to Boeing to support the 787 program, Boeing has continued to decrease the U.S. content of its aircraft models. This downsizing can also be illustrated by the reduction of employment in Boeing's commercial division from pre-9/11 levels of around 90,000 to current levels of a little over 40,000."

Japanese suppliers will build the entire composite wing for the 787. This diffusion of technology means that Japan "will soon be in a position to build their own commercial aircraft as a direct result of decades of industrial offset arrangements between Boeing and the Japanese 'heavies,' " write Pritchard and MacPherson. "It was recently reported that Japan will launch a large regional jet (72 to 92 seats) dubbed the MJ Jet in 2008, with Japanese government subsidies roughly $1 billion."

Airbus is being forced to follow the same strategy, due in large part to Boeing's pressure on the U.S. government to cancel in 2004 the 1992 Large Commercial Aircraft agreement with the EU.

The paper can be downloaded from http://www.custac.buffalo.edu/content/documents/OccPaper35.pdf.

Executive Director Needed At Northeast-Midwest Institute

The Northeast-Midwest Institute is looking for a new executive director, since its long-time leader, Dick Munson, has announced his departure. The Washington, D.C.-based non-profit, non-partisan research group with $3.5 million in annual revenue focuses on issues related to economic vitality, environmental quality and "regional equity" for the states located in the Northeast and Midwest. Interested applicants can check out the job announcement at http://www.nemw.org.

Munson is joining Recycled Energy Development LLC based in Westmont, Ill. The company develops and owns energy recycling and co-generation facilities. It has identified more than $100 billion in U.S. industrial waste energy recycling projects and another $250 billion of potential combined heat and power projects that displace boiler fuel with recycled waste heat from electric generating plants. The company has developed more than 300 projects involving more than $3 billion in capital.

Canada's House Of Commons Proposes An 'Urgent' Strategy To Revive Manufacturing Sector

Canada's government must take "urgent" action in order to stop the steady decline of the country's manufacturing sector, according to a new report from the Canadian House of Commons.

BY RICHARD McCORMACK

"The Government of Canada should make the preservation of a competitive Canadian manufacturing sector a national goal," writes the House of Commons' Standing Committee on Industry, Science and Technology in a 142-page report. "Given the gravity of the challenges facing the sector, the recommendations presented in this report should be implemented in a timely fashion."

The current downturn in the manufacturing sector, which accounts for 18 percent of the Canadian economy, reflects a structural change in the economy, and is not a cyclical downturn, writes the committee. As a result, "different policies are required than those implemented in the past."

The House of Commons committee makes 22 recommendations that could cost as much as $10 billion to implement. But they "will help revitalize Canada's manufacturing sector, making it more resilient and competitive for the benefit of all Canadians. Preserving a competitive manufacturing sector in Canada should be a national goal."

Manufacturing employment in Canada is steadily declining, with the loss of 9.2 percent of all manufacturing jobs since 2002, a decline of 208,900 to 2.1 million. "The challenges posed by a soaring dollar, spiraling energy prices and intense competition from China on the Canadian manufacturing sector have been called 'The Perfect Storm,' " writes the committee. The sectors that have been hit particularly hard in the past three years are those most exposed to international trade: paper, pulp, textiles, apparel, transportation equipment, shipbuilding, chemicals and consumer products, "to name but a few," say the Canadians.

Canadian manufacturers are being hammered by the value of the country's currency, which has appreciated by 44 percent relative to the U.S. dollar over the past four years. "Unit labor costs across Canada's business sector valued in U.S. dollars increased, on average, by 6.6 percent per year between 2001 and the first nine months of 2006 — six times that of the U.S. business sector," says the report. "Canada's competitiveness with the United States has clearly deteriorated in the first half of the first decade of the millennium....Furthermore, Canada is rich in natural resources, whose prices have been increasing on global markets, but it has led to Canada having a case of 'Dutch Disease': An increase in revenues from natural resources de-industrializes a nation's economy by raising the exchange rate, thus making the manufacturing sector less competitive," says the House of Commons' report entitled "Manufacturing: Moving Forward — Rising to the Challenge." "At the regional or provincial level, this shift can cause dislocations."

The House of Commons Industry Committee recommends that the country's tax code be changed to allow manufacturers to take a two-year write off (50 percent per year) on purchases of machinery and equipment used in manufacturing. It recommends that tax incentives for research and development be greatly enhanced. "An improved scientific research and experimental development tax incentive program [should] make the tax credits refundable to all firms, exclude them from the calculation of the tax base, provide an allowance for international collaborative R&D and extend the tax credit to cover patenting, prototyping, product testing and other pre-commercialization activities," writes the committee.

Among its other recommendations:

- Create an agency to accredit skilled immigrants;
- Create a temporary foreign worker program;
- Provide tax credits for employer-financed training;
- Provide grants to post-secondary students to conduct research in conjunction with industry;
- Make public all aspects of free trade agreements prior to their being signed, especially the agreement currently being negotiated with South Korea;
- Conduct a review of all anti-dumping, countervailing and safeguard policies to assure foreigner companies are not selling their products in Canada for less than they are being sold in their home markets;
- Amend the copyright laws and provide resources to "combat the scourge and considerable economic and competitive damage" caused by counterfeiting and the stealing of intellectual property;
- Create a "smart regulation" initiative;
- Expedite international negotiations to implement greenhouse gas emissions and set a goal of reducing emissions by up to 65 percent by 2050.
- Create a system that allows for quick passage of commercial traffic at borders;
- Provide increased funding for programs aimed at commercializing new technologies;
- Create a replacement program for the recently terminated Technology Partnerships Canada program;
- Increase investment in the network of Centers of Excellence from the current level of $80 million.

GUEST EDITORIAL

The Root Cause Of Our Iraq Dilemma

The American populace has been deluged with analyses recently as to why the most powerful nation in the world faces defeat in Iraq: faulty intelligence, too few ground forces, hasty dismantling of the Iraqi Army, the unplanned involvement of Iran and Syria, lack of allied support, failure of the newly elected Iraqi government to establish law and order and, finally, faulty tactics and strategy. To date, however, no analysis of the war, including the recently published Iraq Study Group's report, has zeroed in on the root cause of our current dilemma: that is, our failure to mobilize the U.S. industrial base either prior to our preemptive attack or at anytime thereafter. The result: U.S. ground forces are stretched to the breaking point due to our failure to mobilize the industrial base and recruit additional personnel.

BY JOE MUCKERMAN

The military is woefully short of critical supplies and weapon systems, and it cannot repair worn or damaged equipment in a timely manner. Thus, after four years of war in the Middle East, our civilian and military leaders are still not able to consider a wide range of tactical and strategic options.

This limitation was most evident when our commander-in-chief opted to "surge" troops to Iraq. Unfortunately, the existing force supply and equipment availability makes it clear that this "surge" will be limited in scope — both in the number of troops involved and the amount of time they can be engaged. Undoubtedly, our enemies are well aware of our predicament.

The wars in Iraq and Afghanistan are not the only dangers our nation now faces. The home front is vulnerable to attacks from weapons of mass destruction. Both Iran and North Korea continue their march towards acquiring nuclear weapons and China is rapidly becoming a superpower.

Our failure to mobilize in response to warnings is not a new phenomenon in our nation's history. The country was woefully unprepared for World Wars I and II. The same holds true for the Korean War. However, as soon as that war began, President Truman ordered a full mobilization to "support our fighting forces and to prevent a wider war."

