



PRESS RELEASE

GE Opens First New Manufacturing Operation in Louisville, Ky. in Over 50 Years

- *The GeoSpring™ Hybrid Water Heater rolls off the assembly line for the first time in Louisville*
- *\$38 million investment turns vacant factory into vibrant, high-tech manufacturing operation*
- *GE chooses to invest in new U.S. manufacturing facility — the first milestone in its \$1 billion investment in the Appliances' business, creating 1,300 American jobs by 2014*
- *Success of GE's super-efficient hybrid water heaters expected to create demand and more jobs*

LOUISVILLE, Ky. — Feb. 10, 2012 — (NYSE: GE) — GE Appliances today announced the opening of its GeoSpring™ Hybrid Water Heater manufacturing facility at Appliance Park in Louisville, Ky. — the first to open there since 1957. The \$38 million investment in the new product and a revitalized facility is the first milestone in commitments GE has made since 2009 to invest a total of \$1 billion (\$800 million in Louisville) and create more than 1,300 new jobs in the U.S. by 2014. The new product and other recent investments at Appliance Park has also created hundreds of highly skilled salaried jobs in fields like engineering, industrial design and manufacturing.

"The journey we started in 2009 to get to this day has been an inspirational one," said GE Appliances President and CEO Charles "Chip" Blankenship. "To reverse decades of outsourcing by bringing new, industry-leading products and jobs back to the U.S. takes tremendous cooperation, imagination, courage and plain hard work by a lot of people. I want to thank our local union, our employees, government and company officials for having and executing a vision that is bringing these jobs to Appliance Park and creating a bright future for our business."

Lean manufacturing and a more competitive wage structure for new employees led to the selection of Louisville as the production site for the new water heater instead of China, where an earlier version of the product was made. Not only can the new product now be made more competitively in the U.S., the GeoSpring Hybrid Water Heater, developed by the Louisville team, has an enhanced feature set, offers better performance with greater energy savings and will be more affordable for consumers.

The GeoSpring has the distinction of being the first GE Appliances product designed and built using Lean manufacturing principles. The Lean process, which uses a cross-functional team of employees — including hourly manufacturing workers — to design the product and the manufacturing process, will help increase the competitiveness of the operation by identifying and removing waste in materials and work effort often found in traditional manufacturing.

State and local governments also supported putting the new GeoSpring in Louisville with up to \$17 million in incentives to design and build the new energy-efficient facility and other investments that the company will make at Appliance Park during the next several years.

"We made a commitment early in my administration that energy-related development would be a high priority," Kentucky Gov. Steve Beshear said. "We developed an aggressive plan to not only research and develop new kinds of energy production, but to attract businesses and projects that are similarly committed to cleaner, greener energy applications. GE's new hybrid water heater is a perfect match for our energy commitment and our strong manufacturing core."

About the GeoSpring:

The new GE GeoSpring Hybrid Electric Water Heater is designed to provide hot water in the quantities homeowners have come to expect from a 50-gallon tank water heater, but uses less than half the energy to produce it. Compared to a conventional 50-gallon tank water heater that uses 4879 kWh per year, the new GE GeoSpring Water Heater:

- Uses less than half of that energy – or about 1830 kWh per year.*
- Saves approximately \$325 per year, less than half the cost of a conventional electric water heater — that's \$3,250 in savings in energy costs over a 10-year period based on 10.65 cents per kWh.

The GeoSpring Hybrid Water Heater combines energy-saving heat-pump technology with traditional electric heating elements. Hybrid technology absorbs heat in the ambient air and transfers it into the water. Since this requires much less energy than the energy used to generate radiant heat – as used in a conventional electric tank water heater – the GeoSpring Hybrid Electric Water Heater is more economical to operate.

GeoSpring will be available in March at national retailers such as Lowe's and Sears and national plumbing distributors such as Ferguson, as well as many local retailers and distributors. For more information on features and availability visit Geappliances.com/geospring.

State and local tax credits and utility rebates for purchasing the energy-efficient water heater may also be available to benefit consumers.

*Based on DOE test procedure and comparison of a 50-gallon standard electric tank water heater using 4879 kWh per year vs. the GeoSpring Hybrid Water Heater using 1830 kWh per year.

