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December 2012 -- Since the 1970s many technologies have been developed with strong energy-savings potential for the industrial sector. In fact, the U.S. DOE’s Advanced Manufacturing Office has supported more than 600 RD&D projects that yielded more than 250 technologies that are now in commercial use. However, even when lifecycle cost-effective technologies are available, their adoption can be uneven. As an example, the market penetration of variable speed control technologies in the United States lags behind market penetration rates in Japan and Western Europe. One mechanism to catalyze adoption of such technologies is demonstrations in manufacturing plants under real-world conditions.

Setting the Stage for Adoption

Without credible information on successful implementation, whether from peers or reputable third parties, energy-efficient technologies can seem risky. For energy-efficient industrial technologies in particular, a lack of credible information about a given technology’s success can prevent widespread adoption, particularly if the technology is integrated with a critical process that could jeopardize production if it does not operate as intended.

One important pathway to facilitate technology adoption is through demonstration projects that allow industrial end-users to assess a technology under real-world operation conditions. In “Crossing the valley of death: Policy adoptions to advance the uptake of energy-efficient emerging technologies in U.S. industry” (Bostrom, et al., 2011) the authors propose a set of policy options, including establishing regional demonstration hubs as a mechanism to drive the diffusion of industrial energy-efficient technologies. Demonstrations could also be implemented at company sites where some project funding is provided in exchange for detailed information on the project’s impact.

Showcase Projects Highlight Emerging Technology

The Better Buildings, Better Plants Challenge industrial partners have as part of their challenge-level commitment included showcase projects demonstrating their efforts to improve energy efficiency. Briggs & Stratton, a manufacturer of lawn mowers, generators, and other small engines, included a demonstration of isothermal melting at its Statesboro, Ga., plant. Not only has Briggs & Stratton had exchanges with General Electric and Alcoa to share technical expertise on the technology, but guests from domestic and international representatives from other firms have visited the site.

Isothermal melting uses high-intensity electrical resistance heaters to melt aluminum via conduction and convection, producing zero in-plant emissions. This melting technology imposes relatively low capital and operating costs, requires less floor space, and can increase energy efficiency by up to 70% compared to conventional natural gas-fired furnaces. The process received support from DOE as part of a technology demonstration by Apogee Technology. This demonstration provided the technical information that gave confidence to Briggs & Stratton to commit capital to upgrade their aluminum melting process. Richard Feustel, Corporate Energy Manager at Briggs & Stratton noted the demonstration’s importance, “When we begin to get into the process improvements, the technical expertise is key—the technical expertise we received from Apogee Technologies and the financial backing they had to obtain to get this project off the ground was a big part of it.” In addition to receiving expertise from Apogee, the Statesboro plant received a $45,000 grant from Southern Company which provided additional thrust in moving forward with the installation.

Moving forward with new policy and approaches

The gap between research and development and large-scale adoption of proven technologies remains. Investments in research and development have yielded significant technological developments that extend the potential to improve industrial energy efficiency. However, enabling mechanisms are needed to catalyze these technologies’ adoption in order to achieve their anticipated impacts.

Similar to ARPA-E’s assessment of technologies that offer transformational promise in energy generation, a parallel assessment of technologies with transformational promise in industrial energy efficiency with low market adoption rates could inform demonstration project technology candidates and scope. Ensuring that technologies are consistently
accompanied by demonstrations at relevant firms can provide the necessary information to increase adoption in industry where systems impact and operational risk of major alterations remains high.

2) ARIENS HAS MODEL TO BRIDGE WISCONSIN’S SKILLS GAP

December 12 -- Over the years, I’ve spent considerable time writing and reporting on the manufacturing skills gap. It remains a topic of concern for the industrial sector in Wisconsin as business, education and political leaders continue to work to develop solutions to a problem that stems from manufacturers struggling to fill open jobs while thousands of unemployed workers search for employment but don’t have the necessary skills to make them immediately viable candidates.

During the course of my coverage of the topic, Dan Ariens, president and chief executive officer of privately held Ariens Co., a Brillion-based outdoor power equipment manufacturer, has been held up as an example of a top-level leader who is taking noteworthy steps in dealing with the issue.

Ariens is more than willing to share the story of how his company, over the course of many years, has dealt with the situation. He will deliver the keynote address and also will take part in a break-out session at the Wisconsin Manufacturing Extension Partnership’s Manufacturing Matters! Conference on Feb. 28 in Milwaukee.

Getting students to develop problem solving skills has been essential in the success Ariens has exhibited in attracting key talent.

“We need to educate kids on how to solve problems versus teaching them a skill. That can be done in our plant,” Ariens said.

Educational systems, from high schools to technical schools and universities, aren’t broken but are in need of greater focus, he added.

“What keeps getting missed is that local business that are connected with their high schools, technical schools or university systems need to get much more engaged in those schools and in curriculum support so that it’s hands on, minds on,” Ariens said.

Way too often, students are are delivered the message that they need to go to college so that they can avoid working in a factory, he said.

“There’s a large population that isn’t built for advanced education and who’d much rather work with their hands and solve problems in an environment like manufacturing,” said Ariens. “Teachers keep telling kids that you don’t want to get stuck in factory. We’ve got to get over that. We want them to think that this could be a great opportunity.”

Manufacturers need to go beyond addressing their immediate skills needs on the factory floor and focus more on the long term, Ariens said. Again, he stressed the need to get younger people to develop problem solving skills, which will make them more viable employees.

A key aspect in Ariens’ efforts has come through a major investment to build a technology and education center at Brillion High School. The partnership between Ariens and the school began six years ago.
"It's not just about the infrastructure that we built, it's about the attitude and the mindset," Ariens said. "We really integrate with the school's manufacturing and technology educator, who creates projects through the full term that will engage the kids."

As part of the initiative, Ariens places its manufacturing and engineering staff into the classroom several times a year. The company also brings Brillion school students to its manufacturing plant.

"We'll actually get them engaged in a real live product development process," said Ariens, who has been with the company since 1983 and has served as president and CEO since 1998. "We have snow blowers on the market today that have parts designed by these high school kids. It's sort of a live curriculum."