Vietnam was known as being a "come-as-you-are war" and it remained that way until we pulled out in defeat. Finally, the first Gulf War was so short that mobilization was not necessary. However, when that war began, a mid-level group in the Pentagon, of which I was a part, considered different paths that war might take and attempted to derive the requirements needed for a mobilization. These requirements were compared to an ever-changing industrial base so as to determine the precise amount of time it would take to mobilize for different scenarios. Apparently, this procedure was not followed in the second Gulf War and we are now suffering the consequences.

There are several major obstacles to prudent mobilization planning:

One: There are many in the Pentagon and the government as a whole who are reluctant to support timely and sound mobilization planning. Why? Because if the plans were implemented, they would cost money that would be taken away from modernization (transition) programs. Hence, "a wait-and-see" option is usually adopted.

Two: Today's defense industrial base is global. Thus, if mobilization requirements were generated and matched against the new, ever-changing industrial base, they would reveal that many global suppliers might look to their own needs first in a crisis. Nations that may disapprove of U.S. policy could refuse to fill our orders. Others, both in U.S. industry and government, fear that if mobilization requirements cannot be fully met from a global base, this reality will prompt industrial policy legislation that would restrict dependence on global suppliers for many key items. The result of a requirements review could lead to demands for new "Buy American" policies.

Three: The United States has an outdated, poorly understood mobilization system. The three levels of mobilization to be used in time of need are partial, full and total mobilization. But most decision makers inside and outside of the Pentagon think of mobilization as a giant off-on switch to be pulled only when the President declares a national emergency. This type of thinking prevents a timely and appropriate mobilization response to early warning indicators.

In an effort to correct this all-or-nothing approach to mobilization, a small group, which included myself, attempted to institutionalize a new concept called Graduated Mobilization Response (GMR). As the title implies, GMR allows early and appropriate mobilization responses to early warnings of impending conflicts or for a conflict that might last longer than planned. GMR never caught hold.

Given our current plight in Iraq and Afghanistan, along with threats that we face worldwide and at home — including those from enemies, Mother Nature and pandemics — what should we be doing now to adequately defend and protect our nation?

The answer can be found in the type of planning conducted shortly before the attack on Pearl Harbor. In the late 1930s, the War and

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NIST Director Gets Caught In A Debate That Won't Go Away: Industrial Policy

The National Institute of Standards and Technology continues to be at the center of a decades-long debate over the proper role of the federal government in industrial development and technology commercialization. The measurement agency is in that unenviable position because the Bush administration continues to submit budgets that either eliminate or substantially reduce funding for NIST's Advanced Technology Program and the Manufacturing Extension Partnership program. This year's budget request for 2008 is no different, except this year there is a big difference: Republicans no longer control Congress.

NIST director William Jeffrey got an entertaining and perhaps jolting taste of this new reality during the first hearing of the House Science and Technology Committee's subcommittee on technology and innovation. Raising the ire of subcommittee members and others testifying before the hearing was Jeffrey's justification for the budget cuts.

The Bush administration "recognizes the benefits of the ATP program," he said. "I have to say I'm proud as [NIST] director to be hearing about the success stories from all of these programs because we do execute and run these programs as effectively and efficiently as possible. The issue isn't whether the program is effectively managed, the issue, in the administration's viewpoint, is if it's the appropriate role of the federal government to be playing that role...It basically gets down to a philosophical issue — there really isn't so much an issue of effectiveness."

Jeffrey's description of the philosophical underpinnings of the budget cuts unleashed a torrent of criticism. "My understanding of what you're saying is if it's not broken, then break it?" Rep. Ben Chandler (D-Ky.) immediately responded. "You're saying it's not the role of the government to be part of a program that's working well?"

Vernon Ehlers (R-Mich.), a physicist who chaired the subcommittee until January, said that while the Bush administration may not support ATP and MEP on philosophical grounds, "let me assure you they are wrong and I have been fighting about it for some years. I have always been trying to find out who the little man is in the basement of the White House who holds that view and I have yet to locate him."

There was a lot of talk about this little man in the basement of the White House. Subcommittee chairman Wu called him a "philosopher," though Ehlers said he never thought of the little man as being a philosopher, "but since I haven't met that person, I don't know," he told Wu, who then responded: "Dr. Ehlers, it is the task of this committee to elevate all discussions."

(Other people in attendance at the hearing said afterward that it is widely understood that there are two little men in the White House responsible for the budget cuts are Richard Russell of the Office of Science and Technology Policy and Randolph Lyon of the Office of Management and Budget. Proponents of the ATP and MEP programs have tried to get Congress to summon these men to testify on their ideological desire to kill the programs, but they claim that they are exempt from testifying due to "executive privilege.")

In a self-described "diatribe," Ehlers said he is "very concerned about those ideologues who think it is improper for the federal government to be working with industry the way it does....I appreciate President Bush. He's a good man and I've had good conversations with him. He was in tune with what I'm trying to do. So whoever is saying the administration has problems [with these programs] I don't think is speaking for the President."

Just prior to the hearing, Ehlers had been meeting with a German delegation concerned about technology transfer. "It's ironic," he told Jeffrey. "I was coming from a conference where a foreign country is very eagerly trying to determine how we do technology and knowledge transfer and learning about America and then coming to this discussion."

Subcommittee chair Wu sitting high above the witness table and looking rather jolly said: "I want to get this off my chest Dr. Jeffrey. I love you like a brother. You have been terrific. This is not directed at you. Let's consider you to be a conduit from this end of Pennsylvania Ave. to what Dr. Ehlers has referred to as the fellow in the basement that he hasn't been able to find, what you have referred to as an ideology. Let us consider this a conversation with the philosopher in the White House who has repeatedly cut back on MEP and who has repeatedly zeroed out ATP. Dr. Jeffrey, you must be embarrassed to be here because you are a scientist and you just told us that ATP is a fine program and is doing great things....You're in a very uncomfortable spot of being a scientist representing a bunch of philosophers down the other end of the street. You know, every person has a right to be a Luddite, but at least you should be a consistent Luddite. We provide plenty of funding at the Department of Energy and other agencies that is invested in private-sector technology. An example is the hydrogen initiative, the clean coal initiative. Over at the CIA, In-Q-Tel [the CIA's venture capital fund] has been investing, doing pretty much what ATP does. Dr. Jeffrey, if I were you, I'd be really angry that they're letting the CIA in the investment

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Industrial Policy Debate...

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realm do the things that they want to take away from you."

Other witnesses at the hearing piled on, particularly Michael Borrus, general partner of the venture firm X/Seed Capital in Menlo Park, Calif. The ATP's role in providing funding to promising technologies to help bridge the "valley of death" to commercialization "not only is an appropriate role for the federal government, it is a historically consistent, well established role of the federal government over at least the last century and a half if not longer since the Morrill Act creation of the land grant colleges and the Agricultural Extension Services which, similarly for the technologies of its time, sought to move innovation out of the colleges and research institutes into agriculture," he said. "It is a historically consistent and well received tradition and it ought to be continued."

Data from the National Venture Capital Association verifies that very little venture money is going into early-stage technology development, with most going into late-stage start ups, said Borrus. "Picking winners and losers is a profoundly misleading metaphor," he told the subcommittee. "In a certain sense, it is substituting sloganeering for a thorough understanding of how risky, early-stage technology innovation actually works. No investor, neither public nor private, picks winners and losers. Ultimately, it's the market that picks winners and losers, by which I mean your competitors on one hand and your customers on the other. What investors do is plant seeds and in this particular area of high-risk innovation, they plant technology seeds and there is a well-defined historical traditional role that the federal government can and should play of planting technology seeds in the interest of either private market value or acute national need. That is what ATP has done. That is what the federal government does in other federal programs, and it's an essential role."