About GE Appliances

GE Appliances is at the forefront of building innovative, energy-efficient appliances that improve people's lives. GE Appliances' products include refrigerators, freezers, cooking products, dishwashers, washers, dryers, air conditioners, water filtration systems and water heaters. General Electric (NYSE: GE) works on things that matter to build a world that works better. For more information on GE Appliances, visit www.ge.com/appliances.

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PRESS RELEASE

GE Launches GeoSpring™ – Its Most Energy-Efficient, Hybrid Electric Water Heater

- *The GeoSpring offers consumers an energy-efficient alternative to standard water heating technology, saving an average consumer about \$325 yearly on their water heating utility bills**
- *The GeoSpring, GE's innovative hybrid electric water heater, begins production in Louisville, Ky., creating hundreds of new jobs*

LOUISVILLE, Ky. — Feb. 10, 2012 — (NYSE: GE) — Nearly all Americans (96 percent) think improved appliance efficiency is important for personal financial reasons,¹ yet many homeowners don't realize their water heater is the second single-biggest, energy-consuming appliance in their home, behind the HVAC system and that more energy-efficient options are available in the marketplace.²

To address consumers' growing desire to save money and be environmentally conscious, GE is launching GeoSpring, the first hybrid electric ENERGY STAR®-qualified water heater manufactured in the U.S. that will save an average consumer \$325 every year on their utility bills.

"There are very few products for your home that will save homeowners as much money as the GeoSpring," said Stephen Downer, GE product general manager for water products. "With the state of today's economy, we're betting on acceptance of this technology from consumers who want to save money on their energy bills and support the GE employees in the U.S."

Hybrid technology offers swift payback

A standard electric water heater can cost an average homeowner \$520 every year to operate. The GeoSpring costs an average of \$195 to operate annually, uses 62 percent less electricity than a standard electric water heater and will pay for itself in less than 2.5 years.*

The GeoSpring Hybrid Water Heater combines energy-saving heat-pump technology with traditional electric heating systems used in most conventional water heaters on the market today.

This hybrid technology is designed to absorb heat in ambient air and transfer it into the water. Since this requires much less energy than the energy used to generate radiant heat – as used in a conventional electric tank water heater – the GeoSpring Hybrid Electric Water Heater is more economical to operate.

"Approximately 50 percent of U.S. households use a standard electric water heater," said Downer. "If 25 percent chose a GeoSpring instead of a standard 50-gallon electric water heater, more than four billion pounds of CO2 emissions on the U.S. grid could be avoided annually – equivalent to the annual emissions of more than 360,000 cars on U.S. roads. That's a powerful way consumers can help the environment."

Other features of the GeoSpring include:

- The GeoSpring has the same footprint and electrical connections as the standard electric water heater, making it easy to install.
- The GeoSpring provides the same amount of hot water as traditional 50-gallon standard electric water heaters.

- The integrated electronics on the GeoSpring's control panel offer exclusive features, such as a Vacation mode, which will lower the water temperature to 50 degrees for the duration of a trip, and then automatically reenergize itself on the day before the homeowner's return.
- The GeoSpring offers more control over water temperature, allowing you to adjust in one degree increments from 100 to 140 degrees Fahrenheit.
- The GeoSpring has an Energy Factor of 2.4 and a first hour delivery of 65 gal.

State and local tax credits and utility rebates for purchasing the ENERGY STAR-qualified water heater may also be available to benefit consumers.

Pricing and availability

GeoSpring will be available at national retailers in March such as Lowe's and Sears and national plumbing distributors such as Ferguson as well as many local retailers and distributors. For more information on features and availability visit Geappliances.com/geospring.

Follow us on Facebook and Twitter or check out our website for more information

Friend GE Appliances on Facebook to view how-to videos, learn about new GE appliances and join in the discussion with other GE appliance owners. Join today and follow @GE_Appliances on Twitter or just locate detailed information about our products at www.geappliances.com.