Since the program began, students and parents alike have developed a more energized attitude toward manufacturing, Ariens said.

"Kids want to come work for Ariens," he said.

Having prospective employees see the plant in operation is a huge benefit for the company, which has about 1,800 employees globally, including 850 in Brillion, Ariens added.

"If we can get them here, they know they are in a different place," he said. "It's very high-paced and its hard work. I don't want to shy around that. But for people who want to come to work every day at a good company, those are the people we are able to recruit."

Ariens wants to share his success story with other employers for the benefit of the entire industry.

"We get a lot of educators and chambers of commerce that call us, but individual businesses don't call," he said. "Frankly, I wish they would. I wish they would say what are you doing that we could do in Middleton or in Rhinelander. But they don't. I think businesses assume that what we've done is all about the building and the money we spent to build it. It's really not. It's much more about the mindset and creating an environment where educators and parents understand that Ariens is a great place to work."

3) MILWAUKEE BUSINESS JOURNAL EXECUTIVE OF THE YEAR: PUBLIC COMPANY

Executive of the Year: Public Company

Aaron Jagdfeld

President and chief executive officer, Generac Holdings Inc.

Age: 41
Family: Wife, Christy, an accountant; daughters, Abby, 16, Meghan, 11; son, Adam, 14
Education: Bachelor of business administration degree in accounting, University of Wisconsin-Whitewater
Grew up: Milwaukee and Hartland
What book is on your nightstand? "Actually on my tablet, as I am trying to go paperless, is 'The Complete Short Stories of Ernest Hemingway.'"
What other profession would you like to try and why? “For the longest time, I really wanted to be a high school teacher so that I could teach U.S. history and coach high school track. I’ve always been a big history buff and the desire to coach is something that comes from my high school and college track career.”

What was your first job? Newspaper delivery

Favorite film? “Planes, Trains and Automobiles”

What’s something about you that would surprise people? “I really hate to golf. Most people assume that a CEO spends all of his or her spare time on a golf course, but the truth is that I would rather be running or biking.”

Favorite vacation spot? “We are fortunate to have a place in the north woods of Wisconsin that has been in my wife’s family since the 1940s and even if it’s only for a weekend, the opportunity to unwind and relax on Pelican Lake has always been my favorite retreat.”

Biggest perk of your job? “That one is easy: I get to spend every day doing something I really enjoy.”

What is playing on your iPod? “Every Beatles song imaginable”

iPhone or Blackberry? BlackBerry. “I’m still tied to the physical keyboard on the BlackBerry. I just haven’t found myself to be quite as productive with emails on an iPhone.”

4) EXECUTIVE OF THE YEAR: JAGDFELD PUTS GENERAC ON THE MAP

www.bizjournals.com

A year or two ago, Generac wasn’t exactly a household name around the country.

But times have changed.

After going public in February 2010 and a seemingly endless string of major storms and massive power outages, particularly on the East Coast, the Genesee-based company and its line of generators have been thrust firmly into the spotlight.

“We’ve been kind of this quiet little company out here in western Waukesha County for a long time. And I think that changed overnight,” said Aaron Jagdfeld, president and chief executive officer of Generac Holdings Inc., parent company of Generac Power Systems Inc. “Now with all the outages and the categories of product being top of mind for people and our brand being so strong in the marketplace, we’re really, I think, capitalizing on that today in a way that we just couldn’t before. It’s going to launch us in a place we’ve never been before as a company.”

Founded in 1959 by Robert Kern, Generac grew sales more than 33 percent in 2011 to almost $800 million. The company said in October it expects to grow more than 30 percent in 2012, surpassing $1 billion.

“Coming into this year I don’t know that I really thought that we would be able to achieve the kind of success that we had last year. But we have completely outdone ourselves,” Jagdfeld said. “We’ve hit a number of milestones this year that I think are really important for us.”

Those milestones include topping $1 billion in sales, initiating a $10 million headquarters renovation and expansion, buying back a former Generac manufacturing facility in Jefferson that recently went operational, acquiring a company that gives Generac its first international operations and adding more than 800 jobs through organic growth and acquisition.

The company’s 2012 success under Jagdfeld’s leadership led The Business Journal to name him Executive of the Year in the public company category.
“Aaron Jagdfeld has been instrumental in Generac’s success story,” said Michael Halloran, a Milwaukee-based financial analyst with Robert W. Baird & Co. Inc. who follows Generac.

Halloran said Generac’s 38 percent compound annual growth rate since 2010 is “impressive amid the slow growth environment in the U.S.” and is driven in part by “strong management execution to capitalize on recent major power outage events” and Jagdfeld-led efforts to improve the company’s marketing and distributor penetration.

Jagdfeld, 41, started working at Generac 18 years ago in the finance department. He was named CEO in 2008.

He is perhaps perfectly suited for the top role at a generator manufacturer. His accounting background gives him the chops to run the business, and the self-proclaimed “gear head” understands how the products work.

Jagdfeld, who comes from humble roots on Milwaukee’s northwest side, has built a reputation as one of the hardest workers at Generac. He made a point throughout his career of never going home before his boss left.

“That created for me a way to, I think, get the most out of the people that started working for me,” Jagdfeld said. “People really appreciate when you lead by example. People respect that if you’re the guy who’s in the office last, you’re turning the lights out last and you’re the first guy in the morning to get there and turn the lights on, people will work incredibly hard for you.”

That work ethic hasn’t changed now that he doesn’t have a boss. It helps that he loves his job.

“I feel like my role, and I’ve told my board this, if you didn’t pay me anything I’d still be here because I like what I do,” Jagdfeld said. “I ended up in a role where I’m happy to be building something.”

Tim Sullivan, former president and CEO of mining equipment giant Bucyrus International Inc. and new member of Generac’s board, said Jagdfeld has “unlimited potential.”

“I think the responsibilities he’s been given at his age, learning what he has in his career so far, positions him better than most young CEOs that I’ve met,” said Sullivan, who spent 35 years with Bucyrus in South Milwaukee. “I think he’s got all the attributes to be one of the best ever. I think he has that desire and that drive to be one of the best.”