The idea that these public investments benefit only the companies that receive funding is "completely, flatly wrong," Borrus added. "All government development programs, to distinguish it from basic research funding, have to work through individual companies in a market economy such as ours. In ATP's case, the measured social returns of the program far outstrip the total program dollars spent over the life of the program as a whole and consequently far outstrip — dwarf — the amount of dollars going to an individual company. The resulting societal benefits in the form of jobs, in the form of seeing new technology industries that come into being and in the form of consumer benefits are exceptional and substantial. I suggest the critics who take that view ask those who have been diagnosed with breast cancer through ATP-funded digital mammography innovation and have subsequently been treated because of the early detection if they think the benefits of the program went to a single company or two. You only unleash the social impacts that benefit the nation when you transition something out of the lab into the commercial marketplace. There are some major gaps in finance for that precise part of the problem. That is a gap I'm trying to fill, but I can't fill much of it. There is clearly a role for federal funding mechanisms and ATP."

Dr. Stanley Williams, a senior fellow at Hewlett-Packard and founding director of H-P's Quantum Science Research Group in Palo Alto, Calif., said the United States is on the cusp of losing its ability to innovate in a way similar to what occurred during the last century. U.S. invention of such things as the telephone, light bulb, radio, phonograph, vacuum tube, transistor, laser, and integrated circuit, among others, created huge industries that "employ our citizens, improve our lives and supply a large fraction of the tax dollars collected by the U.S. government," he pointed out. "However, toward the end of the last century, we started to become complacent and neglectful. Our wonderful goose was slowly being starved and the consequences of that were alarming indeed. This situation brought scientists like me to Washington in a new role. Rather than trying to obtain a research grant, we had to learn to represent the entire scientific enterprise in the annual budgetary process so familiar to you but foreign to us."

> *"Over at the CIA, In-Q-Tel [the CIA's venture capital fund] has been doing pretty much what ATP does. Dr. Jeffrey, if I were you, I'd be really angry that they're letting the CIA in the investment realm do the things that they want to take away from you."*

If the physical sciences and engineering infrastructure of the country continue to be starved, then "the cost of failure is too grim to contemplate," said Williams. "We must do this before we lose an entire generation of American scientists and engineers and become completely reliant on other countries for our technology."

Commenting on the laboratory and measurement functions of NIST, Williams said: "It is my observation that the scientific staff at NIST are now overwhelmed by the volume of work that they face." The staff is no longer able to adequately respond to the need for measurement systems demanded by industry. "In some cases, it has taken several years to complete key measurements, which can make them ineffectual in an era in which a new technology can become obsolete in a single year," he said. "Some projects have taken so long they have not survived reorganizations or staff reassignments. In order to respond to new opportunities, NIST scientists often have to compete for grant funding from other government agencies, which creates even more demands on their time."

About 25 percent of NIST's budget for its measurement laboratories last year was provided by other agencies, Williams pointed out. "While these activities can meet important governmental needs, they diminish the Institute's flexibility in responding to the industrial priorities it identifies. Dependence on such short-term funding also diminishes the opportunity to plan long-term programs of broader benefit."

Foes Of Free Trade...

(Continued from page one)

falling."

Gerard and others in the anti-Fast Track movement plan to remind Democrats in Congress that they gained their majority largely on fair trade issues and can only hold their majority in 2008 by changing the terms of trade. Adds Bruce Raynor, president of UNITE, the 460,000-member union representing apparel, textile, hotel, restaurant and casino workers: "Both parties understand that this is an issue that the labor movement, the environmental movement and all of us fighting for American jobs are not going to forget about. We're going to make it a primary issue in 2008 and Congress will understand that more in coming weeks."

Gerard says Congress should not abrogate its responsibility by allowing the President to make "rotten trade deals that have destroyed jobs." By the time Bush leaves office, the U.S. trade deficit could be $1 trillion a year. "I would challenge anybody to tell us why running a $4.5-trillion trade debt and having an $800-billion trade deficit is good for the country," Gerard says. "If it is so damned good for the economy, then why doesn't every other nation on earth try to get one?"

Gerard says he's concerned about positions taken by Rep. Charley Rangel (D-N.Y.), chairman of the House Ways and Means Committee. Rangel has made numerous statements regarding his desire to pass pending free trade agreements that have been negotiated by the Bush administration, and for his support of TPA.

"I actually believe that if we don't have the House and Senate change the way the trade deals are bargained and ratified back to having Congress have a role in it, I suspect it's not only the steel workers but the American public will feel let down because they voted for change and it wasn't just change in Iraq, it was economic change," says Gerard.

Tom Buis, president of the National Farmers Union, says that if elected officials "will listen to the people, they will get a very clear, loud message. I travel all across the country in most of rural America. If you mention to farmers that you need another free trade agreement you might want to duck because they are not believing it. They're not seeing it. I don't know anyone in rural America who actually produces the food and fiber who sees the benefits of the trade agreements. Sure it's an easy answer to say we need more trade, but the details have always proved to work against us. The political support in the country is just not there whether it's a red state or blue state."

Environmentalists are also getting mobilized. They intend to fight against ratification of the trade agreements with Peru, Colombia and Ecuador that need congressional approval. They argue that the Peruvian and Ecuador agreements allow for the illegal logging of mahogany wood. They claim that 85 percent of the mahogany produced in Peru and Ecuador is illegally logged at the expense of the rain forest and indigenous people, and that 90 percent of this production is exported to the United States.

"The treaties that we have negotiated do not permit the enforcement of international environmental obligations," says Carl Pope, executive director of the Sierra Club. "These are basically get-out-of-jail free cards for the governments of these countries that say they don't have to abide by these international treaty obligations. These are not treaties to enforce environmental laws. These are treaties designed to shield all of the countries including the United States from our international environmental obligations under treaty law."

Brent Blackwelder, president of Friends of the Earth, claims that the illegal logging industries use paramilitary groups to capture

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The Citizens Trade Campaign is organizing the lobbying push to derail the reauthorization of Trade Promotion Authority/Fast Track. Here are the members of the coalition:

- Americans for Democratic Action
- Communications Workers of America
- Defenders of Wildlife
- Friends of the Earth
- IATP Action
- International Association of Machinists
- International Brotherhood of Boilermakers
- International Brotherhood of Electrical Workers
- International Brotherhood of Teamsters
- International Union of Painters and Allied Trades
- League of Rural Voters
- National Farmers Union
- Public Citizen
- UNITE HERE
- United Methodist Church, General Board of Church and Society
- United Steelworkers of America
- United Students Against Sweatshops
- Western Organization of Resource Councils

CTC Affiliated State Coalitions:

- California Coalition for Fair Trade and Human Rights
- Florida Fair Trade Coalition
- Maine Fair Trade Coalition
- Minnesota Fair Trade Coalition
- New York State Labor-Religion Coalition, Economic Justice For All
- Ohio Conference on Fair Trade
- Oregon Fair Trade Coalition
- Texas Fair Trade Coalition
- Washington Fair Trade Coalition
- Wisconsin Fair Trade Coalition

Ohio's Manufacturing Woes Worsen In 2006

Ohio suffered the greatest amount of manufacturing job losses in 2006 due to shifting production overseas than during any of the past 12 years, according to Policy Matters Ohio. "International trade is responsible for a significant number of job losses in the Ohio manufacturing sector," says the first line in a new report entitled "International Trade and Job Loss In Ohio 2007." "The real output of Ohio's manufacturing sector in 2005 barely surpassed its 1998 pre-recession peak, despite a national economic expansion."