About GE Appliances

GE Appliances is at the forefront of building innovative, energy-efficient appliances that improve people's lives. GE Appliances' products include refrigerators, freezers, cooking products, dishwashers, washers, dryers, air conditioners, water filtration systems and water heaters. General Electric (NYSE: GE) works on things that matter to build a world that works better. For more information on GE Appliances, visit www.ge.com/appliances.

**Based on DOE test procedure and comparison of a 50-gallon standard electric tank water heater using 4879 kWh every year vs. the GeoSpring hybrid water heater using 1830 kWh every year.*

1. *Public Attitudes Toward Energy Efficiency and Appliance Efficiency Standards, Consumer Federation of America, March 2011. www.consumerfed.org/pdfs/CFA-Appliance-Efficiency-Report-3-11.pdf*

2. *Water heating @ http://en.wikipedia.org/wiki/Water_heating and DOE.*

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FACT SHEET

GE GeoSpring™ Hybrid Water Heater

Product Overview:

The new GeoSpring™ Hybrid Water Heater from GE Appliances is an energy-efficient alternative to standard electric water heating technology. A water heater is the second biggest energy-consuming appliance in an average home, behind the HVAC system. The GeoSpring Hybrid Water Heater offers the following benefits:

- Saves an average consumer \$325* every year on their utility bills. That's \$3,250 in energy savings over a 10-year period
- Has an average of \$195/year in annual operating costs versus \$520/year* for a standard electric water heater
- Allows for fast and easy installation, using the same water and electrical connections
- Includes integrated electronics on the control panel offering exclusive features, including a Vacation mode
- Offers greater temperature control, ranging from 100 to 140 degrees Fahrenheit in one degree increments

How it Works: The GeoSpring Hybrid Water Heater combines energy-saving heat-pump technology with traditional electric heating systems used in most conventional water heaters on the market today, without sacrificing the amount of hot water it can deliver.

Payback: Pays for itself in approximately 3 years*

Capacity: 50-gallon capacity (replaces a 40- or 50-gallon standard electric water heater)

Warranty: 10-year limited warranty** on all parts

Where to Buy: The GeoSpring will be available to consumers in March at Lowe's, Sears, and Ferguson as well as many independent retailers and plumbing distributors, **Price:** MSRP \$1,199 - \$1,299

Production location: The GeoSpring Hybrid water heater is proudly assembled at GE Appliances' headquarters in Louisville, Ky.

For additional information on the GeoSpring, visit www.geappliances.com/geospring

**Based on DOE test procedure and comparison of a 50-gallon standard electric tank water heater using 4879 kWh every year vs. the GeoSpring hybrid water heater using 1830 kWh every year.*

***See written warranty for details*



The Skinny on Lean

Use It or Lose It – GE Appliances and the Lean Process

What does it take to make a 100-year-old manufacturer globally competitive? That's the question GE Appliances' leaders asked themselves in 2005 when they began applying Lean to eliminate waste during manufacturing. The [vision of what Lean means](#) to the transformation of GE Appliances has grown. GE will launch seven completely revitalized product lines using the Lean process over the next two years – a process that will cut costs and improve GE's competitiveness. That competitiveness means more Americans at work with the creation of more than 1,000 new U.S. jobs.



CRUNCHING NUMBERS USING LEAN

GE GeoSpring™ Hybrid Water Heater and Lean

From product development to production, the GeoSpring Hybrid Water Heater is the first product GE Appliances will introduce using the Lean principles. The proof of Lean's success within this product launch can be found in the numbers:

20%: GE has eliminated one of every five parts first included in GeoSpring assembly.

25%: Lean helped reduce GeoSpring material costs by 25 percent.

30%: GE reduced equipment investment by 30 percent.

50%: The GE GeoSpring team cut its program cycle time in half.

50%: GE reduced resources to build the GeoSpring by over 50 percent.

\$8 Million: GE has saved over \$8 million during GeoSpring development and production.

GE Dishwashers and Lean

In 2009, GE experimented with Lean on a dishwasher assembly line – resulting in great savings:

30%: Labor efficiency improved by 30 percent after employing Lean principles.

60%: GE reduced dishwasher inventory by 60 percent.

68%: The dishwasher team reduced production time by 68 percent.

80%: The dishwasher production line now requires just a fifth of the space compared to pre-Lean production.