Generac chief financial officer York Ragen said he knows few people with the same level of drive and energy that Jagdfeld possesses. Jagdfeld has made an impression at investor conferences in Generac’s early stages as a public company.

“(Investors and analysts) talk to a lot of CEOs obviously, and there’s a lot of people that don’t come to the table with the same level of passion,” Ragen said. “If you want to talk about intangibles, those are probably things you spend 30 minutes talking with him, (and) the energy radiates as you talk to him.”

Jagdfeld, an avid sports fan, talks about his strategy for Generac in terms of building a strong program that attracts top talent and has a certain aura of success surrounding it.

Key to that strategy are acquisitions. Ragen said Jagdfeld has led that charge over the past two years, which have seen Generac’s first acquisition in its history and its first international presence.

“It’s a huge world out there, and it’s something that I think if we continue to be shrewd about it, I think we can really add scale to this company over the next few years,” Jagdfeld said. “This is one of those situations where success breeds success.”

Generac Holdings Inc.

Company: Manufacturer of generators and other engine-powered products

Headquarters: Town of Genesee
Employees: 3,000
Top executive: Aaron Jagdfeld, president and chief executive officer
2012 projected sales: Nearly $1.2 billion

Generac’s 2012 in review

Generac had arguably its most successful year to date. Here are some of the highlights:

- **Feb. 1**: Generac announces one of its subsidiaries acquired Gen-Tran Corp., a transfer switch and portable generator accessory manufacturer in Alpharetta, Ga.
- **Feb. 7**: Generac says it will invest as much as $10 million to remodel and expand its corporate headquarters in the town of Genesee, create a technical center at the location and add more than 200 jobs.
- **Feb. 22**: Forbes names Generac’s Aaron Jagdfeld one of the 20 most powerful CEOs who are 40 years of age or younger.
- **July 30**: Generac says it will sell its automatic home backup power systems and other products in Australia and New Zealand through a distribution contract signed with Allpower Industries of Victoria, Australia.
- **Oct. 1**: Generac raises its 2012 guidance to about 30 percent sales growth over 2011, which would push it past $1 billion in annual sales.
- **Oct. 31**: Generac says it will hire more than 100 production workers and start manufacturing operations in a Jefferson facility that it initially intended to use for warehousing and distribution, driven by superstorm Sandy’s impact on the short-term demand for Generac’s portable generators and the expected long-term demand for its home standby generators.
- **Nov. 20**: Generac announces $46.5 million purchase of Ottomotores UK Ltd., which includes Mexican and Brazilian affiliates. The acquisition, completed Dec. 8, adds 500 employees and gives Generac its first international manufacturing operations.

5) HOW U.S. RETAILERS ARE BUILDING UP THEIR ONLINE MUSCLE

Reuters

MARTINSBURG, West Virginia – December 24 - The brave new world for U.S. retailers can be found in small cities like Martinsburg, West Virginia.

That's where department store chain Macy's Inc recently opened a facility the size of 43 football fields - big enough to stock 1 million pairs of shoes - just to fulfill orders made online.

The $150 million building, its third one dedicated primarily to supporting macys.com, has already been handling 60,000 orders on a busy day this holiday season. Macy's expects that figure to triple in two years.

"The customer is increasingly voting that she wants to shop both ways," said RB Harrison, Macy's executive vice president in charge of integrating e-commerce and store operations.

From Macy's to Home Depot Inc and Best Buy Co Inc, retail executives are racing to speed up order delivery and improve inventory management, which if done well, can help profit margins.

Many chains are also hiring staff, or even buying firms in Silicon Valley, to get the edge in technology.
"Today, tomorrow and going forward, you are comparing the experience in our store to the experience of sitting in your living room, in the comfort of your home, ordering something on your laptop, your smart phone or your iPad," Home Depot Chief Executive Frank Blake told Reuters.

"Your willingness to put up with rude associates, dirty stores and out of stocks is just going to go down and down and down. Our bar on performance in our stores is going to go up and up and up," he said.

To be sure, online sales to date account for just 7 percent of retail sales, according to Forrester Research. But the firm expects online sales growth to rise 45 percent to $327 billion and account for 9 percent of overall sales by 2016. Retailers are realizing they must respond to that kind of growth.

"When I was meeting with brick-and-mortar retailers 24 months ago they weren't thinking about online," said Carlo Bronzini Vender, a senior partner at New York-based investment bank Sonenshine Partners who helped advise Drugstore.com when it was bought by Walgreen Co in 2011. "Now people are being more proactive about it."

Even if some retailers like Macy's are less exposed to the threat from e-commerce's 800-pound gorilla Amazon.com Inc than a company like electronics chain Best Buy Inc, they are all under enormous pressure to offer faster delivery times, better service and an array of products.

Already armed with 40 e-commerce fulfillment facilities, Amazon is set to open another 7 centers next year.

And by next year, Amazon could offer cost-efficient same-day shipping to every customer in the 10 largest U.S. cities, according to RBC Capital Markets.

This year, Saks Inc, Dillard's Inc and Kohl's Corp are among retailers that opened the biggest online fulfillment centers they have ever had.

And those without much of an online presence are moving quickly to get one. For example, T.J. Maxx parent TJX Cos Inc, which sells designer clothing and home goods at discounted prices, said on Friday it bought off-price Internet retailer Sierra Trading Post for about $200 million.

NOT-SO-SECRET WEAPON

Most national retailers have largely stopped opening new stores as same-store sales growth has slowed compared to online.

But the stores can be a major weapon for companies like Macy's and Home Depot as they fight Amazon.

Since this summer, 292 of Macy's 800 stores have been doing double-duty as mini-fulfillment centers that assemble, pack and ship online orders, up from 23 stores a year ago. It plans to add this function to 200 more stores next year.

Nordstrom Inc has been doing this for years, giving it a big lead over other department stores.

At Macy's, already 10 percent of orders placed online have been dispatched through stores this holiday season.