Using data from the federal Trade Adjustment Assistance (TAA) program, Policy Matters Ohio research analyst Dr. Jon Honeck found that 13,432 Ohio workers were certified to have lost their jobs last year due to foreign trade. It is only the second time that the annual level of certifications surpassed 13,000.

Certification levels declined from 2002 to 2005, "but rose dramatically in 2006," writes Honeck. Policy Matters Ohio found that more than half of the job losses were due to employers shifting production to foreign factories or by replacing Ohio-made products with foreign imports. Shifting production to Canada and Mexico led to the direct loss of 5,000 jobs.

"Job losses have devastating effects on manufacturing workers," writes Honeck. "Workers displaced from manufacturing jobs have a difficult time finding new positions, especially at comparable pay. Just 65 percent of workers nationwide who lost a job between 2003 and 2005 were re-employed as of January 2006. Of those who found new jobs, more than one-third had to accept wages that were more than 20 percent below their previous pay levels."

Policy Matters Ohio says the TAA program is not very good at providing benefits to many manufacturing workers who lose their jobs due to international trade. Workers at smaller supplier companies that lose business because major customers are impacted by trade tend not to receive benefits.

Between 1995 and 2006, 71,242 Ohio workers were certified by the TAA program as having lost their job to international trade. "Massive trade deficits weaken the link between economic growth and employment growth in domestic manufacturing," writes Honeck. "Public policy must do more to prevent job losses due to international trade and to help workers who become unemployed due to international trade. At the national level, we must reexamine the costs and benefits of our current trade policies which fail to protect basic labor and environmental standards and have been unsuccessful at addressing widespread unfair trading practices."

Policy Matters Ohio is a nonprofit, nonpartisan research institute "dedicated to researching an economy that works for all in Ohio."

Montana Manufacturer Can't Compete With Cheap Imports, And Rigged Currencies

The U.S. furniture industry cannot compete with Asia, and that fact is putting a lot of niche manufacturers quickly out of business. One such company is Golden Ratio Woodworks, based in Emigrant, Mont. The company made portable massage tables. At one point, it had 105 employees producing 1,200 tables per month. Now, it has none.

For Golden Ratio, things started looking ominous in 1999 when big-box retailer Costco started selling fully equipped imported massage tables for $220. U.S. producers were selling similar tables for $400 and, with all the accessories, could make between $500 and $600 per table. The Costco price of $220 included all the accessories.

That's when company president and founder John Fanuzzi went to his senator's office in Washington, D.C., Conrad Burns, and said: "Do you realize what's going to happen here? NAFTA and free trade are

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Small Business Boosts U.S. Economy

A high small-business birth rate has the greatest positive impact on gross state product, state personal income and total state employment "than any other factor examined," says a new report from the Small Business Administration's Office of Advocacy. "State efforts to promote small business formation will be more fruitful in terms of generating economic growth than virtually any other policy option in our models," say the authors of the report, titled "Small Business and State Growth: An Econometric Investigation" (No. 292), located at, www.sba.gov/adv.

Free Trade Foes... *(Continued from page seven)*

members of the indigenous people and force them to work cutting down the forest. "They use death threats and other kinds of techniques to stop workers from escaping these logging camps," he says. "We have a combination of labor and environment abuse here. It was a prime opportunity to say we are not going to tolerate these in this agreement, but the Bush administration chose not to do so."

The Bush administration showed its "audacity" in negotiating a free trade agreement with Colombia, "which is on the State Department's list as one of the sponsors of the greatest inflow of illegal drugs into the United States and is on the global list of countries that kill, assassinate and shoot the most trade unionists," says Gerard. "It is the most dangerous place in the world to be a trade unionist and yet this administration wants to negotiate a deal and wants it to be ratified where Congress gives up its right to even question it. This is a bad failed policy that has 20 years of evidence that it does not work for American workers, farmers or families."

Iraq Quagmire... (From page four)

Navy Departments conducted what was called "Rainbow" planning. The plans looked at different paths the war might take and determined what level of forces and equipment would be required to meet those planning requirements. In the summer of 1941, Major Albert C. Wedemeyer chose the most likely Rainbow path and developed the Victory Plan. This plan forecast the size of the armed forces and the production requirements for industries that did not exist or were still committed to making peacetime products. In other words, the Victory Plan of 1941 constituted a grand strategy that included forces along with the wherewithal to support the forces for the length of war envisioned.

As General Shoomaker recently wrote: "When people talk about the ends, ways and means of strategy, they usually focus on the ends and the ways. Few understand the actual means and time required to generate those means."

The National War College was created to focus on ends and ways, while the Industrial College of the Armed Forces (neighbors at Ft. McNair, Washington, D.C.) focuses on means. These two institutions, which constitute the National Defense University, should be tasked to come up with a half-dozen Rainbow scenarios to address the possible contingencies that we might face and determine the ends, ways and means associated therewith, i.e., a grand strategy.

As Field Marshall Helmuth von Moltke remarked, "No military plan survives the first contact with the enemy." Nevertheless, this type of planning will cause leaders to cross a mental threshold that makes them face up to the grave dangers that our Nation now faces. Let us not wait for another Pearl Harbor, 9/11, or Katrina to develop this strategy. There are many Rainbow I scenarios that need attention. What happens in the ensuing chaos if the U.S. pulls out of Iraq? Will oil supplies be threatened? What happens if a major American city is attacked with anthrax or a dirty nuclear device? Are we crying wolf? Certainly not in this troubled world.

Our nation's security depends on having forces and logistics systems already in place with the ability to respond with stockpiles of critical items, materials and oil, as well as having the ability to surge-produce needed equipment and life-saving supplies in a timely manner.

Joseph Stalin said that World War II was not won in Europe, but in Detroit. But the Detroit of the 1940s no longer exists. Therefore, it is essential that we match requirements derived from a range — a "Rainbow" — of scenarios to determine the risks associated with inattention and delayed reaction.

I once asked General Curtis LeMay the following question: "General, how much warning do you think that we will get prior to a World War III?" He answered, "Son, we've been on warning since 1945. What the hell are you doing about it?"

Iraq was a come-as-you-are war, stay-as-you-are war. Let us not repeat past mistakes.

— Joseph E. Muckerman was director of emergency planning in the Office of the Secretary of Defense from 1986 to 1992. He is a former faculty member at the Army War College and the Industrial College of the Armed Forces.

Bioscience Industry Fuels Economic Growth Throughout The Country

The biosciences industry, which includes the making of pharmaceuticals; medical devices and equipment as well as research, testing and medical laboratories, is a growing and vibrant sector of the United States economy, according to Battelle. It is also widely dispersed throughout 25 major metropolitan areas of the United States having more than 10,000 total bioscience jobs. The New York City region has the largest number of employees working in these industries, at 110,000. A total of 7 million people are directly and indirectly employed in the industry.

Regions such as Boulder, Colo., Durham, N.C., Flagstaff, Ariz., Kansas City, Mo., Madison, Wisc., Philadelphia, Penn., and St. Louis, Mo., are all investing heavily in the sector as a means to build the talent pool, attract capital for commercialization and capabilities to build a critical mass of bioscience firms, says Battelle. Adds Walter Plosila, vice president of Battelle's Technology Partnership Practice: "Biosciences are a key driver in the development of regional technology-based economies throughout the United States, offering a way for regions to diversify their economies by growing diverse segments of the biosciences including ag biotechnology and industrial processing, the manufacture of medical devices, the development and production of drugs and pharmaceuticals, and research, testing, and medical labs." Every large metropolitan area in the United States is actively pursuing bioscience industry development.

