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Special Report from USA Today on News from General Electric, NCR and Caterpillar

## Manufacturing Heading Back to the USA?

Reprinted from USA Today, August 6, 2010 -- Money/Economy/Manufacturing

By Paul Davidson, USA Today

Faced with rising costs, General Electric is moving production of its new energy-efficient water heater halfway around the world. The country it's leaving? China. The one it's bringing 400 jobs and a newly renovated factory? The United States.

A small but growing band of U.S. manufacturers — including giants such as General Electric (GE), NCR (NCR) and Caterpillar (CAT) — are turning the seemingly inexorable offshoring movement on its head, bringing some production to the U.S. from far-flung locations such as China. Others that were buying components overseas are switching to U.S. suppliers.

Ford Motor said Wednesday that it's bringing nearly 2,000 jobs to its U.S. plants by 2012 from suppliers, including those in Japan, Mexico and India.

Experts say the initiatives could moderate job losses that have dramatically shrunk the U.S. manufacturing industry. "I think we're going to start to see a slowing of lost jobs, and we'll see some jobs coming back," says Simon Ellis, an analyst for IDC Manufacturing Insights. "At some point, it will balance out, and we'll reach an equilibrium."

There are myriad reasons for the shifts, often called "onshoring" or "reshoring." Chinese wages and shipping costs have risen sharply in the past few years while U.S. salaries have stayed flat, or in some



cases, fallen in the recession. Meanwhile, U.S. manufacturers have been frustrated by the sometimes poor quality of goods made by foreign contractors, theft of their intellectual property and long product-delivery cycles that make them less responsive to customer demand.

Several cite the drawbacks of tying up valuable capital in huge overseas shipments, and want to bring assembly closer to engineers, suppliers and customers, concerns that mounted as makers slashed costs in the downturn. Others are simply weary of midnight phone calls — and multiple annual trips — to Asia.

"A lot of companies who have gone there to take advantage of cheap labor are start-

ing to tell us that if you (calculate) total cost and don't just look at wages, it's actually not worth it," says Jeremy Leonard, consultant for Manufacturers Alliance/MAPI, an industry-funded research group.

To be sure, examples of companies moving production to the U.S. are dwarfed by the many more still shuttering U.S. plants and moving to China, India or elsewhere. No one tracks such data, but one glaring, if imprecise, barometer is the U.S. trade deficit, which hit an 18-month high of \$42.3 billion in May.

Onshoring "is a trickle; it's not a flood," says Scott Paul, executive director of the Alliance for American Manufacturing, a

trade group. "There's still more going out than coming in."

Products that are labor-intensive and churned out in high volumes, such as apparel, textiles and TVs, will likely continue to be made overseas. So will those that are relatively inexpensive to ship but high-priced, such as laptops and cell phones, Ellis says. Goods are increasingly being made near customers, a trend that's driving U.S. makers to build factories in fast-growing China.

Still, says Jim Campbell, CEO of GE's appliance unit: "The biggest difference is the U.S. is in the game now."

### **Rethinking options**

In a June survey by MFG.com, 21% of North American manufacturers said they'd brought production into, or closer to, the continent in the past three months, up from 12% in the first quarter; 38% planned to re-search such a move in the next three months.

"More companies are looking at their options," says Sean Correll, senior director of consulting firm Emptoris.

He says most of his firm's clients, which include 250 of the Fortune 1,000, are weighing onshoring, up from a handful 18 months ago.

Meanwhile, many U.S. makers that were planning to move abroad are rethinking their strategies, says Craig Giffi, vice chairman of consulting firm Deloitte.

For decades, offshoring has dominated, driven by Chinese factory wages that were a tenth of U.S. pay. Imports make up about a third of all goods purchased in the USA, up from 10% in the early 1970s, according to the National Association of Manufacturers.

U.S. manufacturing employment, after peaking at 19.4 million in 1978, is 11.6 million, though automation also contributed to sizable job losses. More than 2 million factory jobs were cut in the recession alone. Yet, the U.S. still had 21% of global manufacturing in 2008, more than any other nation.

The tide may be easing, if not quite turning. Wages for Chinese factory workers, bol-

stered by recent strikes, have jumped 15% a year the past decade, Ellis says, but they're still a fraction of U.S. pay. Shipping costs are up about 71% the past four years as a result of higher oil prices and cutbacks in ships and containers in the slump, says IHS Global Insight.

With the cost gap between the U.S. and other countries narrowing for other expenses, such as class-action lawsuits, making products in the USA is now about 22% higher than the average of nine of its largest trading partners, down from 32% in 2006, according to a study by Leonard.

For GE, the increase in foreign costs tipped scales already shifting to the U.S. for certain products. The industrial giant announced last year that it will move assembly of its energy-efficient water heater from Chinese contractors to its own factory in Louisville in 2011. The company took advantage of a 2005 labor contract under which employees at the new Louisville plant will be paid an average of \$13 an hour, down from \$22 prior to the agreement.

GE also got state and local tax credits of \$25 million over 10 years, and federal incentives that encourage the manufacture of energy-saving products.

At the same time, the year-old water heater is a high-tech, high-growth model — it can delay heating if electric rates are high — and "something we would like to control," Campbell says. "We don't want to just park that with another company to build. When you have it in your plant, the cycle time (is) faster, and you can do launches quicker."

For example, he says, making the device in Louisville already has allowed engineers to work closely with production managers and assembly-line workers to perfect the product's design via prototypes. The approach has helped the company eliminate redundant parts and trim unit costs by \$20.