"It's a natural extension for us because of our ability to leverage the 800 stores' inventory," said Harrison of Macy's. He noted that the cost for equipping a store for e-commerce is relatively small, requiring a small space in the docking area for tables, scales, and room to pack boxes.

Saks is testing "ship-from-store" and expects to roll it out next fall. Wal-Mart Stores Inc and Kohl's are also testing it.

"Fulfilling online orders from the store is the most important thing that will change physical retailers over the next five years," said Matt Nemer, an e-commerce analyst at Wells Fargo.

The strategy is aimed squarely at boosting profit margins.
Saks CEO Stephen Sadove envisions a scenario in which a pair of shoes sitting unsold at his Saks Fifth Avenue flagship could be used to fill an online order and sold at full price, instead of ending up being sold at a discount, hurting profit.

Macy's computers have complex algorithms that scour companywide inventory, factor in distance and shipping costs to come up with an optimal way to assemble and ship an order.

Despite higher shipping costs, Macy's shipments are often split between locations if a computer determines that the benefit to margins from selling an item that a store doesn't need or has too much of outweighs the extra expenses.

Stores are also serving as pick-up spots for online orders, and many retailers are finding this a boon. Wal-Mart says customers spend about $60 in a store when they pick up items ordered online.

In November, Best Buy decided to assign additional employees to deal with in-store pick-ups since 40 percent of bestbuy.com orders are now picked up.

DANGER OF MISSTEPS

Even Amazon sees the benefits of a physical presence. Staples Inc said last month it will install "Amazon Lockers" at its stores, allowing customers to have packages sent to Staples stores to avoid delivery hassles.

The biggest reason many retailers are only now offering 'ship-from store' and in-store pick-up is that the traditionally managed store and e-commerce inventory had been handled separately.

That is changing rapidly. Saks is spending about $40 million this year to update its computer systems in part to integrate databases. Industry experts say Nordstrom's e-commerce lead over department store rivals stems in large part to technology investments it made years ago.

But there are risks.

Computer systems and staff have to be ready or else retailers can face disaster, said Forrester Research analyst Sucharita Mulpuru. The use of stores is pointless if, for example, an inventory system gives the stockroom person collecting an order incorrect information about where a coat is located, leading to wasted time.

There is also a big risk of an item in store being "shopworn," or unsuitable to be sold.

"It's smart to fulfill from stores if you can figure out a way to get your operations right," Mulpuru said, noting the potential for human error is another concern. Such problems are limited at fulfillment centers because the systems are highly automated.

Executives agree. Harrison said stores are not meant to replace fulfillment centers, with their much greater breadth and quantity of products, but are there to supplement them.

"It's always going to be more efficient to ship from a fulfillment center," Saks' Sadove told Reuters. "You're never going to be perfect in 'ship-from-store'."

SILICON VALLEY APPEAL

To support its e-commerce strategy, retailers are aggressively hiring in Silicon Valley. Nordstrom took on more than 400 new employees with software engineering and website development experience, including Kirk Beardsley, an e-commerce executive from Microsoft Corp who had been a director of business development at Amazon for over seven years.

Retailers hope to take this even further by analyzing online data. Macy's executive Harrison said data collected this holiday season will help prepare for the next steps in its online push.
Last year, Wal-Mart acquired California-based start-up Kosmix, which developed technology to filter data from social media networks. As a result, Wal-Mart's San Bruno, California-based e-commerce offices now house more than 1,000 staff.

Getting hold of the technology to back up these efforts is driving acquisitions. They are frequently small ones, driven by retailers' attempts to master the online sales process, rather than immediately boost sales.

Home Depot, which bought tech start-up Redbeacon earlier this year, is looking to acquire or partner with more companies in the Valley, according to CEO Blake.

Redbeacon, founded by a trio of Google Inc veterans, matches homeowners with the best contractors for jobs such as cleaning and home repair. That kind of innovation will send shock waves through the sector, Blake said.

"I think there is going to be as much change over the next 10 years in retail as in the last 50 years. So if you're prioritizing where you put your best people, your best resources and all the rest, for us it's on inter-connective retail," said Blake.

6) WEBSITES VARY PRICES, DEALS BASED ON USERS' INFORMATION

December 24 -- It was the same Swingline stapler, on the same Staples.com website. But for Kim Wamble, the price was $15.79, while the price on Trude Frizzell's screen, just a few miles away, was $14.29.

A key difference: where Staples seemed to think they were located.

A Wall Street Journal investigation found that the Staples Inc. website displays different prices to people after estimating their locations. More than that, Staples appeared to consider the person's distance from a rival brick-and-mortar store, either OfficeMax Inc. or Office Depot Inc. If rival stores were within 20 miles or so, Staples.com usually showed a discounted price.

"How can they get away with that?" said Ms. Frizzell, who works in Bergheim, Texas.

In what appears to be an unintended side effect of Staples' pricing methods—likely a function of retail competition with its rivals—the Journal's testing also showed that areas that tended to see the discounted prices had a higher average income than areas that tended to see higher prices.

Presented with the Journal's findings, Staples acknowledged that it varies its online and in-store prices by geography because of "a variety of factors" including "costs of doing business."

For years, the Internet, with its promise of quick comparison shopping, has granted people a certain power over retailers. At the click of a button, shoppers could find a better deal elsewhere, no travel required.

But the idea of an unbiased, impersonal Internet is fast giving way to an online world that, in reality, is increasingly tailored and targeted. Websites are adopting techniques to glean information about visitors to their sites, in real time, and then deliver different versions of the Web to different people. Prices change, products get swapped out, wording is modified, and there is little way for the typical website user to spot it when it happens.
The Journal identified several companies, including Staples, Discover Financial Services, Rosetta Stone Inc. and Home Depot Inc., that were consistently adjusting prices and displaying different product offers based on a range of characteristics that could be discovered about the user. Office Depot, for example, told the Journal that it uses "customers' browsing history and geolocation" to vary the offers and products it displays to a visitor to its site.

Offering different prices to different people is legal, with a few exceptions for race-based discrimination and other sensitive situations. Several companies pointed out that their online price-tweaking simply mirrors the real world. Regular shops routinely adjust their prices to account for local demand, competition, store location and so on. Nobody is surprised if, say, a gallon of gas is cheaper at the same chain, one town over.