"For a variety of reasons, we're seeing significant interest from state and regional development authorities in the biosciences," says Patrick Kelly, vice president of state government relations for the Biotechnology Industry Organization. "The biosciences not only have the potential to create high-skill, high-wage jobs, but the industry is also developing technologies that can improve the quality of healthcare and agriculture and help meet our nation's growing energy needs."

The report, "The Biosciences in the United States: A Regional Perspective," describes how various regions are promoting the industry's development. It is located at http://www.bio.org/local/battelle2007/.

MEP Centers...*(Continued from page one)*

to try to address that, we would actually have to be in a position of cutting every single center by the same percentage which would probably create much more disruption and a more weaker system at that point."

Members of the subcommittee, which oversees NIST programs, expressed outrage at the plan, which had not been vetted with Congress, the centers or the state partners that provide most centers with about one-third of their funding. "Dr. Jeffrey, we've had eloquent, effective testimony about the need for MEP," said subcommittee chairman David Wu (D-Ore.) after listening to two manufacturing company executives testify about the need for and effectiveness of the MEP program. "Let's just declare the 50-odd percent cut for MEP dead on arrival."

Congress is opposed to the MEP re-competition, said Wu. "In fact, in fiscal year '05, NIST was specifically prohibited from doing the re-competition." Congress might "put that prohibition back into the appropriations bill," Wu added.

Revamping the MEP program based on an ideology within the Bush administration that the federal government should not be supporting industry "is absolutely idiotic," said Rep. Vernon Ehlers (R-Mich.). There is no "pragmatic" reason to cripple a program "that is helping industry, helping our nation and helping our economy," he told Jeffrey. "If you want to review MEP and modify it just on the basis of making a good program better, God bless you and we'll be happy to work with you and help you, but I would resist any impetus to do it on the basis of the belief of some people in the administration that somehow this is something the government should not be doing and we have to restructure because of some ideological beliefs."

A re-competition along with the funding cut "would be disastrous," added Peter Murray, vice president of Welch Allyn Inc. of Beaverton, Ore., when asked by Wu directly after Jeffrey described the re-competition plan. "I'm speaking as a board member of the [MEP] affiliate in Oregon. The organization as it is now is extremely lean. I've been to their office — it's anything but plush. The staff is very efficient and lean. I don't know where they would find additional savings. I think it would be a distraction for that business to take away already limited resources, look for a new business and market to other clients. I really think it would be a disaster. I can't say it strongly enough."

Michael Ryan, president and CEO of TUG Technologies Corp. of Marietta, Ga., who has worked for a variety of well known, successful manufacturing companies that have used the services of MEP centers in five states, says the strength of the program is the common philosophy of business improvement based on lean principles that exists within the nation-wide network of centers. "If we take that down a notch or two or three or in half as the proposal says, we'll lose what we've built up over 18 years, unfortunately, and that would be a travesty."

Did NIST notify the MEP state partners of its plan to re-compete the centers, Rep. Jim Matheson (D-Utah) asked Jeffrey. "It is my understanding that at least in my state of Utah, the MEP has not been consulted on this budget proposal, and I think many state agencies would reduce their share of matching funds if the federal share is cut," he said. Jeffrey told Matheson that NIST could not discuss the budget before it was submitted to Congress, but since the request has been made, the director of the MEP program has been talking to the centers and "having them understand what the implications would be and having them start thinking about what the right approach is moving forward," Jeffrey said. "I wouldn't say they're in complete shock, but we are working with them now before any kind of re-competition would occur to make sure that everyone understands what the ground rules are and what we're looking for and how to maintain the most effective process for the small manufacturer out there."

Mike Coast, president of the highly regarded Michigan Manufacturing Technology Center, said most center directors feel a re-competition would be a waste of time and effort. "It's unbelievable, it really is. They're talking about a re-competition starting in April and we don't even know what the 2008 budget number is going to be," he said. "In all likelihood, the program is going to be fully funded again. We've restored the funding every year for the past five years. Why go through this exercise if we don't have to? It's another year of fighting to get the money to go out and help small manufacturers."

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Inside The Collapse Of U.S. Manufacturing: Moosehead Furniture Succumbs To Cheap Imports

All is not well in the United States furniture industry, and the surge of cheap foreign imports is taking a toll. A recent casualty among many is Moosehead Furniture, the largest privately owned furniture company in New England. The 60-year-old company had 126 employees, and it told them all to go find a job somewhere else on Feb 8, because it could no longer compete.

In 2002, Moosehead had sales of about $15 million and employed 250 workers.

The Bangor Daily News described the closure as a "blow to the heart" for the town of Monson, Maine. Dozens of comments posted by readers on the Bangor Daily News site were damning of U.S. trade policies and expressed a grave sense of sadness and anger. "This country is pretty much owned by outsiders," stormed one. "Thanks Washington, D.C.: another screwup. This country needs to start finding a way to take itself back!" Another said: "We have become a third-world country where the only thing we can export is our resources." A New Yorker wrote: " It would be nice if America were still prosperous enough for a kid to be free to choose a career he loves (e. g., some people enjoy making furniture) and feel secure in his career for the rest of his working life. Unfortunately, American workers are now just another commodity, to be bought, sold, and discarded."

Manufacturing & Technology News Editor Richard McCormack spoke with Moosehead Furniture Co. president John Wentworth about the situation. Here's what he had to say.

Question: Do you think you could have prevented the closure of your company?

Wentworth: I'll be asking that question of myself for years. Most of the furniture manufacturers in North Carolina and Virginia are pretty much closed up except for some of the smaller custom shops that make things such as kitchen cabinets. Farooq Kathwari [CEO] of Ethan Allen was talking on PBS about the effect of globalization on his company. They're down to three case goods plants from 13 a few years ago. He defended his position. If he hadn't become more competitive by outsourcing, then Ethan Allen wouldn't be here.

In our situation, we considered outsourcing to China, but we're a relatively small company with 250 employees at our peak a few years ago. Our problem is we're not a sales and marketing company. We're manufacturing. We didn't have the expertise to do that and we wanted to keep our manufacturing base here. We're in a very rural area without a lot of opportunities. To close it down to outsource it didn't seem like...

Richardson Brothers, which is a little larger family-owned high-end furniture manufacturing company in Wisconsin, closed their manufacturing facilities four years ago to go the overseas route and import their own designs. They announced last week that the strategy did not work for them, and they are going to close everything.

That was an indication that just going overseas is not the answer because, honestly, large stores can buy direct. They don't need to go through a manufacturer, and they save money.

Q: Was globalization the primary reason you went out of business?

Wentworth: Globalization was probably the number-one issue in the top of our issues. Associated with that was the loss of the traditional mom-and-pop local retail furniture stores. They have lost out to big-box furniture stores. That took a toll on us. We lost a lot of dealers in the last couple of years. Nobody is opening up furniture stores to replace them.

Q: Furniture is bulky and even if it's shipped flat, it's heavy. With high energy costs, how is it possible to produce something in China, ship it over the largest ocean on the planet and have it delivered in Maine for cheaper than you can make it there?