By contrast, he says, with the heater made in China, "You ship it abroad, guys make it, and if there's a problem, it's not going to be fixed initially." The company, he says, also worries that China's recent decision to let its currency rise against the dol-

lar will "drive our costs up."

GE plans to make other advanced products in the U.S., noting a 30% Chinese cost advantage likely has tilted to roughly a 6% U.S. edge when figuring lower inventory expenses and fewer delivery snafus. Within five years, he says, GE plans to move a "significant piece" of overseas appliance production to the U.S., for hundreds more jobs.

NCR was similarly motivated by a more nuanced view of costs when it decided to move manufacturing of ATMs sold in the U.S. from China, India and Hungary to a new 260-employee plant in Columbus, Ga., last October. The ATMs scan checks, providing an image receipt, and let customers put cash and checks into them without an envelope.

Besides uniting engineers with assembly-line workers, NCR wanted designers to be close to suppliers, customers and universities that quickly trained employees, says Peter Dorsman, head of global operations. Large bank customers, he says, came up with the idea for the ATMs.

"You're including suppliers and customers in the design activity so when it gets to the marketplace, you go from one or two units to mass production quickly," Dorsman says.

### **Quality issues**

Others have grown frustrated by the spotty quality of foreign goods. Sleek Audio, which makes high-end earphones, has moved most manufacturing from Chinese contractors to its plant in Manatee County, Fla., in the past year. Contractors have turned out poorly soldered cables, defective connectors and torn flanges, says CEO Mark Krywko. The start-up once had to scrap several hundred thousand dollars' worth of earphones due to a bad cable, and production mistakes have cost it millions of dollars in retail sales.

"You would have batches that were good and batches that were bad," Krywko says, adding that he had to hire four employees to inspect shipments.

Meanwhile, he says, Chinese labor and raw-material costs have risen even as U.S.

suppliers cut their prices in the slump. Although making the earphones in China is still 20% cheaper, "Dad got a few more gray hairs," says Krywko's son, Jason, the firm's vice president.

The Krywkos also tired of making six two-week trips a year to China. And with China 12 hours ahead of the East Coast, Jason had to call contractors almost daily at about 11 p.m. "My wife loves that," he says. The company has hired five employees at its Florida plant and plans to add another 15.

### **No shipping headaches**

Other reasons manufacturers are switching to the U.S.:

- **Lower inventory costs and fewer shipping hassles.**

Diagnostic Devices, which makes blood-glucose testing strips and monitors for diabetics, has to ship about 20% more product than it needs because of the month-long trek ships take to the U.S. from contractors in China and Taiwan, says Chief Operating Officer Rick Admani Abulhaj.

The company also keeps about \$4 million of extra goods in the warehouse in case of delays, forcing it to tie up a total \$6.5 million in inventory compared with about \$1 million if products are made in the U.S.

If products are defective, replacing them takes five months after figuring squabbles with contractors, shipments of raw materials back to Asia and reviews of new samples, he says.

In September, the company plans to move production of the strips to a new factory in Charlotte, where most of the manufacturing process will be automated to cut

labor costs. Monitor-making is scheduled to move to Charlotte by the end of 2011. The firm is hiring 20 employees.

- **Protection of intellectual property.**

With intellectual-property laws often enforced less vigorously in Asia, many manufacturers complain about counterfeiting. Farouk Systems, a top maker of hair irons and hair dryers, has spent \$500,000 a month battling counterfeiters who put the company's trademark on copies of Farouk's products, says CEO Farouk Shami.

"Counterfeiting is killing us," he says.

To remedy the problem and whittle inventory costs to \$50 million from \$120 million, Farouk last July moved some assembly of its irons and dryers from South Korea and China to a Houston factory that employs 1,000. Manufacturing costs in China are still about 30% lower. But Farouk believes the appliances' "Made in the USA" stamp will increase sales to hair salons.

- **Ease of meeting customer demand.**

The Outdoor GreatRoom Co. had to order products such as fire pits nine months in advance to fit into its Chinese contractors' production schedule and account for shipping lags. Most sales are in the fall, forcing the firm to forecast customer design preferences and sales volumes well in advance.

"You're locked in," says CEO Dan Shimek. "You might buy the wrong inventory that moves slower than you'd like."

By moving manufacturing of fire pits and some outdoor shelters to the U.S. the past year, the company now can place orders just three months in advance.

Onshoring also has been a boon for sup-

pliers. Three supplier trade groups joined forces last year for a marketing campaign to push manufacturers to bring production back to the U.S.

"I'd like to reduce the amount that's offshored by 30% to 40%," says Harry Moser, a former machine tool executive who conceived the effort. At a May trade fair in Irvine, Calif., 18 of 28 manufacturers that attended asked suppliers for quotes on purchases they would like to switch to U.S. sources.

Sales for vehicle gear supplier Morey are up 70% over last year as makers and fleet managers shift purchases to the U.S., says Vice President Taymur Ahmad.

Morey, which makes devices that track vehicle location, speed and maintenance data, has hired 110 employees at its Woodridge, Ill., plant since October. "I'm getting business that's unprecedented," Ahmad says. "And it's all from customers that are looking to buy locally."

(End)

### **Related article from Modern Casting magazine: "Poorly Made in China"**

*This review of the book, "Poorly Made in China," by an American author with a background in Chinese history and years of OEM experience with manufacturers in China updates current (2009) business practices. The review summarizes valuable knowledge for any OEM company considering offshore sourcing of custom components.*

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