But price-changing online isn't popular among shoppers. Some 76% of American adults have said it would bother them to find out that other people paid a lower price for the same product, according to the Annenberg Public Policy Center at the University of Pennsylvania.

"I think it's very discriminatory," said Ms. Wamble, an insurance account manager in Boerne, Texas, who priced the Swingline stapler for the Journal this month. She was just 10 miles or so down the road from Ms. Frizzell, but she saw higher prices on the Staples website than Ms. Frizzell did for all five products tested. Items tested included a pack of Bic pens, a case of orange masking tape, a set of crimped-end mailing tubes and a big safe.

It remains unclear precisely what formula Staples used to set online prices. Staples declined to answer detailed questions about the findings. It told the Journal that "in-store and online prices do vary by geography due to a variety of factors, including rent, labor, distribution and other costs of doing business."

It is possible that Staples' online-pricing formula uses other factors that the Journal didn't identify. The Journal tested to see whether price was tied to different characteristics including population, local income, proximity to a Staples store, race and other demographic factors. Statistically speaking, by far the strongest correlation involved the distance to a rival's store from the center of a ZIP Code. That single factor appeared to explain upward of 90% of the pricing pattern.

What economists call price discrimination—when companies offer different prices to different people based on their perceived willingness to pay—is commonplace and can be beneficial. Movie theaters give senior-citizen discounts. One traveler's willingness to pay top dollar for an airplane seat might mean other people will pay less.

In other cases, though, shoppers can be the loser. That same airline might easily just pocket the big spender's extra money and leave other prices unchanged.

Of course, not all price differences are instances of price discrimination. Prices driven down by competition wouldn't generally be considered discriminatory, for example.

Basing online prices on geography can make sense for various reasons, from shipping costs to local popularity of a particular item. Some retailers might naturally cluster in specific areas as well—a prosperous suburb, say—boosting the competitive pressure to discount.

But using geography as a pricing tool can also reinforce patterns that e-commerce had promised to erase: prices that are higher in areas with less competition, including rural or poor areas. It diminishes the Internet's role as an equalizer.

In the Journal's examination of Staples' online pricing, the weighted average income among ZIP Codes that mostly received discount prices was roughly $59,900, based on Internal Revenue Service data. ZIP Codes that saw generally high prices had a lower weighted average income, $48,700.

Staples didn't comment on the income split beyond saying that the company offers a low-price guarantee.

Online businesses have experimented with tailored offers since the dawn of the Internet era. In 1997, a startup called Personify sold software that tried to personalize Web pages for shoppers. For example, people taking a certain path through a site could be tagged as price-conscious and be shown low-end items, said Eileen Gittins, Personify's former chief executive.
"The idea was more advanced than the technology could support at the time," said Ms. Gittins. Today she runs an online company, Blurb, that lets people make books using their own photos.

In 2000, Amazon.com Inc. infuriated many customers when it sold DVDs to different people for different prices. Amazon called it merely a test and ultimately refunded the price difference to people who paid more.

In 2010, the Journal reported that Capital One Financial Corp. was using personalization technology to decide which credit cards to show first-time visitors to its website. Recent Journal follow-up testing indicated that Capital One was showing different users different cards first—either those for "excellent credit" or "average credit."

Capital One says it gathers data about visitors while they are on its website and uses this information to suggest different products to them. "We do not use any of this data in credit decisioning or underwriting," a Capital One spokeswoman said. "We're making an educated guess about what we think consumers will like."

This year, researchers in Spain studied more than 200 online retailers and found a handful of examples of price differences—including at Staples within Massachusetts—that appeared to be based on location and other factors. Those findings suggest that Staples’ price adjustments have been present at least since this summer.

It is difficult for online shoppers to know why, or even if, they are being offered different deals from other people. Many sites switch prices at lightning speed in response to competitors’ offerings and other factors, a practice known as "dynamic pricing." Other sites test different prices but do so without regard to the buyer’s characteristics.

To find differences that weren’t purely the result of dynamic pricing or randomized tests, the Journal conducted preliminary scans by simulating visits from different computers to a variety of e-commerce sites. If a website showed different prices or offers, the Journal then analyzed the site’s computer code and conducted follow-up testing.

The Journal’s tests, which were conducted in phases between August and December, indicated that some big-name retailers are experimenting with offering different prices and products to different users.

Some sites, for example, gave discounts based on whether or not a person was using a mobile device. A person searching for hotels from the Web browser of an iPhone or Android phone on travel sites Orbitz and CheapTickets would see discounts of as much as 50% off the list price, Orbitz said.

Both sites are run by Orbitz Worldwide Inc., which in fact markets the differences as "mobile steals." Orbitz says the deals are also available on the iPad if a person installs the Orbitz app.

"Many hotels have proven willing to provide discounts for mobile sites," said Chris Chiames, Orbitz’s vice president of corporate affairs. Hotels on Orbitz mobile sites also offer discounts "that might target shoppers in a specific geographic region," as determined by the physical location of the user, as well as "other factors."

Often, sites tailored results by geography. In the tests, Discover, for instance, showed a prominent offer for the company's new "it" card to computers connecting from cities including Denver, Kansas City, Mo., and Dallas, Texas. Computers connecting from Scranton, Penn., Kingsport, Tenn., and Los Angeles didn’t see the same offer.

A Discover spokeswoman said that the company was testing the card, but that for competitive reasons, it wouldn’t comment further on its "acquisition strategy" for new customers.

At home-improvement site Lowe's Cos., prices depend on location. For example, a refrigerator in the Journal's tests cost $449 in Chicago, Los Angeles and Ashburn, Va., but $499 in seven other test cities. Lowe's said online shoppers receive the lower of the online store price or the price at their local Lowe's store as indicated by their ZIP Code.

Home Depot's website offered price variations that appeared to be based on the nearest brick-and-mortar store as well. A 250-foot spool of electrical wiring fell into six pricing groups, including $70.80 in Ashtabula, Ohio; $72.45 in Erie, Pa.; $75.98 in Olean, N.Y and $77.87 in Monticello, N.Y.
The company said it uses "IP address," a number assigned to devices that connect to the Internet, to try to match users to the closest store and align online prices accordingly.