Wentworth: Believe me, I don't understand how you do that. I don't understand what that is. But labor costs to make a piece of furniture there is 20 cents an hour versus an average of $10 to $11 for regular labor in this country. Plus you have to add the cost of health care, which is approximately an extra payroll a month. In fact we paid half as much for health care as we did for lumber.

Somebody asked me where the Chinese get the lumber from. Well, the ships come over here full of furniture and they don't like to go back empty. There is a lot of lumber that it is cut in Maine and sawed in Quebec and it ends up in China.

Q: So they're even using Maine lumber and selling the finished product in Maine for less than you can make it?

Wentworth: We make a solid hardwood chair for $110. I could have outsourced it from China for $15. A tractor trailer load of our furniture was $55,000 retail cost, but it only cost from $2,500 to $3,500 to get a container from China to the United States. If you can buy the container for $3,500, you have got $7,000 in it versus $55,000.

Q: Is there anything U.S. manufacturers can do to succeed? Will Lean or Six Sigma save U.S. manufacturing?

Wentworth: We've been lean for years. We only assemble and finish what is to order. We don't even

(Continued on next page)

Moosehead Furniture...(From page 11)

inventory packed goods. We inventory some parts but you won't find much wood in our factory.

It's our labor costs and health care costs — plus, there are no regulatory costs overseas that we have here. They're allowed to use a lot of finishing materials that we're not allowed to use in this country because of regulations. It just all adds up.

Q: Is there any way to stop the hemorrhage or reverse the trend?

Wentworth: One thing we need to do is to get health care off the backs of the employers in this country. We have to go to a universal health care system. I know that is probably not popular, but when you spend half as much for health care as you do for lumber to make furniture, that is a huge chunk.

For companies and industries that have high labor content like hand-made furniture, there is nothing to offset the cost of 20-cent-an-hour labor in China. I don't know how you balance that out.

American companies like Thomasville that have gone over there and partnered with Chinese companies setting up factories are using the same equipment that you can buy now at auction prices in this country. You throw it on a boat and go over there. There is not the disparity any more as to what is available for equipment.

Even a high-end company like Stickley has a manufacturing facility in Vietnam because the labor is even cheaper there than it is in China.

Q: How has this happened to our domestic manufacturers?

Wentworth: We've done it to ourselves, but our consumers have driven us. They want everything as cheap as possible. That's just the way the economy is. Some businesses will make out and do better. I'm sure Coca-Cola and McDonald's will do well in China. But for the rest of us here who have been trying to keep people in our small rural communities employed and going there comes a point where you just run out of cash.

Q: What does globalization mean for rural areas?

Wentworth: The county in which we're located is the size of the state of Connecticut, yet we have only 17,000 people in this entire county. We were a major employer paying local property taxes, providing employment. The same thing has happened to the shoe industry and the textile industry before us. It's been tough because nobody is coming in and replacing those jobs with anything that pays as well or has the benefits.

Q: Americans have a sense of let's blame ourselves for our travails — let's blame bad management, bad design, bad strategy. So good riddance to the GMs Fords and the American companies that make shoes or furniture because they can't do it as well or as cheaply as foreigners. Is that justified?

Wentworth: I think so to some degree. There is enough blame to go around for everybody. There is a lot of finger pointing, but at the end of the day it doesn't change anything.

Q: What has the process been like for you during the last couple of weeks?

Wentworth: We notified all of our employees on Thursday [Feb. 8] and then the press started showing up. It's frustrating. I grew up in this community. The people I laid off are the people I went to school with, and their parents. We had two plants in this town of 600 people. You have to look at those people in the face. They've been here for 20, 30 years.

It's a portion of rural America that is slipping away and it won't come back. Some people will get some retraining and in a year or two they might think this was a great opportunity. One door closes and one door opens. But there are a lot of people who spent their whole life working in a furniture factory. Those skills are not transferable.

Wentworth's e-mail is johnw@mooseheadfurniture.com.

Montana Manufacturer...(From page eight)

going to kill not just our industry, you're going to kill all of the manufacturing in our country."

Fanuzzi received a letter back from Burns, saying that NAFTA and free trade "are going to be good for Montana because they are buying Montana cattle and the people over there need a break in order to raise their standard of living," Fanuzzi told *Mfg. & Tech. News*. "That's great," Fanuzzi responded. "That's nice, but what about our family here in the U.S.?"

Patents kept Golden Ratio in business for a while, but that didn't last long. "In the old days, competitors were respectful and if you came up with something new they left you alone," he explains. "Now with the Chinese, it doesn't matter. They don't care. You have everybody and their grandmother copying." Similar tables are now being imported into the United States for $65.

A U.S. producer could not get close to that price. After Katrina, foam prices for U.S. producers doubled overnight to $40 a table. In China, the same amount of urethane foam cost $15. Fuel prices started going up, and sales on high-end tables started to decline.

"We were at a disadvantage shipping from Montana because we're not on a seaport," says Fanuzzi.

What will it take for a company like his to compete, Fanuzzi is asked. The dollar will have to be devalued "but they don't want to do that," he says. "They're printing dollars like they're the Mafia. I don't know if that will catch up to them, but they're selling dollars to keep it strong and they have the media and whatever news they want to write. They don't report how much money they're printing any more....Our country is over. We have been sold out. Every single line item of everything has been sold out."

Factories Are Closing, And Factories Are Opening

The Polymer Group Inc. has announced plans to close its Rogers, Ark., and Gainesville, Ga., plants. Charlotte, N.C.-based PGI purchased the Rogers plant in 1992 from Scott Paper and will lay off 120 workers. Its production of thermal and adhesive bonding products will shift to the company's Landisville, N.J., and North Little Rock, Ark. plants. The company will move its production of medical fabrics used in surgical gowns from its plant in Gainesville, Ga., to a new facility in Suzhoe, China. It will also move production of film products used in feminine sanitary napkins from Gainesville to a plant in San Luis Potosi, Mexico. PGI purchased the Gainsville plant in 1995 from Johnson & Johnson. It has been in operation since 1956. It will lay off its 50 workers. "We deeply regret the impact these difficult actions will have on our employees but they are necessary to achieve our profit targets in an increasingly competitive market," said William Hewitt, Polymer Group's interim CEO.

M&S Manufacturing Co., one of the world's largest privately held makers of high-precision machined parts, has closed up shop. The Hudson, Mich.-based company, founded in 1941 has hired Hilco Industrial to hold a five-day auction starting March 26 to sell off about 200 major precision machines, including Index and Nakamura CNC machines, Hydromat rotary transfer machines and a "large number of miscellaneous machining devices from well-known brands such as National Acme, Tornos Bechler, Miyano, Techno Wassino, Micron, Takamaz and Traub," says Hilco. "There is an unprecedented opportunity for buyers to realize great savings on hard-to-acquire, late model, well maintained equipment," said Robert Levy, president of Hilco. For a list of the equipment being sold, go to www.hilcoind.com.

Sparton Corp. has announced plans to close its cable wire harness manufacturing and assembly plant in Deming, N.M., by March 31. "Based upon the current business climate, the pressure of offshore pricing and demand within the market, Sparton can no longer offer competitive cable wire harness solutions to its customers," says the Jackson, Mich.-based company.

Weyerhaeuser has announced plans to close two plants in Oregon, one in Springfield, impacting 86 people, and another in Coburg, impacting 42.