“A large amount of the work in designing, manufacturing, delivering, and selling a product is non-value-added work, or the customer does not want to pay for it. The trick is using Lean to find and eliminate the non-value-added work.”

Richard Calvaruso, Lean Leader for GE Appliances in Louisville, Ky.



Facility Facelift: GE Appliance Park's Transformation with Lean

As Appliance Park transforms itself to a Lean and modern manufacturing facility, the large production buildings are getting a facelift. So far, the amount of steel recycled as a result of the demolition is equal to roughly the amount of structural steel to build or equal:

- 4 KFC Yum! Centers
- 24 fully loaded Boeing 747s
- 2,600 Asian elephants



Bare Bones: Lean Background

Lean determines what customers want and are willing to pay for – then the most efficient way to create that product. In a manufacturing environment, Lean:

- Creates efficiencies during the initial design and manufacturing processes
- Reduces ergonomic issues for operators
- Simplifies the entire production process
- Continually refines product and manufacturing processes to add value for the customer
- Eliminates waste, whether it's time, resources or parts, during production
- Produces better quality products
- Reduces the need for product repairs after production
- Saves money for manufacturer and consumer

Lean was adopted from processes developed by Henry Ford as well as Kiichiro Toyoda, Taiichi Ohno, and others at Toyota. Visit <http://www.lean.org/WhatsLean/> for a full history.

The Lean Team Packs a 1-2-3 Punch

Every skill needed to build a new product is in the same room from the first day through product launch.

1. Co-location of the core team is key. For each product launch, there is one space dedicated to one product using engineers, quality employees, hourly and salaried production workers, and sourcing teams.
2. The cross-functional approach cuts product development time and involves all team members in the entire process – from design through production.
3. Lean promotes a "One-Team" approach to problem solving.

The Basic Steps of Lean:

1. Specify the value from the customers' perspective.
2. Identify all steps required to deliver the product or service to the customer.
3. Eliminate steps that don't create value.
4. Create a process that flows smoothly.
5. When it isn't possible to flow, create a system that pulls from the upstream process.
6. Repeat until no waste exists.



GeoSpring Employee Profiles

Every expert featured here has been involved in making GeoSpring a reality. All are available for interviews. To coordinate those, please contact Julie Wood at julie_wood@ge.com or 502.452.5914.



TOM ZIMMER

Product Manager, Water Heaters

"I've been with GE for 23 years. Earlier in my career, I was part of the team that found ways to save GE money through outsourcing," says Tom Zimmer. Tom is now part of the shift toward bringing jobs back to the U.S. through GE's \$1 billion investment in American manufacturing.

Tom conducted the initial scope study to see if it would be feasible for GE to move GeoSpring production from China to the U.S. "It's really exciting to see GE bring manufacturing back to Louisville during my career here," says Tom.

As GeoSpring's product manager, Tom has encouraged his team to get creative through fewer constraints on design and Lean's continuous improvement process. "The energy-saving benefit is a huge 'wow' factor for the consumer. We designed the GeoSpring to be the best in the industry for a 50-gallon hybrid water heater," says Tom.



KEN STONE

AME Generalist

Ken Stone, who worked as a corporate engineer for a company that made exhausts for major automakers, was laid off two years ago due to the downtrend in industry.

"After 35 years, I wanted to get out of automotive," says Ken. "I wanted more stability and GE provides that." Ken believes his experience in tube forming and new product launches landed him the position in GE's GeoSpring launch team.

Ken was responsible for designing the way the tubes coil around the GeoSpring's tank. "It started out taking four machines to wind the tubes, but with my idea, it's down to two," says Ken.



PATTI BEYL

Kaizen Process Operator (KPO)

Hourly employee Patti Beyl believes the Lean process used to create and produce the GeoSpring is the future of GE and Louisville's Appliance Park, the new home of GeoSpring assembly. Patti has worked at GE for 24 years.

When GE adopted the Lean process, Patti was one of the first employees to jump at the opportunity to work as a KPO, a position that helps find efficiencies through the Lean process. "I know someone putting forethought into ergonomics and safety would have made a difference in my life 20 years ago when I was a new hire on the factory line," says Patti.