Location also seemed to be important for some international companies. The Journal saw Rosetta Stone, which sells software for learning languages, offering discounts of as much as 20% for people who bought multiple levels of its German lessons from certain locations in the U.S. or Canada, but not others from the U.K. or Argentina.

Rosetta Stone said it sometimes tests and offers different product "bundles" in different places. It also personalizes its suggestions based on how the visitor gets to the site, Rosetta Stone said—whether from a search engine, a social-media link, a mobile device or a PC. "We are increasingly focused on segmentation and targeting," a spokesman said. "Every customer is different."

The differences found on the Staples website presented a complex pricing scheme. The Journal simulated visits to Staples.com from all of the more than 42,000 U.S. ZIP Codes, testing the price of a Swingline stapler 20 times in each. In addition, the Journal tested more than 1,000 different products in 10 selected ZIP Codes, 10 times in each location.

The Journal saw as many as three different prices for individual items. How frequently a simulated visitor saw low and high prices appeared to be tied to the person's ZIP Code. Testing suggested that Staples tries to deduce people's ZIP Codes by looking at their computer's IP address. This can be accurate, but isn't foolproof.

In the Journal's tests, ZIP Codes whose center was farther than 20 miles from a Staples competitor saw higher prices 67% of the time. By contrast, ZIP Codes within 20 miles of a rival saw the high price least often, only 12% of the time.

Staples.com showed higher prices most often—86% of the time—when the ZIP Code actually had a brick-and-mortar Staples store in it, but was also far from a competitor's store. In calculating these percentages, the Journal excluded New York City and used the more than 29,000 "standard" ZIP Codes in the 50 states and District of Columbia. This meant things like ZIP Codes with only post-office boxes weren't counted.

Prices varied for about a third of the more than 1,000 randomly selected Staples.com products tested. The discounted and higher prices differed by about 8% on average.

There were a few areas of the U.S. and its territories that offer exceptions. The Journal found that Puerto Rico was generally shown the higher prices no matter how close the ZIP Code was to local OfficeMax or Office Depot outlets. For Guam, on the other hand, tests of Staples.com almost always returned the lower prices, even though the nearest U.S. OfficeMax or Office Depot is listed online as being in Hawaii, nearly 4,000 miles away.

New York City, too, appeared to be a special case. Tests of Staples.com using ZIP Codes in the boroughs of the Bronx, Manhattan and Staten Island consistently saw higher prices, while Brooklyn and Queens saw almost only the discounted prices. This despite the fact that all parts of New York City look to be within 20 miles of a Staples competitor, according to the websites.

As a final test, the Journal ordered two separate Swingline staplers from Staples.com, from two nearby ZIP Codes—one costing $14.29 and the other one $15.79. The staplers arrived the same day. They appear to be indistinguishable from one another and do an equally thorough job of stapling.
THOUGHTS FOR THE DAY

I AM IN LOVE WITH YOU

"I am," he said. He was staring at me and I could see the corners of his eyes crinkling.

"I’m in love with you, and I’m not in the business of denying myself the simple pleasure of saying true things. I’m in love with you and I know that love is just a shout into the void, and that oblivion is inevitable, and that we’re all doomed and that there will come a day when all our labor has been returned to dust, and I know the sun will swallow the only earth we'll ever have,

and I am in love with you."

-- Anonymous

BE YOURSELF

"Be who you are and say what you feel. because those who mind don’t matter and those who matter don’t mind."

– Dr. Seuss

STRETCHING THE MIND

“A mind that is stretched by a new experience can never go back to its old dimensions.”

– Oliver Wendell Holmes, Jr.

FORGIVENESS

“The weak can never forgive. Forgiveness is the attribute of the strong.”

– Mahatma Gandhi

A SMILE

“Nothing is more beautiful that a smile That has struggled through tears.”

-- Demi Lovato

MAKING MISTAKES

“A life spent making mistakes is not only more honorable, but more useful than a life spent doing nothing.”

– George Bernard Shaw
BEING LONELY

People are lonely because they build walls instead of bridges.

- Anonymous

OPENNESS

Be careful who you open up to.
Only a few people actually care,
the rest are just curious.

-- Anonymous

VISION

"Much of what we see depends on what we are looking for."

– Phil Callaway

AGAINST THE GRAIN

People are often unreasonable, irrational, and self-centered. Forgive them anyway.
If you are kind, people may accuse you of selfish, ulterior motives. Be kind anyway.
If you are successful, you will win some unfaithful friends and some genuine enemies. Succeed anyway.
If you are honest and sincere people may deceive you. Be honest and sincere anyway.
What you spend years creating, others could destroy overnight. Create anyway.
If you find serenity and happiness, some may be jealous. Be happy anyway.
The good you do today, will often be forgotten. Do good anyway.
Give the best you have, and it will never be enough. Give your best anyway.

-- Mother Teresa

BACK TO THE TOP

8) GENERAC MAY BE A LITTLE SHORT ON POWER HERE

Stephen Simpson  www.seekingalpha.com

January 2 -- I love modestly-sized niche industrial companies, but I tend to like them a lot better when they're not especially popular or well known yet. That's the problem with Generac (GNRC) - although I really like Generac's power generator business (and the prospects for taking it global), there is ample analyst coverage today and the valuation is not all that compelling.
Generac has built itself into a billion dollar-plus business by manufacturing a broad range of standby and portable electric power generators. Generac's systems range from 0.8kW to 9MW and cover the waterfront from small portable generators to fixed residential standby units to larger industrial generators.

Unlike competitors like Briggs & Stratton (BGG), Kohler, Cummins (CMI), and Caterpillar (CAT), Generac is solely focused on generators, and that focus shows. The company has the broadest array of products available to the market, many of which offer meaningful performance/cost advantages (like lower cost of ownership and higher reliability). Generac also uses a lean manufacturing process that includes outsourcing, and the company has reaped good margins and returns as a result.