Culp Inc., a manufacturer of textile fabrics used in furniture, mattresses and upholstery, has announced plans to close two plants in North Carolina — a weaving plant in Graham and a yarn plant in Lincolnon. Production will shift to plants in Anderson, S.C., and Shanghai, China. "We have been aggressively growing our China-produced business," says Robert Culp, chairman and CEO of the company. "By further consolidating our U.S. manufacturing operations and utilizing lower-cost manufacturing alternatives, we are reducing our operating costs and improving our domestic capacity utilization. We have been highly successful with our China platform and continue to be encouraged by the progress we are making in selling non-U.S. produced products. We deeply regret the impact these actions will have on the people and communities involved. We are committed to providing employment and benefit assistance to the extent possible, and Culp associates at both plants qualify for Trade Adjustment Assistance benefits, which include, among other things, training programs to learn a new trade."

Modine Manufacturing Co. has announced that it will close its Toledo, Ohio, manufacturing plant. The facility makes heating and cooling systems for the automotive industry. "We sincerely thank the employees at the plant for their service and dedication to their jobs," said Modine president and CEO David Rayburn. "They should be proud of the high-quality products produced in the plant." The Racine, Wisc.-based company, with sales last year of $1.6 billion, also announced that it will build a $14 million greenfield manufacturing facility in the Chennai area of India. Products manufactured in the facility will serve India's domestic commercial vehicle, off-highway, domestic bus air conditioning markets.

Littelfuse Manufacturing has announced plans to transfer its semiconductor wafer manufacturing capacity from Irving, Texas, to Wuzi, China, and lay off 180 workers. "We are committed to making this transition as seamless as possible for our customers," said CEO Gordon Hunter. The company will invest $16 million in the new Chinese factory adjacent to an existing plant. The project is expected to save the company between $9 million and $10 million a year once the transfer from Irving is complete. The Irving facility produces thyristor surge protectors and power control devices. "This was a difficult decision given that Irving employees have been a significant part of our growth and success," said Hunter. "However, we believe this move is in the best interest of our company, our customers and our shareholders over the long term."

American Axle's East Delavan Ave. plant in Buffalo might soon be closing, according to a report in Automotive News. The facility, which is an "anchor" for Buffalo's East Side and was built in 1923, is the city's largest manufacturing facility with 700 employees. The plant produces drivetrain parts for GM pickups and SUVs. Its closure would "snuff out a source of good-paying jobs for generations of area residents," says the Buffalo News. "There's no question it's an important manufacturing facility in the city — it plays an important role in the economy," said Peter Cutler, spokesman for Mayor Byron Brown. About 570 employees at the plant have already left since December, taking a buyout offer from the company.

(Continued on next page)

Factories Closing...(Continued from page 13)

Eli Lilly has decided to stop construction of a new insulin manufacturing plant in Manassas, Va., due to a slowdown in demand. The company says it will be able to meet expected growth in insulin demand with capacity that is being added in Sesto, Italy. "The decision to cease construction of the Prince William County site is very difficult because of the impact on employees," said Scott Canute, Lilly's president of manufacturing operations. The company will return all economic development incentives received from Virginia state and local entities. Lilly will also close its Tippecanoe Laboratories manufacturing plant in Lafayette, Ind., and offer a "voluntary exit" program for up to 250 employees. The closure is due to excess capacity for small molecule active ingredients.

The company is investing heavily in biotechnology, however. It has just completed a new biotech pilot manufacturing plant and soon-to-be-completed biotech research laboratory in Indianapolis. It is also adding a new assembly line at its device assembly operation in Indianapolis to make a new pre-filled insulin pen. It has also recently completed a $1-billion expansion of its Puerto Rico manufacturing operations.

Standard Register has decided to close its Middlebury, Vt., factory, and lay off 112 workers. It will put the 115,000-square-foot plant up for sale and move the equipment to plants in Murfreesboro, Tenn., York, Penn., and Frayetteville, Ark.

Goodyear has announced plans to stop tire production at its Valleyfield, Quebec, facility. The decision "shocked the community," according to reports in the Canadian press. The company will lay off 800 of its 1,000 workers at the plant, which it describes as being a "high-cost manufacturing" facility. "In today's intensely competitive and increasingly global business environment, we face some very difficult choices," said Jon Rich, president of Goodyear's North American Tire business. "The decision to discontinue tire production at Valleyfield is one of those necessary steps to make Goodyear more competitive. This decision does not reflect on the commitment or performance of our Valleyfield associates."

Goodyear's departure "is the tip of the iceberg," said Henri Masse, president of the Quebec Federation of Labour. "I am convinced that we will see other cases like this in Quebec if our governments don't act. We haven't seen the federal government lift a finger in Quebec to address the problems we have in the manufacturing sector. They are probably stuck in western oil and don't see the economies of Quebec and Ontario."

Whirlpool Corp. has announced plans to close its Cleveland, Tenn., cooking products manufacturing plant, laying off 370 people, and shifting production to Tulsa, Okla., "and a yet-to-be determined location in Mexico," says the company. "These changes will improve the productivity and efficiency of our North American manufacturing platform," said David Swift, president of Whirlpool North America.

Pfizer has announced plans to reduce its global workforce by 10 percent, or 10,000 workers. As part of that initiative, the company will close manufacturing facilities in Brooklyn, N.Y., Omaha, Neb., and Feucht, Germany. From 2003 to 2008, the company will reduce its network of manufacturing plants around the world from 93 to 48. It will also close research and development sites in Ann Arbor, Mich., Esperion (also in Ann Arbor), and Kalamazoo, Mich. It intends to close additional R&D sites in Nagoya, Japan and Amboise, France, subject to consultation with local labor councils and local labor law.

Chrysler's Feb. 15 announcement to eliminate 13,000 workers will result in the loss of 2,000 white-collar jobs and 11,000 production jobs mainly at eight factories. The biggest impact will be in southeastern Mich., where 5,300 people will be gone by 2009. At the company's Warren truck plant, 1,000 workers will lose their jobs when a shift is eliminated; 250 jobs will disappear at the Detroit axle plant; 200 more will go at the Mack Ave. engine plant in Detroit; 100 at an engine factory in Trenton; 65 at a stamping plant in Sterling Heights; and another 100 at a stamping plant in Warren. About 1,600 of the 2,000 white-collar jobs will be eliminated from U.S. corporate headquarters in Auburn Hills. In Ohio, 200 Chrysler jobs will be eliminated at the Toledo machining plant and another 110 at a stamping plant in Twinsburg near Cleveland. In Indiana, the transmission plant in Kokomo will lose 100 jobs.

Tecumseh Products Co. has announced plans to close its engine component manufacturing plant in New Holstein, Wisc., and lay off the 320 remaining workers there. The company will move operations to "low cost countries," including India, Brazil and China, says Tecumseh president James Bonsall. "The impact of the decision announced today on Tecumseh's remaining workers in New Holstein is deeply regrettable, but unavoidable." The plant has been in operation since 1956 and employed 1,500 people in 2000.

Hershey announced plans on Feb. 15 to eliminate 1,500 jobs, close down more than one-third of its production, outsource production of low value-added items, and build a new factory in Monterrey, Mexico. "Increased access to borderless sourcing will further leverage the company's manufacturing scale within a lower overall cost structure," the company said. It plans to develop a "truly global footprint for Hershey's iconic brands," says CEO Richard Lenny. "We recognize this will involve considerable change over the next three years and intend to make this transformation of our supply chain as smooth as possible for our employees and customers. We will work closely with those affected by the program to assist them with the transition."