Patti started her career as a KPO three years ago on GE's dishwasher line. She switched teams 18 months ago and has worked solely on improving job stations and processes for GeoSpring.

Patti has helped develop the material flow for the GeoSpring assembly line by actually performing the steps herself. "I have to physically put my hands on it and drive the screws," says Patti. With her insight, she helped reduce the time for assembly of one GeoSpring part from 107 seconds to 45 seconds.



SCOTT STOUT Kaizen Process Operator (KPO)

Scott Stout has worked on various lines during his 17-year tenure at GE. He worked on the dishwasher and refrigeration lines before becoming a Kaizen Process Operator for GeoSpring. "This is my favorite job so far," says Scott. "This is the first time I've watched GE put a line in since I've been here."

In this position, Scott appreciates that the people in charge of designing the line heed his advice. "They actually listen to me," says Scott. The designer, who uses a computer to determine how the assembly line will operate, now runs his or her ideas by Scott.

"I do the job the designer's way, and then I do it my way," says Scott. "I tweak the process to find the little things that make the operator's job so much easier."



JOHN WEBSTER Maintenance Moonshiner

The ringtone on John Webster's cell phone is the Mission Impossible theme song, but it could just as easily be the theme from MacGyver. John is one of the first maintenance moonshiners in Appliance Park in Louisville.

He previously worked as an electrician for companies such as Pepsi and Eli Lilly, and in the automotive industry. He joined GE in November 2009 and started as a moonshiner two months later. Moonshiners are a critical part of the Lean team. They create quarter-scale models and mock-ups of products and production equipment out of cardboard, foam and other everyday materials. Using the 3D models helps the team find cheaper, easier and faster ways to do things, and offers a chance to fine-tune ideas.

"If a machine flops and falls on its face, we've lost a lot of money. If we can save money using models, then the consumer saves money on the final product," says John. "It feels great to be a part of it."



ROD CUNDIFF Maintenance Moonshiner

Rod Cundiff used to work in the automotive industry making brakes. He joined GE in October 2009 and within a few months he joined the Lean team as a maintenance moonshiner.

Rod and other moonshiners create quarter-scale models and mock-ups of products and production equipment out of cardboard, foam and other everyday materials. Using the 3D models helps the team find cheaper, easier and faster ways to do things, and offers a chance to fine-tune ideas. Rod and the rest of the GeoSpring Lean team came up with a range of ideas to reduce costs and make the water heater more efficient.

Appliance Park started with two moonshiners; now more than a dozen are working on various projects.

"This department didn't exist before," says Rod. "Now each building with a moonshine team wants more moonshiners. Our work allows the engineers to concentrate on what they do best and we help them by doing what we do best."



CHRIS RISSLER

Water Products Technology, Lead Design Engineer

Chris Rissler joined GE on the GeoSpring Lean team in May 2011. Chris has a degree in industrial engineering technology and previously worked at Hitachi Cable in New Albany, Ind., and also worked in automotive supply.

At GE, he works on structural and mechanical engineering issues.

Chris wasn't familiar with Lean concepts and experienced some culture shock when he joined the Lean team. He was used to work environments where work functions were physically separate.

"Here everyone on the team is in the same room," he says. "There's a lot more teamwork here." He notes that communication is more open and cooperation is easier as a result of co-locating.

"I'm excited about everything here. It's an exciting environment to be in, and it's great to be on the edge of something new," Chris says. "Being a part of this has given me hope for the future and even for the economy."



ALEX SIGMAN

Materials Manager

Alexandria ("Alex") Sigman joined the GeoSpring Lean team in August 2011. Her role is to get materials from suppliers into the facilities and get finished products out the door.

Alex studied aerospace engineering at Indiana State University, and previously worked at other major manufacturers. She was attracted to GE because of the company's reputation.

"When I think of GE, I think of one word—innovation," she said.

Alex enjoys the team approach. "We have different backgrounds, cultures, hierarchy, and are hourly and salaried. We make collaborative decisions to make a great unit. Not many places allow you to be part of a project from concept to completion."

She believes that by using Lean, GE has developed a redesigned water heater that will allow more people to afford the heat pump technology.