Generac has also differentiated itself with the fuel sources - while it's commonplace for residential standby generators to run on natural gas or LP, industrial generators have historically used diesel. By offering natural gas and LP options (as well as diesel and bi-fuel), Generac has created genset options with lower cost of ownership and operation, but without sacrificing performance.

While Generac is certainly working on building its commercial and industrial (C&I) business (more on this later), the residential business generates more than 60% of revenue at present. The real question is just how big Generac's addressable market could get.

Generac believes it has about 70% of the residential standby market, with Briggs & Stratton and Kohler claiming about 10% each and Cummins holding 5%. Unfortunately, the residential standby market is only about 2.5% penetrated today (with another 12% or so of homeowners owning a portable system). With each 1% of residential standby market penetration worth about $2 billion in addressable market size, it's well worth asking if this market can grow.

The biggest obstacle to growth is that the purchase of a standby system is at the very least a highly discretionary purchase, if not a luxury item. Generac (and others in the market) have made great strides in lowering the cost (down about 50% over the last 14 years), and the company has worked with builders to increasingly design standby units into the basic design of new homes. Accordingly, it's not unreasonable to think that the growth of this market is tied at least in part to the growth in residential housing (particularly on the higher end where an incremental $2,000 to $5,000 may not be problematic).

Perception of need is another issue, but the U.S. utility infrastructure is taking care of that one for Generac. While major weather events like Hurricane Sandy and 2012's "super derecho" certainly bring more attention to the need for and advantages of standby power supplies, the ongoing erosion of the power system is arguably a bigger factor. There were over 60 power outages affecting more than 50,000 people in 2010, versus just five such outages in 1993. Given that it seems unlikely that the U.S. government is going to find enough spare change in the couch cushions to fund a major transmission/distribution system improvement initiative, more and more homeowners may turn to fixed standby systems as a means of guaranteeing that their power stays on all the time.

When it comes time to buy, Generac is usually well-positioned. Not only does Generac have over 4,000 dealers across the country, but its products figure prominently at Home Depot (HD) and Lowe's (LOW), even with Briggs & Stratton selling systems under the General Electric (GE) brand name.

Though clearly smaller than the residential business, I wouldn't sleep on Generac's C&I business, as the company has ramped up its investments into these operations. Right now, Generac has about 15% share in the C&I market, with much of that concentrated in the standby market. That leaves them well behind the likes of Caterpillar (which has about 30%) share, Cummins (25%), Kohler (20%), and Germany's Tognum.

Generac has done relatively well in places where you'd expect solid interest in standby power - healthcare facilities, educational facilities, telecom installations and so on. Part of the question now is how successfully the company can expand its addressable market. Given the cost of spoilage, businesses like supermarkets, convenience stores, and restaurants are all likely candidates, but I suspect there's a larger market in customer service-sensitive applications. Consider that in the recent Hurricane Sandy it would seem that more Verizon (VZ) towers stayed operational compared with AT&T (T), as Verizon made greater use of mobile gensets.
Generac is also looking to compete more directly in markets like construction, where rivals like Caterpillar and Cummins have been pretty successful. In acquiring Magnum, Generac bought a business that has about 10% share in mobile trailer-mounted generators, as well as 35% share in the light towers that construction crews use to light up work areas at night.

Perhaps just as important are the overseas growth opportunities. Caterpillar, Cummins, and Tognum are global genset businesses, but Generac really hasn't been up until recently. The company is moving to change that, though, with a recent distribution arrangement for Australia and the acquisition of Ottomotores from TT Electronics. Ottomotores has solid C&I market positions in Mexico and Brazil, and I believe entry into Australia could be a launching pad into markets like Indonesia and India - markets where power reliability is a major issue even in large cities.

Will Risks Zap Investors?

Like any company, Generac has multiple operating risks for investors to consider. While Generac has benefited from its focused approach to the generator market, the company has begun to spread its wings a bit, re-entering markets like pressure washers. At the same time, there's always the risk that competitors will check any moves the company makes to gain share in the C&I market and/or look to grab some of that sizable share in the residential standby market.

Investors should also note that private equity group CCMP Capital Advisors owns more than half of the shares and three of the seven board seats. While the company recently announced (and then canceled) a secondary offering that would have seen about one-third of that stake go into the float, investors need to realize the potential for conflicts of interest here.

Likewise, I can't say I'm ecstatic about the company's decision earlier in 2012 to recapitalize and pay a $6 per share special dividend. The recapitalization added about $400 million in net debt, and I believe the capital could have been better used to grow the business.

Last and maybe least, there's a small matter with Briggs & Stratton that means little today, but could become an issue in the future. Generac exited the portable generator business years ago, and in so doing Briggs & Stratton came to own the trademark to "Generac Portable Products." Generac reentered the business in 2007 and while Briggs & Stratton doesn't presently use that trademark, I suppose it could and create some market confusion in the process.

The Bottom Line

I like the Generac business quite a lot, and I think there are good prospects for both domestic market penetration and overseas growth. What I don't like so much, though, are the expectations already built into the stock.

Generac has recently been delivering free cash flow margins in the high teens, but I think the company is likely to see those fall into the mid-teens as the company invests in growth. Even still, investors should note that the company spends quite little on Capex (relative to sales) compared with most industrial companies. Consequently, while I can see this company growing revenue at a nearly 10% compound rate out past 2000, the free cash flow growth rate is more likely to be in the high single digits.