Pulaski Furniture Co., based in Pulaski, Va., announced on Feb. 16, that it was closing its last U.S. factory in Pulaski and laying off 260 employees. The closure will "level a significant blow to Pulaski's economy," reports the Roanoke Times. Closing the plant is the result of "the shift of domestically manufactured

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Factories Closing... (Continued from page 13)

furniture to offshore production, especially to Asia," said company vice president of operations Lamont Hope. "Our competition, by moving production offshore, has created such pricing pressure that our domestic operation can no longer compete." The company had adopted lean production techniques "but those efforts have failed," reported the Roanoke Times.

NEW PLANTS OPENING IN THE UNITED STATES

Visteon Corp. has announced plans to build a $35-million plant in Highland Park, Mich. The facility will create 175 new jobs and will manufacture interior components for the automotive industry in Michigan and the Midwest. The Michigan Economic Development Corp. provided Visteon with a tax credit worth $1.73 million over seven years, and the city of Highland Park provided tax abatements worth $4.5 million. "The project is expected to generate more than $150 million in personal income for Michigan workers over the life of the tax credit," says the MEDC.

Toyota Motor Corp. will soon be naming a site in the southern United States to be the location for its eighth North American assembly plant. It has narrowed its search to locations in Chattanooga, Tenn., Marion, Ark., a site near Alamo, Tenn., and another in North Carolina. The facility is expected to produce 200,000 vehicles a year, including the Toyota Highlander and a replacement for the Solara called the "Ace."

UGN Inc., a Tinley Park, Ill.-based producer of automotive acoustic, interior trim and thermal management products, is expanding its production facility in Somerset, Ky. The expansion will boost annual production of the company's light-weight carpet line by nearly 60 percent. UGN's 300,000-square-foot Somerset manufacturing facility began production in the fall of 2006 and has created approximately 90 jobs. With its latest expansion, UGN will add 70 additional positions, and should reach 300 employees when the facility reaches full operation, making it the second largest employer in Somerset, Ky.

Holcim Ltd. of Switzerland is building what is considered to be the world's largest cement plant on 3,900 acres along the Mississippi River in Ste. Genevieve County, Mo. The greenfield plant will feature the largest single clinker production line in the world with a capacity of 12,000 tons per day of clinker and four million metric tons of finished cement annually. "The plant will utilize the most advanced technology and equipment, making it one of the lowest emission cement plants in the world," says CH2M Hill, which won the contract to design the facility.

Tempur-Pedic International, a Lexington, Ky.-based manufacturer of mattresses and pillows, has opened a new manufacturing facility in Albuquerque, New Mexico. The 800,000-square-foot, $95-million plant is the world's largest mattress factory and is the company's second plant in the United States. The facility will eventually produce the company's complete line of mattresses to serve markets in the western United States. Tempur-Pedic is also expanding its plant in Denmark to meet growing demand for its products in Europe.

Nanosolar Inc., a Palo Alto, Calif.-based maker of "roll-print" photovoltaic cells has selected a former Cisco plant in San Jose as a new manufacturing facility in the United States. The company received incentives from PG&E and the city of San Jose. Along with a new facility in Berlin, Germany, the company has added 647,000 square feet of manufacturing space to make its thin-film solar cells.

Procter & Gamble Co. has announced plans to invest between $35 and $50 million in its South Boston manufacturing center. The 33-acre site will house research and development, engineering, manufacturing, marketing and business support related to the company's Gillette Blade and Razor business. Employees now located in the Prudential Tower Building in Boston's Back Bay will relocate to the South Boston facility when the current Prudential Tower lease expires in 2009. "By combining the key blade and razor functions in one location, we will further strengthen our focus on world-class shaving product innovation and manufacturing technology" said Chip Bergh, president of P&G's global grooming division.

Purafilter 2000, a Las Vegas, Nev.-based manufacturer of residential and industrial air filters, will build a new manufacturing plant in Greer, S.C. The facility will employ 70 workers. "After an extensive search across the eastern seaboard our decision became clear upon arrival into Greenville, S.C.," said Mike Zimmer, president and CEO of Purafilter 2000. "My entire team is thrilled with everything that Greenville has done to help accommodate our needs."

Bioking has announced plans to build a second biodiesel equipment production plant in Lethbridge, Canada. The Dutch company will hire 50 employees to produce between 20 to 25 biodiesel processing units per week. The company says it hopes to become the world's leading biodiesel equipment manufacturer and intends to build similar facilities in other countries "both alone and together with partners." It plans to build another such facility in The Netherlands. It is located on the Web at www.bioking.nl.

Kysor Panel Systems, a maker of insulated panel systems for the food retail, hospitality, healthcare and environmental industries, is building a new 182,482-square foot manufacturing and warehouse facility in Forth Worth, Texas.

L&M Radiator of Hibbing, Minn., has announced plans to build a new plant in Yankton, S.D., creating 80 new jobs within three years. The $55-million manufacturer and distributor of industrial radiators and

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Factories Opening...

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heat exchangers, selected the southeast South Dakota site for its North American expansion after exploring options in Iowa, Minnesota and other states, says company president Dan Chisholm. "It was important for us to have a partnership with metal fabricators that could meet our needs. The labor force was also a consideration. The South Dakota option kept surfacing as the best solution for us."

Carolina Nonwovens Corp. has announced plans to build a new 33,000-square-foot, $4.2-million plant in Lincolnton N.C. The company expects to hire 15 employees.

NEW PLANTS OPENING OVERSEAS

Showa Denko K.K. (SDK) has opened a new $508-million hard disk media plant in Singapore, the company's second plant in that nation and its fourth hard disk media plant in the world. SDK says it is positioning itself for substantial growth in the hard disk drive industry, which is projected to grow by 40 percent between 2005 and 2009 to $40 billion. With the completion of the Singapore plant, the company's total HD production capacity will be 24 million disks per month by the end of 2008 compared to its current 15.75 million disks produced per month. Singapore has become a major base for the final assembly of high-end hard disk drives. Last year, Singapore accounted for 25 percent of the world's market share for discs, with Seagate and Hoya also having invested in plants there. The Singapore Economic Development Board (www.sedb.com) helped with incentives.

Tata Refractories has opened a new factory in China to manufacture magnesia carbon refractories. "The company has located the plant in Bayunguan, China, "to leverage the proximity to raw material sources and to avail itself of the low-manufacturing-cost structure of the Chinese economy," says the Indian-based company. Tata will invest Rs 37 crore in the plant, which will have a production capacity of 30,000 MTPA.

Brady Corp., a maker of identification products for the manufacturing industry, said it is expanding its manufacturing operations near Bangkok, Thailand, and in Penang, Malaysia. The company has also opened a new manufacturing center in Bangalore, India. The new Thailand facility will manufacture precision die-cut and stamped parts and labels for the hard-disk-drive industry. The Bangalore facility will focus on die-cut materials for the mobile phone and portable electronics industries.

Samsung India Electronics Pvt. Ltd. has started construction of a new color television manufacturing plant in Sriperumbudur near Chennai, India, with a production capacity of 1.5-million TV sets per year. The facility, spread over 80 acres, will also host factories making refrigerators, air conditioners, washing machines, printers, color monitors, LCD TVs and monitors and other products. The facility is expected to provide employment to around 2,500 people.

APEC, the Baldwin Park, Calif.-based maker of medical devices, has announced plans to open a new factory in China to make mid-to high-volume medical moldings. The company says it is building the 35,000-square-foot plant in Shenzhen because it has "the best infrastructure in China for high-end manufacturing, a large technical workforce, and its proximity to Hong Kong, a world class shipping port." The plant will provide output to Fortune 100 medical OEMs located in the area, as well as for the growing Asian market.