"It's exciting that GE is bringing products back to America. We want to come back to the glory days; we all want that. We believe in GE, in the product, and in Louisville."



GREG THOMAS

Sealed Systems Leader

Greg Thomas joined GE in 2002 and started on the hybrid electric water heater team in late 2009. The team was created to transfer GeoSpring production from China using the product's original design.

"When we got to the Lean journey, we realized that the way the water heater was designed wasn't very cost-effective," he says. Within about a month, the team had outlined what they wanted in a redesign and had created a plan to reduce costs.

"We had a good footing and an idea of what the product would look like," Greg says. "Once the decision was made, we went after it gung-ho. We collectively made the decisions that were needed to move it forward. We quickly honed in on what we needed to do."

There was plenty for the team to do and they used the Lean "seven ways" technique exhaustively. The Lean approach facilitated the speed of the redesign and improved competitiveness of the final product.

"I really truly believe in this product. The beauty of it is that it makes financial sense," says Greg.



RICHARD M. CALVARUSO

Lean Leader

Richard Calvaruso has been at GE for more than 20 years – his entire career in manufacturing. He is the lead teacher and coach for Lean thinking within GE Appliances.

“The old process involved lots of handoffs between functions. The new approach is all about one team,” he says. “The idea was to have all of the people together in one room so they can collaborate and develop the water heater product and processes.”

“Lean thinking can help us be competitive,” Richard says. “Lean is a set of concepts, principles and tools used to create and deliver the most value from the customer’s perspective while consuming the fewest resources.”

The goal of the Lean team has been to develop a culture of problem solvers who see problems as an opportunity to improve a product or process. Richard is clearly proud of their accomplishments.



JENNIFER BOLTON

Lean Leader, Hybrid Water Heater

Jennifer Bolton has a degree in electrical engineering and joined GE 12 years ago. She held several positions, including working in the GE Answer Center, designing refrigerator controls, and working as a Black Belt in a Lean Six Sigma group focused on washer quality.

“I enjoyed the fast pace of manufacturing and took a role as a business team leader for washer production and then, lastly, my current role,” she says.

Jennifer assumed her role as Lean Six Sigma Black Belt and Lean Leader on the hybrid water heater project in January 2010.

“Lean focuses on operators and allows them to solve problems,” she says. “The Lean teams operate at a very fast pace and sometimes it can be stressful. Over the past two years, I have found myself as the sounding board on several occasions. The work is demanding, but very rewarding, and my team is like a second family to me.”



JERRY CARNEY

President, IUE-CWA Local 83761

According to Jerry Carney, president of IUE-CWA Local 83761, Appliance Park’s involvement with Lean manufacturing started when Tommy Spires was the local president in 2008. Jerry notes that from 2008 to the present, 50 jobs associated with Lean have been added to the workforce.

“Taking waste out doesn’t always mean taking out headcount,” he says. According to the union’s agreement with Appliance Park, there’s no headcount loss from Lean. “If Lean takes a job out on one line, it creates another one somewhere else. The headcount stays the same and no one loses their job.”

In May 2009, the local passed a competitive wage agreement by an 80-percent affirmative vote. Less than one week later, GE decided to move manufacturing to the U.S.

“We need to be embracing Lean, looking at it as job production, not job loss,” Jerry says. “We also need to be looking at continuous improvement. In order for our union members to make more money, we have to be competitive.”



JASON CONRAD

Human Resources Manager, Appliance Park Manufacturing

Jason Conrad, human resources manager at Appliance Park, may become much busier over the next few years. GeoSpring has brought at least 70 new hourly jobs to Appliance Park, as well as new salaried jobs. Ultimately, Appliance Park could have hundreds of new hires over the next few years as workers retire and as production grows. Lean has made it possible for GE to bring GeoSpring production back to the U.S.

"We need to continue to work together to stay competitive," he says. "We've put the hourly workers first and need to be sure we're supporting them. People have to see Lean in action to believe it."

He notes that the operator is now the focus of production. Team leaders support the operators and try to resolve problems or escalate them to upper management for resolution.

"The whole world is watching us to see if we can pull this off or not—if we can bring product back to the U.S.," says Jason.