If Generac grows at an 8%-9% clip, fair value (net of the debt) would seem to be in the high $20s. That said, I would note that the company earns very good returns on capital, enjoys healthy market shares, and has a manufacturing system that should scale well with relatively modest incremental investments. That would lead me to give it some benefit of the doubt in terms of its future growth prospects (and/or the appropriate discount rate), but even an "enhanced" fair value analysis suggests a fair value in the mid-$30s today. To me, then, that makes it a great watch list candidate, but a riskier idea for new money.
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<tr>
<th>Date</th>
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<tr>
<td>February 5-8, 2013</td>
<td><strong>World of Concrete</strong>, Las Vegas Convention Center, Las Vegas, NV</td>
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<td>February 6-7, 2013</td>
<td><strong>GIS</strong>, Golf Industry Show, San Diego Convention Center, San Diego, CA</td>
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<td>February 10-13, 2013</td>
<td><strong>The Rental Show</strong>, American Rental Association Conference and Trade Show, Sands Convention Center, Las Vegas, NV</td>
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<td>February 16-19, 2013</td>
<td><strong>OPEAA</strong>, Outdoor Power Equipment Aftermarket Association Annual Meeting, PGA Resort and Spa, Palm Beach Gardens, Florida</td>
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<td>March 3-6, 2013</td>
<td><strong>OPEESA</strong>, Outdoor Power Equipment and Engine Service Association, Annual Members Meeting, Don CeSar Hotel, St. Pete Beach, Florida</td>
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<td>March 10, 2013</td>
<td><strong>Daylight Savings Time Begins</strong></td>
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<td>May 7-9, 2013</td>
<td><strong>National Hardware Show</strong>, Las Vegas Convention Center and Sands Convention Center, Las Vegas, NV</td>
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<td>June 23-29, 2013</td>
<td><strong>Skills USA</strong>, National Leadership and Skills Conference, Kansas City, MO</td>
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<td>September 2-4, 2013</td>
<td><strong>SPOGA+GAFA</strong>, International Garden Trade Fair with the International Trade Fair for Sport, Camping and Garden Lifestyle, Cologne, Germany</td>
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<td>September 3-5, 2013</td>
<td><strong>IOG SALTEX</strong>, Grounds Care, Sports Facilities, Amenities, Landscaping And Estate Management Outdoor Trade Show, Windsor Race Track, Windsor, Berkshire, England</td>
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<td>September 16-18, 2013</td>
<td><strong>GLEE</strong>, International Garden and Leisure Show, NEC Birmingham, England</td>
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<td>October 30 – Nov. 2, 2013</td>
<td><strong>FFA</strong>, Future Farmers of America Annual Convention, Louisville, KY</td>
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<td>October 23-25, 2013</td>
<td><strong>GIE+EXPO</strong>, Combining GIE+EXPO and the Hardscape North America Shows, Louisville, KY</td>
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<td>November 3, 2013</td>
<td><strong>Daylight Savings Time Ends</strong></td>
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### OPEESA Officers, Board, Executive Director Contact Information

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Company</th>
<th>Email</th>
<th>Position/Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pete</td>
<td>Yunker</td>
<td>Power Equipment Systems 1645 Salem Industrial Dr. Salem OR 97301</td>
<td><a href="mailto:petey@pesnet.com">petey@pesnet.com</a></td>
<td>President</td>
</tr>
<tr>
<td>Todd</td>
<td>Winstead</td>
<td>Tidewater Power Equipment 5796 Thurston Ave. Virginia Beach VA 23455</td>
<td><a href="mailto:twinstead@tpeco.com">twinstead@tpeco.com</a></td>
<td>Vice President Annual Meeting</td>
</tr>
<tr>
<td>Ron</td>
<td>Monroe</td>
<td>Hayward Distributing Co. 4061 Perimeter Drive Columbus OH 43228</td>
<td><a href="mailto:rmonroe@haydist.com">rmonroe@haydist.com</a></td>
<td>Sec/Treas.</td>
</tr>
<tr>
<td>Robert</td>
<td>Graham</td>
<td>EWI 7415 Empire Central Houston TX 77040</td>
<td><a href="mailto:robert.graham@engwarehouse.com">robert.graham@engwarehouse.com</a></td>
<td>Past President</td>
</tr>
<tr>
<td>Mike</td>
<td>Rounsavall</td>
<td>Servantage Dixie Sales Co. 5920 Summit Ave. Browns Summit NC 27214</td>
<td><a href="mailto:mrounsavall@dixiesales.com">mrounsavall@dixiesales.com</a></td>
<td>2013</td>
</tr>
<tr>
<td>Denis</td>
<td>Bedard</td>
<td>Husqvarna Professional Products 9335 Harris Corners Parkway Charlotte NC 28269</td>
<td><a href="mailto:denis.bedard@husqvarna.com">denis.bedard@husqvarna.com</a></td>
<td>2013 Manufacturer/Affiliate Rep.</td>
</tr>
<tr>
<td>Robert</td>
<td>Smith</td>
<td>Smith’s South-Central Sales Co. 1802 S. Arkansas St Springhill LA 71075</td>
<td><a href="mailto:rsmith@smithssc.com">rsmith@smithssc.com</a></td>
<td>2014</td>
</tr>
<tr>
<td>Rick</td>
<td>Bryan IV</td>
<td>Bryan Equipment 457 Wards Corner Road Loveland OH 45140</td>
<td><a href="mailto:rbiv@bryanequipment.com">rbiv@bryanequipment.com</a></td>
<td>2014</td>
</tr>
<tr>
<td>Jeff</td>
<td>Plotka</td>
<td>Precision Work 75 Harbor Road Port Washington NY 11050</td>
<td><a href="mailto:jeff@precisionworkinc.com">jeff@precisionworkinc.com</a></td>
<td>2014</td>
</tr>
<tr>
<td>Mike</td>
<td>Horak</td>
<td>GE Commercial Dist. Finance 5595 Trillium Blvd. Hoffman Estates, IL 60192</td>
<td><a href="mailto:mike.horak@ge.com">mike.horak@ge.com</a></td>
<td>2014 Manufacturer/Affiliate Rep.</td>
</tr>
<tr>
<td>Ted</td>
<td>Finn</td>
<td>Gardner, Inc. 3641 Interchange Road Columbus, OH 43204</td>
<td><a href="mailto:tedf@gardnerinc.com">tedf@gardnerinc.com</a></td>
<td>2015</td>
</tr>
<tr>
<td>Nancy</td>
<td>Cueroni</td>
<td>OPEESA 37 Pratt Street 26 Essex CT 064</td>
<td><a href="mailto:Info@opeesa.com">Info@opeesa.com</a></td>
<td>Executive Director</td>
</tr>
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</table>